United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with Virginia Polytechnic Institute and State University

Soil Survey of Floyd County, Virginia

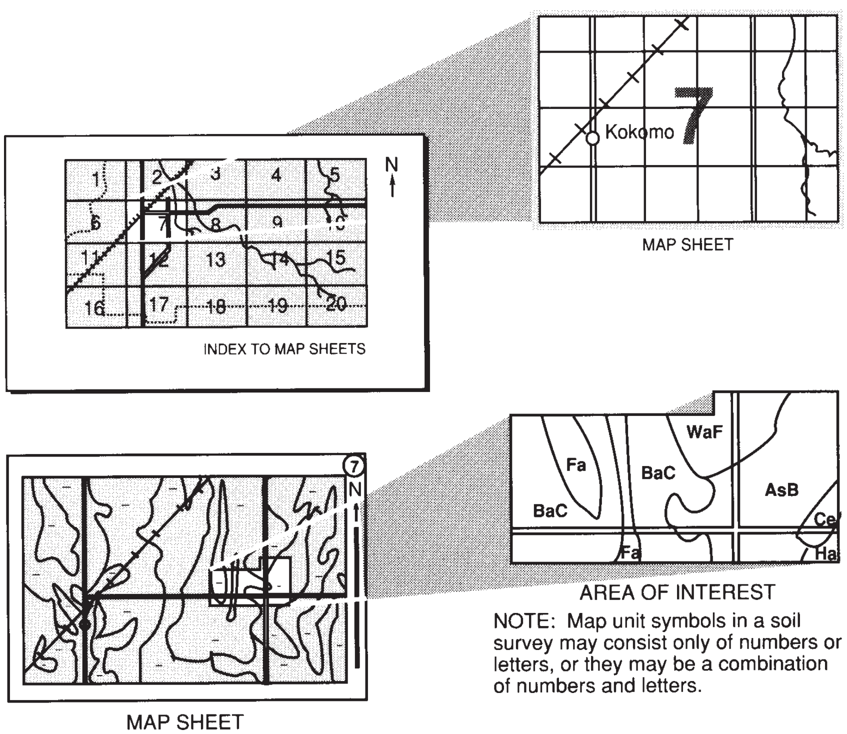
How To Use This Soil Survey

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 go to that sheet.

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

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



National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service, the Virginia Polytechnic Institute and State University, and the Virginia Department of Conservation and Recreation. The survey is part of the technical assistance furnished to the Skyline Soil and Water Conservation District. The Floyd County Board of Supervisors and the Virginia Department of Conservation and Recreation provided financial assistance for the survey.

Major fieldwork for this soil survey was completed in 2006. Soil names and descriptions were approved in 2007. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2006. The most current official data are available on the Internet.

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

Nondiscrimination Statement

Cover Caption

The summit of Buffalo Mountain, the most prominent peak in the county, looking east over the southern portion of Floyd County.

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

Contents

Issued 2009

Foreword

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

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

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

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

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

John A. Bricker
State Conservationist
Natural Resources Conservation Service

Soil Survey of
Floyd County, Virginia

By Robert K. Conner, Natural Resources Conservation Service

Fieldwork by Robert K. Conner, Mark A. Van Lear, Christopher J. Fabian, Aletta A. Davis, Sarah M. Murray, and Jeannine C. Freyman, Natural Resources Conservation Service, and Dean A. Gall, Stephen A. Cromer, Michael H. Genthner, Charles E. Nelson, and David S. Hall, Virginia Polytechnic Institute and State University

United States Department of Agriculture, Natural Resources Conservation Service,
in cooperation with
Virginia Polytechnic Institute and State University.

FLOYD COUNTY is in the southwestern part of Virginia, about 40 miles southwest of Roanoke, Virginia (fig. 1). The county is roughly triangular in shape. It is bordered on the southwest by Carroll County, on the north by Pulaski, Montgomery, and Roanoke Counties, and on the southeast by Franklin and Patrick Counties. The survey area has a total land area of 244,000 acres, or 382 square miles. Of the 244,000 acres, about 3,600 acres along the Blue Ridge Parkway are federally owned.

The population of the survey area in 2000 was 13,874 *(19)*. The town of Floyd, which is near the center of the county, is the county seat. Farming and forestry are the major land uses in the county. The survey area is about 60 percent woodland and 40 percent farmland. Most of the farms produce beef cattle, dairy products, sheep and lambs, corn, and hay. Wood products and textiles are the major manufactured goods. Fraser fir Christmas trees are grown extensively in parts of the county.

General Nature of the Survey Area

This section provides general information about the survey area. It describes early history; water resources; transportation; physiography, relief, and drainage; and climate.

Early History

Prior to the first settlements of Europeans in the 1740’s, the survey area was part of the hunting grounds of various eastern Native American tribes. Trade was established with the Cherokee Indians as early as 1700. Most of the early European settlers were Scotch-Irish, German, or English. Many had traveled southwest on the “Old Buffalo Trail” or “Great Road” through the Valley of Virginia from Pennsylvania in search of farmland. A significant number of settlers also came north from North Carolina to settle in the upper New River Valley.

Floyd County was formed on January 15, 1831, from the southern section of Montgomery County. In 1871, a section of Franklin County was added. The county

Figure 1.—Location of Floyd County in Virginia.

was named for John Floyd, who served as Governor of Virginia from 1830 to 1834. The town of Floyd was first called Jacksonville, in honor of Andrew Jackson. Jacksonville became the county seat at the time Floyd County was formed. On January 23, 1896, the General Assembly passed an act officially changing the name of the town of Jacksonville to Floyd.

Water Resources

The county is drained primarily by the Little River and its tributaries, which flow into the New River below the Claytor Lake Dam. The headwaters of the South Fork of the Roanoke River are in the northeastern part of the county.

The Little River is formed by three main branches or forks: East Fork, West Fork, and South Fork (Dodd's Creek). The East Fork of the Little River runs through the eastern part of the county near the crest of the Blue Ridge and is joined by its tributaries—Boothe's Creek, Pipestem Branch, and Payne's Creek—to form the head of the Little River. Some of the larger tributaries that it receives as it flows south include Beaverdam Creek, Pine Creek, Camp Creek, Terry's Creek, and Laurel Creek.

The West Fork of the Little River heads in the Blue Ridge Mountains near the Patrick County line. It flows north and northeast through the central portion of the county and is joined by its major tributaries—Howell Creek, Rush Fork, and Spurlock Creek. About 2 miles north of the town of Floyd, the West Fork is joined by the South Fork, or Dodd's Creek, which begins in the Haycock Mountain area near the head of Pine Creek and flows in a large curve around and to the west of the town of Floyd. After this junction, the West Fork flows north for about 8 miles to its junction with the East Fork of the Little River.

Reed Island Creek receives its triburies, Burke's Fork and Grassy Creek, and flows through the southwest corner of the county into Carroll County; flows back into Floyd County; and once again enters Carroll County where it empties into the New River.

Indian Creek heads near the town of Willis, runs north for about 12 miles, and flows into the Little River.

Other small streams which flow into the Little River include Beaver Creek, Payne's Creek, and Brush Creek.

More than 90 percent of Floyd County households receive their source of domestic water from individual wells or springs.

Transportation

Four major highways serve Floyd County. U.S. Route 221 provides access to points east and west through the county. U.S. Route 8 crosses the central part of the county and provides access to points north and south. State Route 58 crosses the

Figure 2.—This area of the Blue Ridge Parkway intersects with State Route 8, about 5 miles from the town of Floyd, Virginia.

southwestern tip of the county, just south of Turnip Patch Ridge, and runs for about 1.6 miles through the county before it reaches Meadows of Dan in Patrick County. The Blue Ridge Parkway (fig. 2) runs along the eastern edge of Floyd County for a distance of about 33 miles, near the Franklin-Patrick County line. It is easily accessed via U.S. Route 8, south of the town of Floyd.

Physiography, Relief, and Drainage

Floyd County is entirely within the Blue Ridge Major Land Resource Area. It is on the Blue Ridge Upland or Plateau of southwestern Virginia. This part of the Plateau is bordered on the southeast by the Blue Ridge Escarpment and on the northwest by the Blue Ridge Mountains. The county is characterized by intermingled valleys, surrounded by rolling hills, knobs, and isolated mountain ridges (fig. 3). The most prominent mountain in the county is Buffalo Mountain, located in the southwest portion of the county. Most of the portion of the survey area drained by tributaries of the New River has a rolling topography. The area of the county drained by tributaries of the Roanoke River has a steeper landscape and is more highly dissected in topography. The mountains along the northwestern rim of the county mainly formed in residuum from metasandstone, quartzite, and phyllite. The rolling upland and valley areas in the central and southern portions of the county dominantly formed in residuum from gneiss and schist with bands of amphibolite running through sections in the southern part of the county. Areas of colluvium derived from the surrounding ridges and knobs are present throughout the county. Alluvial areas are common along the Little River and its tributaries.

The elevation of the survey area ranges from 1,555 feet, near the South Fork of the Roanoke River at the Montgomery County line, to 3,971 feet, on the summit of Buffalo Mountain.

No streams flow into Floyd County. The streams in the survey area flow out of the county and have as their source tributaries which form within Floyd County.

Figure 3.—A view of valleys, hills, and mountains in Floyd County, looking north from the Blue Ridge Parkway, near Tuggles Gap.

Climate

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

In winter, the average temperature is 34.2 degrees F and the average daily minimum temperature is 23.1 degrees. The lowest temperature on record, which occurred at Floyd on January 21, 1985, is -19 degrees. In summer, the average temperature is 68.3 degrees and the average daily maximum temperature is 80.3 degrees. The highest recorded temperature, which occurred at Floyd on July 14, 1954, is 100 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 (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The average annual total precipitation is 40.92 inches. Of this, about 18 inches, or 44 percent, usually falls in May through September. The growing season for most crops falls within this period. The heaviest 1-day rainfall during the period of record was 7.25 inches, recorded at Floyd on September 30, 1959. Thunderstorms occur on about 36 days each year, and most occur in July.

The average seasonal snowfall is 20.3 inches. The greatest snow depth at any one time during the period of record was 25 inches, recorded on March 16, 1960. On an average, no days per year have at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was 15.0 inches, recorded on December 26, 1969, February 27, 1982, and January 22, 1987.

The average relative humidity in mid-afternoon is about 53 percent. Humidity is higher at night, and the average at dawn is about 78 percent. The sun shines 60 percent of the time in summer and 43 percent in winter. The prevailing wind is from the northwest. Average windspeed is highest, 8.5 miles per hour, in March.

How This Survey Was Made

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

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses *(16)*. Soil survey areas typically consist of parts of one or more MLRAs.

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

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

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

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

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

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

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

Detailed Soil Map Units

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

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

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

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

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

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

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Hayesville loam, 8 to 15 percent slopes, is a phase of the Hayesville 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. Ashe-Edneytown complex, 25 to 35 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Glenelg and Hayesville loams, 3 to 8 percent slopes, 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. The Urban land part of Udorthents-Urban land complex, 0 to 25 percent slopes, is an example.

Table 4 gives the acreage and proportionate extent of each map unit in the survey area. 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.

1E—Ashe-Edneytown complex, 25 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Ashe and similar soils: Typically 50 percent, ranging from about 45 to 55 percent
Edneytown and similar soils: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Ashe

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 18 inches—brownish yellow gravelly sandy loam

Substratum:
18 to 28 inches—yellowish brown gravelly sandy loam

Hard bedrock:
28 inches—gneiss bedrock

Edneytown

Surface layer:
0 to 4 inches—brown loam

Subsurface layer:
4 to 7 inches—yellowish brown loam

Subsoil:
7 to 20 inches—strong brown sandy clay loam
20 to 27 inches—strong brown sandy loam

Substratum:
27 to 44 inches—brownish yellow loamy sand
44 to 62 inches—brownish yellow loamy sand

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Peaks soils, which are similar to the Ashe soil, are moderately deep to hard bedrock, and have less clay and more rock fragments in the subsoil; in similar landform positions
- Soils that are similar to the Ashe soil and have a dark surface layer; on elevated summits and north-facing backslopes
- Cowee soils, which are similar to the Ashe soil and have more clay in the subsoil; in similar landform positions
- Hayesville soils, which are similar to the Edneytown soil and have more clay in the subsoil; in similar landform positions
- Soils that are similar to the Edneytown soil and have a dark surface layer; on elevated summits and north-facing backslopes
- Edneyville soils, which are similar to the Edneyville soil and have less clay in the subsoil; in similar landform positions
- Tate soils, which are similar to the Edneytown soil and have a thicker solum; on footslopes, toeslopes, and lower backslopes
- Soils that are similar to the Edneytown soil and have a red subsoil; in similar landform positions
- Glenelg soils, which are similar to the Edneytown soil and can have loam, silt loam, and silty clay loam textures in the argillic horizon; in similar landform positions
- Myersville soils, which are similar to the Edneytown soil and are deep to bedrock; in similar landform positions

Soil Properties and Qualities

Available water capacity: Ashe—very low (about 2.7 inches); Edneytown—moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Ashe—high (about 1.98 in/hr); Edneytown—moderately high (about 0.57 in/hr)
Depth class: Ashe—moderately deep (20 to 40 inches); Edneytown—very deep (more than 60 inches)
Depth to root-restrictive feature: Ashe—20 to 40 inches to bedrock (lithic); Edneytown—more than 60 inches
Drainage class: Ashe—somewhat excessively drained; Edneytown—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Ashe—very high; Edneytown—high

Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

Suitability: Ashe—poorly suited; Edneytown—well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.

Woodland

Suitability: Ashe—well suited to chestnut oak and moderately suited to eastern white pine; Edneytown—well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: Ashe—JJ; Edneytown—L
Hydric soils: No

2E—Ashe-Edneyville complex, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Ashe and similar soils: Typically 40 percent, ranging from about 35 to 45 percent
Edneyville and similar soils: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Ashe

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 18 inches—brownish yellow gravelly sandy loam

Substratum:
18 to 28 inches—yellowish brown gravelly sandy loam

Hard bedrock:
28 inches—gneiss bedrock

Edneyville

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsurface layer:
5 to 11 inches—yellowish brown loam

Subsoil:
11 to 26 inches—yellowish brown sandy loam
26 to 34 inches—yellowish brown sandy loam

Substratum:
34 to 62 inches—brownish yellow sandy loam

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments in the subsoil and are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Peaks soils, which are similar to the Ashe soil, are moderately deep to hard bedrock, and have more rock fragments in the subsoil; in similar landform positions
- Cowee soils, which are similar to the Ashe soil and have more clay in the subsoil; in similar landform positions
- Soils that are similar to the Ashe soil and have a dark surface layer; on elevated summits and north-facing backslopes
- Edneytown and Glenelg soils, which have more clay in the subsoil; in landform positions similar to those of the Edneytown soil
- Tate soils, which are similar to the Edneytown soil and have more clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Soils that are similar to the Edneytown soil and have a dark surface layer; on elevated summits and north-facing backslopes
- Myersville soils, which are similar to the Edneytown soil, have more clay in the subsoil, and are deep to bedrock; in similar landform positions

Soil Properties and Qualities

Available water capacity: Ashe—very low (about 2.7 inches); Edneyville—moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Ashe—moderately deep (20 to 40 inches); Edneyville—very deep (more than 60 inches)
Depth to root-restrictive feature: Ashe—20 to 40 inches to bedrock (lithic); Edneyville—more than 60 inches
Drainage class: Ashe—somewhat excessively drained; Edneyville—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Ashe—very high; Edneyville—medium
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Ashe—well suited to chestnut oak and moderately suited to eastern white pine; Edneyville—well suited to yellow-poplar and eastern white pine and moderately suited to northern red oak
- Proper planning for timber harvesting is essential in order to minimize the potential

negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Ashe—JJ; Edneyville—GG
Hydric soils: No

3E—Ashe-Edneyville complex, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits

Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Ashe and similar soils: Typically 40 percent, ranging from about 35 to 45 percent
Edneyville and similar soils: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Ashe

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 18 inches—brownish yellow gravelly sandy loam

Substratum:
18 to 28 inches—yellowish brown gravelly sandy loam

Hard bedrock:
28 inches—gneiss bedrock

Edneyville

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsurface layer:
5 to 11 inches—yellowish brown loam

Subsoil:
11 to 26 inches—yellowish brown sandy loam
26 to 34 inches—yellowish brown sandy loam

Substratum:
34 to 62 inches—brownish yellow sandy loam

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments in the subsoil and are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in similar landform positions

Similar components:
- Peaks soils, which are similar to the Ashe soil, are moderately deep to hard bedrock, and have more rock fragments in the subsoil; in similar landform positions
- Cowee soils, which are similar to the Ashe soil and have more clay in the subsoil; in similar landform positions
- Soils that are similar to the Ashe soil and have a dark surface layer; on elevated summits and north-facing backslopes
- Areas that are similar to the Ashe soil and have fewer stones on the surface; in similar landform positions
- Edneytown and Glenelg soils, which have more clay in the subsoil; in similar landform positions
- Tate soils, which are similar to the Edneytown soil and have more clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Soils that are similar to the Edneytown soil and have a dark surface layer; on elevated summits and north-facing backslopes

- Myersville soils, which are similar to the Edneytown soil, have more clay in the subsoil, and are deep to bedrock; in similar landform positions
- Areas that are similar to the Edneytown soil and have fewer stones on the surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Ashe—very low (about 2.7 inches); Edneyville—moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Ashe—moderately deep (20 to 40 inches); Edneyville—very deep (more than 60 inches)
Depth to root-restrictive feature: Ashe—20 to 40 inches to bedrock (lithic); Edneyville—more than 60 inches
Drainage class: Ashe—somewhat excessively drained; Edneyville—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Ashe—very high; Edneyville—medium
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Ashe—well suited to chestnut oak and moderately suited to eastern white pine; Edneyville—well suited to yellow-poplar and eastern white pine and moderately suited to northern red oak

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Ashe—JJ; Edneyville—GG
Hydric soils: No

4B—Braddock cobbly loam, 3 to 8 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces, coves, and benches on foothills
Position on the landform: Risers and treads on stream terraces; footslopes and toeslopes in coves and on benches
Size of areas: 5 to 125 acres
Shape of areas: Irregular

Map Unit Composition

Braddock and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 8 inches—brown cobbly loam

Subsoil:
8 to 15 inches—strong brown cobbly clay loam
15 to 51 inches—red clay
51 to 62 inches—red clay loam

Minor Components

Dissimilar components:
- Rock outcrops in similar landform positions
- Areas with stony surfaces; in similar landform positions
- Greenlee soils, which have more rock fragments in the soil; in similar landform positions

Similar components:
- Braddock soils that have fewer cobbles in the surface horizon
- Tate soils, which have less clay in the subsoil; in similar landform positions
- Delanco soils, which are moderately well drained; in similar landform positions
- Elsinboro soils, which have less clay in the subsoil; on adjacent lower stream terraces
- Soils that have a brown subsoil; in similar landform positions
- Soils that have a clayey subsoil extending below a depth of 60 inches; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: High
Surface fragments: None
Parent material: Alluvium and/or colluvium derived from igneous and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn, grass-legume hay, and alfalfa hay; not suited to tobacco
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak and eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.

- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- This soil is well suited to septic tank absorption fields.

Local roads and streets

- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3s
Virginia soil management group: O
Hydric soil: No

4C—Braddock cobbly loam, 8 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces, coves, and benches on foothills
Position on the landform: Risers and treads on stream terraces; footslopes, toeslopes, and lower backslopes in coves and on benches
Size of areas: 5 to 125 acres
Shape of areas: Irregular

Map Unit Composition

Braddock and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 8 inches—brown cobbly loam

Subsoil:
8 to 15 inches—strong brown cobbly clay loam
15 to 51 inches—red clay
51 to 62 inches—red clay loam

Minor Components

Dissimilar components:
- Rock outcrops in similar landform positions
- Areas with stony surfaces; in similar landform positions

- Greenlee soils, which have more rock fragments in the soil; in similar landform positions

Similar components:
- Braddock soils that have fewer cobbles in the surface horizon
- Tate soils, which have less clay in the subsoil; in similar landform positions
- Delanco soils, which are moderately well drained; in similar landform positions
- Elsinboro soils, which have less clay in the subsoil; on adjacent lower stream terraces
- Soils that have a brown subsoil; in similar landform positions
- Soils that have a clayey subsoil extending below a depth of 60 inches; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: High
Surface fragments: None
Parent material: Alluvium and/or colluvium derived from igneous and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn, grass-legume hay, and alfalfa hay; not suited to tobacco
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak and eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low strength interferes with the construction of haul roads and log landings.

- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4s
Virginia soil management group: O
Hydric soil: No

4D—Braddock cobbly loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces, coves, and benches on foothills
Position on the landform: Risers and treads on stream terraces; footslopes, toeslopes, and lower backslopes in coves and on benches
Size of areas: 5 to 125 acres
Shape of areas: Irregular

Map Unit Composition

Braddock and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 8 inches—brown cobbly loam

Subsoil:
8 to 15 inches—strong brown cobbly clay loam
15 to 51 inches—red clay
51 to 62 inches—red clay loam

Minor Components

Dissimilar components:
- Rock outcrops in similar landform positions
- Areas with stony surfaces; in similar landform positions

- Greenlee soils, which have more rock fragments in the soil; in similar landform positions

Similar components:
- Braddock soils that have fewer cobbles in the surface horizon
- Tate soils, which have less clay in the subsoil; in similar landform positions
- Delanco soils, which are moderately well drained; in similar landform positions
- Elsinboro soils, which have less clay in the subsoil; on adjacent lower stream terraces
- Soils that have a brown subsoil; in similar landform positions
- Soils that have a clayey subsoil extending below a depth of 60 inches; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: High
Surface fragments: None
Parent material: Alluvium and/or colluvium derived from igneous and/or metamorphic rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak and eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6s
Virginia soil management group: O
Hydric soil: No

5D—Brownwood fine sandy loam, 8 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and moderately steep shoulders and summits

Map Unit Composition

Brownwood and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

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

Subsoil:
6 to 10 inches—dark yellowish brown fine sandy loam
10 to 16 inches—strong brown fine sandy loam
16 to 35 inches—strong brown cobbly fine sandy loam

Soft bedrock:
35 to 45 inches—mica schist bedrock

Hard bedrock:
45 inches—mica schist bedrock

Minor Components

Dissimilar components:
- Edneytown, Edneyville, and Glenelg soils, which are very deep to bedrock; in similar landform positions
- Peaks soils, which have more rock fragments in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock and have more clay in the subsoil; in similar landform positions
- Cowee soils, which have more clay in the subsoil; in similar landform positions
- Areas that have more stones on the surface; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Ashe soils, which have less mica in the soil; in similar landform positions
- Soils that have darker surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Poorly suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: JJ
Hydric soil: No

5E—Brownwood fine sandy loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and very steep shoulders and summits

Map Unit Composition

Brownwood and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

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

Subsoil:
6 to 10 inches—dark yellowish brown fine sandy loam

10 to 16 inches—strong brown fine sandy loam
16 to 35 inches—strong brown cobbly fine sandy loam

Soft bedrock:
35 to 45 inches—mica schist bedrock

Hard bedrock:
45 inches—mica schist bedrock

Minor Components

Dissimilar components:
- Edneytown, Edneyville, and Glenelg soils, which are very deep to bedrock; in similar landform positions
- Peaks soils, which have more rock fragments in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock and have more clay in the subsoil; in similar landform positions
- Cowee soils, which have more clay in the subsoil; in similar landform positions
- Areas that have more stones on the surface; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Ashe soils, which have less mica in the soil; in similar landform positions
- Soils that have darker surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soil: No

6A—Codorus loam, 0 to 3 percent slopes, frequently flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Flood plains in valleys (fig. 4)
Position on the landform: Steps and channels
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Codorus and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Surface layer:
0 to 7 inches—brown loam

Subsoil:
7 to 12 inches—brown loam

Figure 4.—An area of Codorus loam, 0 to 3 percent slopes, frequently flooded, on a level flood plain along Burks Fork, in the western part of the county. The strongly sloping area of pastureland at the base of the hillside to the right, is on Tate loam, 8 to 15 percent slopes.

12 to 19 inches—brown loam; yellowish brown masses of oxidized iron
19 to 37 inches—yellowish brown loam; gray iron depletions

Substratum:
37 to 49 inches—yellowish brown gravelly sandy loam; gray iron depletions
49 to 62 inches—yellowish brown very gravelly sandy loam; gray iron depletions

Minor Components

Dissimilar components:
- Comus soils, which are well drained; in similar landform positions
- Tate soils, which are well drained; on footslopes, toeslopes, and lower backslopes
- Greenlee soils, which are well drained; on footslopes, toeslopes, and lower backslopes
- Craigsville soils, which are well drained and have more rock fragments in the subsoil; in similar landform positions
- Codorus soils that have cobbly or stony surfaces

Similar components:
- Hatboro soils, which are poorly drained; in similar landform positions
- Kinkora soils, which are poorly drained and have more clay in the subsoil; on treads
- Delanco soils, which are moderately well drained and have more clay in the subsoil; on treads, footslopes, and toeslopes
- Soils that have a dark surface layer; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 8.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)

Depth to root-restrictive feature: More than 60 inches
Drainage class: Somewhat poorly drained
Depth to seasonal water saturation: About 12 to 24 inches
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Alluvium derived from igneous and/or metamorphic rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- Flooding may damage pastures.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should focus on streamside management zones and stream crossings and should include general adherence to all applicable best management practices.
- Flooding may damage haul roads.
- Flooding restricts the safe use of roads by log trucks.
- Soil wetness may limit the use of log trucks.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding is a limitation affecting building site development.
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields

- Flooding is a limitation affecting septic tank absorption fields.
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Flooding may damage local roads and streets.
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- The low strength may cause structural damage to local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6w
Virginia soil management group: A
Hydric soil: No

7A—Comus fine sandy loam, 0 to 5 percent slopes, frequently flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Flood plains in valleys
Position on the landform: Steps and channels
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Comus and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Surface layer:
0 to 9 inches—dark yellowish brown fine sandy loam

Subsoil:
9 to 31 inches—dark yellowish brown fine sandy loam

Substratum:
31 to 53 inches—brown fine sandy loam; few yellowish brown mottles
53 to 62 inches—brown gravelly loamy sand

Minor Components

Dissimilar components:
- Delanco soils, which are moderately well drained and have more clay in the subsoil; on treads, stream terraces, footslopes, and toeslopes
- Codorus soils, which are somewhat poorly drained; in similar landform positions
- Hatboro soils, which are poorly drained; in similar landform positions
- Kinkora soils, which have are poorly drained and have more clay in the subsoil; on treads
- Comus soils that have cobbly or stony surfaces

Similar components:
- Soils that have a dark surface layer; in similar landform positions
- Craigsville soils, which have more rock fragments in the subsoil; in similar landform positions

Soil Properties and Qualities

Available water capacity: High (about 9.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: Frequent

Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Alluvium derived from igneous and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to corn, grass-legume hay, and alfalfa hay; not suited to tobacco
- Frequent flooding restricts the use of winter grain crops.
- Flooding may damage crops.

Pastureland

Suitability: Well suited
- Flooding may damage pastures.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should focus on streamside management zones and stream crossings and should include general adherence to all applicable best management practices.
- Flooding may damage haul roads.
- Flooding restricts the safe use of roads by log trucks.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding is a limitation affecting building site development.

Septic tank absorption fields

- Flooding is a limitation affecting septic tank absorption fields.

Local roads and streets

- Flooding may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 2w
Virginia soil management group: A
Hydric soil: No

8C—Cowee loam, 8 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Cowee and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown loam

Subsoil:
6 to 27 inches—yellowish red clay loam

Substratum:
27 to 39 inches—mulitcolored gravelly sandy loam

Soft bedrock:
39 to 45 inches—interbedded mica gneiss and mica schist bedrock

Minor Components

Dissimilar components:
- Glenelg soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Edneytown soils, which are very deep to bedrock; in similar landform positions
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil; in similar landform positions
- Greenlee soils, which are very deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Brownwood soils, which have less clay and more mica in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions

Similar components:
- Soils that have a yellowish brown subsoil; in similar landform positions
- Ashe soils, which have less clay in the subsoil; in similar landform positions
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high

Figure 5.—Pastureland in an area of Cowee loam, 8 to 15 percent slopes, in the foreground. Buffalo Mountain is in the distant background.

Surface fragments: None
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

Suitability: Well suited to grass-legume hay; moderately suited to corn and alfalfa hay; not suited to tobacco

- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress.

Pastureland

Suitability: Well suited (fig. 5)

- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: N
Hydric soil: No

8D—Cowee loam, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Cowee and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown loam

Subsoil:
6 to 27 inches—yellowish red clay loam

Substratum:
27 to 39 inches—mulitcolored gravelly sandy loam

Soft bedrock:
39 to 45 inches—interbedded mica gneiss and mica schist bedrock

Minor Components

Dissimilar components:
- Glenelg soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Edneytown soils, which are very deep to bedrock; in similar landform positions
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil; in similar landform positions
- Greenlee soils, which are very deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Brownwood soils, which have less clay and more mica in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions

Similar components:
- Soils that have a yellowish brown subsoil; in similar landform positions
- Ashe soils, which have less clay in the subsoil; in similar landform positions
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited

- Avoid planting in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: N
Hydric soil: No

8E—Cowee loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits

Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Cowee and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown loam

Subsoil:
6 to 27 inches—yellowish red clay loam

Substratum:
27 to 39 inches—multicolored gravelly sandy loam

Soft bedrock:
39 to 45 inches—interbedded mica gneiss and mica schist bedrock

Minor Components

Dissimilar components:
- Glenelg soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Edneytown soils, which are very deep to bedrock; in similar landform positions
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil; in similar landform positions
- Greenlee soils, which are very deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Brownwood soils, which have less clay and more mica in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions

Similar components:
- Soils that have a yellowish brown subsoil; in similar landform positions
- Ashe soils, which have less clay in the subsoil; in similar landform positions
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None

Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland

Land capability class: 7e
Virginia soil management group: N
Hydric soil: No

9D—Cowee gravelly loam, 8 to 35 percent slopes, stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Cowee and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown gravelly loam

Subsoil:
6 to 27 inches—yellowish red gravelly clay loam

Substratum:
27 to 39 inches—gravelly sandy loam

Soft bedrock:
39 to 45 inches—interbedded mica gneiss and mica schist bedrock

Minor Components

Dissimilar components:
- Glenelg soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Edneytown soils, which are very deep to bedrock; in similar landform positions
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil; in similar landform positions
- Greenlee soils, which are very deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Brownwood soils, which have less clay and more mica in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil; in similar landform positions

Similar components:
- Cowee soils that have fewer stones or cobbles on the surface
- Soils that have a yellowish brown subsoil; in similar landform positions
- Ashe soils, which have less clay in the subsoil; in similar landform positions

- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Low (about 3.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.01 to 0.10 percent stones
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Avoid planting in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: N
Hydric soil: No

9E—Cowee gravelly loam, 35 to 55 percent slopes, stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Cowee and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown gravelly loam

Subsoil:
6 to 27 inches—yellowish red gravelly clay loam

Substratum:
27 to 39 inches—gravelly sandy loam

Soft bedrock:
39 to 45 inches—interbedded mica gneiss and mica schist bedrock

Minor Components

Dissimilar components:
- Glenelg soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Edneytown soils, which are very deep to bedrock; in similar landform positions

- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil; in similar landform positions
- Greenlee soils, which are very deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Brownwood soils, which have less clay and more mica in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil; in similar landform positions

Similar components:
- Cowee soils that have fewer stones or cobbles on the surface
- Soils that have a yellowish brown subsoil; in similar landform positions
- Ashe soils, which have less clay in the subsoil; in similar landform positions
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Low (about 3.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.01 to 0.10 percent stones
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Avoid planting in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: N
Hydric soil: No

10D—Cowee-Rock outcrop complex, 8 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits (fig. 6), shoulders, and moderately steep backslopes
Size of areas: 5 to 25 acres
Shape of areas: Irregular

Map Unit Composition

Cowee and similar soils: Typically 55 percent, ranging from about 50 to 60 percent
Rock outcrop: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Cowee

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown loam

Subsoil:
6 to 27 inches—yellowish red clay loam

Figure 6.—An area of Cowee-Rock outcrop complex, 8 to 35 percent slopes, adjacent to the Blue Ridge Parkway.

Substratum:
27 to 39 inches—gravelly sandy loam

Soft bedrock:
39 to 45 inches—interbedded mica gneiss and mica schist bedrock

Rock outcrop

This part of the map unit consists of outcrops of mica schist and mica gneiss, which are about 10 to 200 feet apart.

Minor Components

Dissimilar components:
- Glenelg soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Edneytown soils, which are very deep to bedrock; in similar landform positions
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil; in similar landform positions
- Greenlee soils, which are very deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Brownwood soils, which have less clay and more mica in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions

- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil; in similar landform positions

Similar components:
- Soils that have a yellowish brown subsoil; in similar landform positions
- Ashe soils, which have less clay in the subsoil; in similar landform positions
- Soils that have dark surface layers; on elevated summits and north-facing backslopes
- Areas which have rock outcrops that are spaced more than 200 feet apart; in similar landform positions

Properties and Qualities of the Cowee Soil

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- The low strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Cowee—7s; Rock outcrop—8
Virginia soil management group: Cowee—N; Rock outcrop—none assigned
Hydric soils: No

10E—Cowee-Rock outcrop complex, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Cowee and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Rock outcrop: Typically 40 percent, ranging from about 35 to 45 percent

Typical Profile

Cowee

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown loam

Subsoil:
6 to 27 inches—yellowish red clay loam

Substratum:
27 to 39 inches—gravelly sandy loam

Soft bedrock:
39 to 45 inches—interbedded mica gneiss and mica schist bedrock

Rock outcrop

This part of the map unit consists of outcrops of mica schist and mica gneiss, which are about 10 to 200 feet apart.

Minor Components

Dissimilar components:
- Glenelg soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Edneytown soils, which are very deep to bedrock; in similar landform positions
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil; in similar landform positions
- Greenlee soils, which are very deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Brownwood soils, which have less clay and more mica in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil; in similar landform positions

Similar components:
- Soils that have a yellowish brown subsoil; in similar landform positions
- Ashe soils, which have less clay in the subsoil; in similar landform positions
- Soils that have dark surface layers; on elevated summits and north-facing backslopes
- Areas which have rock outcrops that are spaced more than 200 feet apart; in similar landform positions

Properties and Qualities of the Cowee Soil

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited

- Avoid planting in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- The low strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Cowee—7s; Rock outcrop—8
Virginia soil management group: Cowee—N; Rock outcrop—none assigned
Hydric soils: No

11C—Cowee-Urban land complex, 0 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Cowee and similar soils: Typically 55 percent, ranging from about 50 to 60 percent
Urban land: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Cowee

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown loam

Subsoil:
6 to 27 inches—yellowish red clay loam

Substratum:
27 to 39 inches—gravelly sandy loam

Soft bedrock:
39 to 45 inches—interbedded mica gneiss and mica schist bedrock

Urban land

This part of the map unit consists of areas covered by highways, streets, parking lots, buildings, and other impervious surfaces.

Minor Components

Dissimilar components:
- Glenelg soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Edneytown soils, which are very deep to bedrock; in similar landform positions
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil; in similar landform positions
- Greenlee soils, which are very deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Brownwood soils, which have less clay and more mica in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions

Similar components:
- Soils that have a yellowish brown subsoil; in similar landform positions
- Ashe soils, which have less clay in the subsoil; in similar landform positions
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Properties and Qualities of the Cowee Soil

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations of Native Soil Areas

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Cowee—7e; Urban land—8
Virginia soil management group: Cowee—N; Urban land—none assigned
Hydric soils: No

12A—Craigsville cobbly sandy loam, 0 to 3 percent slopes, frequently flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Flood plains in valleys

Position on the landform: Steps and channels
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

Craigsville and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

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

Subsoil:
6 to 19 inches—yellowish brown very cobbly sandy loam
19 to 32 inches—yellowish brown very cobbly sandy loam

Substratum:
32 to 62 inches—yellowish brown extremely cobbly loamy sand

Minor Components

Dissimilar components:
- Codorus soils, which have fewer rock fragments in the subsoil and are somewhat poorly drained; in similar landform positions
- Kinkora soils, which have fewer rock fragments in the subsoil and are poorly drained; on stream terraces
- Hatboro soils, which have fewer rock fragments in the subsoil and are poorly drained; in similar landform positions
- Delanco soils, which have fewer rock fragments in the subsoil and are moderately well drained; on stream terraces
- Greenlee soils, which formed in colluvium on footslopes, toeslopes, and lower backslopes
- Tate soils, which have fewer rock fragments in the soil and formed in colluvium on footslopes, toeslopes, and lower backslopes

Similar components:
- Comus soils, which have fewer rock fragments in the subsoil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 3.8 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: Frequent
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Alluvium derived from igneous and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay; poorly suited to corn; not suited to tobacco and alfalfa hay

- The limited available water capacity may cause plants to suffer from moisture stress.
- Frequent flooding restricts the use of winter grain crops.
- Flooding may damage crops.

Pastureland

Suitability: Moderately suited
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.
- Flooding may damage pastures.

Woodland

Suitability: Well suited to northern red oak and eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should focus on streamside management zones and stream crossings and should include general adherence to all applicable best management practices.
- Flooding may damage haul roads.
- Flooding restricts the safe use of roads by log trucks.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding is a limitation affecting building site development.

Septic tank absorption fields

- Flooding is a limitation affecting septic tank absorption fields.

Local roads and streets

- Flooding may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 2w
Virginia soil management group: CC
Hydric soil: No

13B—Delanco fine sandy loam, 3 to 8 percent slopes, rarely flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)

Landform: Stream terraces and alluvial fans in valleys; coves in foothills
Position on the landform: Treads on stream terraces; toeslopes and footslopes on alluvial fans and in coves
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Delanco and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Surface layer:
0 to 10 inches—dark yellowish brown fine sandy loam

Subsurface layer:
10 to 16 inches—yellowish brown fine sandy loam

Subsoil:
16 to 41 inches—yellowish brown sandy clay loam; light brownish gray iron depletions
41 to 47 inches—yellowish brown loam; light brownish gray iron depletions

Substratum:
47 to 62 inches—yellowish brown sandy loam; light brownish gray iron depletions

Minor Components

Dissimilar components:
- Delanco soils that have cobbly surface horizons
- Codorus soils, which are somewhat poorly drained; on flood plains
- Hatboro soils, which are poorly drained; on flood plains
- Craigsville soils, which have more rock fragments and less clay in the subsoil; on flood plains
- Kinkora soils, which are poorly drained and have more clay in the subsoil; in similar landform positions
- Comus soils, which are well drained and have less clay in the subsoil; on flood plains
- Greenlee soils, which are well drained and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions

Similar components:
- Elsinboro soils, which are well drained; in similar landform positions
- Braddock soils, which are well drained and have more clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Tate soils, which are well drained; on footslopes, toeslopes, and lower backslopes
- Delanco soils that occur in less sloping areas

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Moderately well drained
Depth to seasonal water saturation: About 12 to 30 inches
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Moderate

Runoff class: Medium
Surface fragments: None
Parent material: Alluvium derived from igneous and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to corn, tobacco, and grass-legume hay; moderately suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- Frost action may damage the root system of winter grain crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Moderately suited to yellow-poplar; well suited to eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- Soil wetness may limit the use of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- This soil is well suited to haul roads and log landings.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding is a limitation affecting building site development.
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields

- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.

Interpretive Groups

Prime farmland: Prime farmland if drained
Land capability class: 2e
Virginia soil management group: B
Hydric soil: No

14C—Delanco fine sandy loam, 8 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces and alluvial fans in valleys; coves in foothills
Position on the landform: Treads on stream terraces; footslopes and toeslopes on alluvial fans and in coves
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Delanco and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Surface layer:
0 to 10 inches—dark yellowish brown fine sandy loam

Subsurface layer:
10 to 16 inches—yellowish brown fine sandy loam

Subsoil:
16 to 41 inches—yellowish brown sandy clay loam; light brownish gray iron depletions
41 to 47 inches—yellowish brown loam; light brownish gray iron depletions

Substratum:
47 to 62 inches—yellowish brown sandy loam; light brownish gray iron depletions

Minor Components

Dissimilar components:
- Delanco soils that have cobbly surface horizons
- Codorus soils, which are somewhat poorly drained; on flood plains
- Hatboro soils, which are poorly drained; on flood plains
- Craigsville soils, which have more rock fragments and less clay in the subsoil; on flood plains
- Kinkora soils, which are poorly drained and have more clay in the subsoil; in similar landform positions
- Comus soils, which are well drained and have less clay in the subsoil; on flood plains
- Greenlee soils, which are well drained and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions

Similar components:
- Elsinboro soils, which are well drained; in similar landform positions
- Braddock soils, which are well drained and have more clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Tate soils, which are well drained; on footslopes, toeslopes, and lower backslopes
- Delanco soils that occur in less sloping areas

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Moderately well drained

Depth to seasonal water saturation: About 12 to 30 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Medium
Surface fragments: None
Parent material: Alluvium derived from igneous and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to corn, tobacco, and grass-legume hay; moderately suited to alfalfa hay

- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- Frost action may damage the root system of winter grain crops.

Pastureland

Suitability: Well suited

- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Moderately suited to yellow-poplar; well suited to eastern white pine

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- This soil is well suited to haul roads and log landings.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: B
Hydric soil: No

15B—Delanco-Kinkora complex, 0 to 8 percent slopes, rarely flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces and alluvial fans in valleys; coves in foothills
Position on the landform: Treads on stream terraces; toeslopes and footslopes on alluvial fans and in coves
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Delanco and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Kinkora and similar soils: Typically 40 percent, ranging from about 35 to 45 percent

Typical Profile

Delanco

Surface layer:
0 to 10 inches—dark yellowish brown fine sandy loam

Subsurface layer:
10 to 16 inches—yellowish brown fine sandy loam

Subsoil:
16 to 41 inches—yellowish brown sandy clay loam; light brownish gray iron depletions
41 to 47 inches—yellowish brown loam; light brownish gray iron depletions

Substratum:
47 to 62 inches—yellowish brown sandy loam; light brownish gray iron depletions

Kinkora

Surface layer:
0 to 7 inches—dark grayish brown fine sandy loam; light brownish gray iron depletions

Subsurface layer:
7 to 16 inches—dark grayish brown fine sandy loam; yellowish brown masses of oxidized iron

Subsoil:
16 to 27 inches—grayish brown clay loam; yellowish brown masses of oxidized iron
27 to 38 inches—grayish brown clay loam; yellowish brown masses of oxidized iron

Substratum:
38 to 48 inches—gray gravelly loam
48 to 62 inches—gray gravelly loamy sand

Minor Components

Dissimilar components:
- Greenlee soils, which are well drained and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Craigsville soils, which are well drained and have more rock fragments and less clay in the subsoil; on flood plains
- Comus soils, which are well drained and have less clay in the subsoil; on flood plains

Similar components:
- Elsinboro and Braddock soils, which are similar to the Delanco soil and are well drained; in similar landform positions
- Tate soils, which are similar to the Delanco soil and are well drained; on footslopes, toeslopes, and lower backslopes
- Hatboro soils, which are similar to the Kinkora soil, are poorly drained, and have less clay in the subsoil; on flood plains
- Codorus soils, which are similar to the Kinkora soil, are somewhat poorly drained, and have less clay in the subsoil; on flood plains

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Delanco—moderately high (about 0.20 in/hr); Kinkora—moderately low (about 0.06 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Delanco—moderately well drained; Kinkora—poorly drained
Depth to seasonal water saturation: Delanco—about 12 to 30 inches; Kinkora—about 0 to 6 inches
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: Delanco—none; Kinkora—occasional
Depth of ponding: Delanco—not applicable; Kinkora—0.1 to 0.5 foot
Shrink-swell potential: Delanco—moderate; Kinkora—high
Runoff class: Delanco—low; Kinkora—negligible
Surface fragments: None
Parent material: Alluvium derived from igneous and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Delanco—well suited to corn, tobacco, and grass-legume hay and moderately suited to alfalfa hay; Kinkora—poorly suited to corn and not suited to tobacco, grass-legume hay, and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.
- Frost action may damage the root system of winter grain crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pastureland

Suitability: Delanco—well suited; Kinkora—poorly suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Delanco—moderately suited to yellow-poplar and well suited to eastern white pine; Kinkora—moderately suited to red maple
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- Ponding restricts the safe use of roads by log trucks.
- Soil wetness may limit the use of log trucks.
- These soils are well suited to haul roads and log landings.

Christmas trees

- These soils are unsuited to Christmas trees.

Building sites

- Flooding and ponding are limitations affecting building site development.
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields

- Ponding is a limitation affecting septic tank absorption fields.
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.
- Because of shrinking and swelling, the use of these soils as base material for local roads and streets is restricted.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Delanco—2e; Kinkora—4w
Virginia soil management group: Delanco—B; Kinkora—OO
Hydric soils: Delanco—no; Kinkora—yes

16C—Edneytown-Ashe complex, 8 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Edneytown and similar soils: Typically 55 percent, ranging from about 50 to 60 percent
Ashe and similar soils: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Edneytown

Surface layer:
0 to 4 inches—brown loam

Subsurface layer:
4 to 7 inches—yellowish brown loam

Subsoil:
7 to 20 inches—strong brown sandy clay loam
20 to 27 inches—strong brown sandy loam

Substratum:
27 to 44 inches—brownish yellow loamy sand
44 to 62 inches—brownish yellow loamy sand

Ashe

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 18 inches—brownish yellow gravelly sandy loam

Substratum:
18 to 28 inches—yellowish brown gravelly sandy loam

Hard bedrock:
28 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Hayesville soils, which are similar to the Edneytown soil and have more clay in the subsoil; in similar landform positions
- Soils that are similar to the Edneytown soil and have a dark surface layer; on elevated summits and north-facing backslopes
- Edneyville soils, which have less clay in the subsoil; in similar landform positions
- Tate soils, which are similar to the Edneytown soil and have a thicker solum; on footslopes, toeslopes, and lower backslopes
- Soils that are similar to the Edneytown soil and have a red subsoil; in similar landform positions
- Glenelg soils, which are similar to the Edneytown soil and can have loam, silt loam, and silty clay loam textures in the argillic horizon; in similar landform positions
- Myersville soils, which are similar to the Edneytown soil and are deep to bedrock; in similar landform positions
- Peaks soils, which are similar to the Ashe soil, are moderately deep to hard bedrock, and have less clay and more rock fragments in the subsoil; in similar landform positions
- Soils that are similar to the Ashe soil and have a dark surface layer; on elevated summits and north-facing backslopes
- Cowee soils, which are similar to the Ashe soil and have more clay in the subsoil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Edneytown—moderate (about 7.2 inches); Ashe—very low (about 2.7 inches)

Slowest saturated hydraulic conductivity: Edneytown—moderately high (about 0.57 in/hr); Ashe—high (about 1.98 in/hr)
Depth class: Edneytown—very deep (more than 60 inches); Ashe—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Edneytown—more than 60 inches; Ashe—20 to 40 inches to bedrock (lithic)
Drainage class: Edneytown—well drained; Ashe—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Edneytown—medium; Ashe—very high
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

Suitability: Edneytown—well suited to tobacco and grass-legume hay and moderately suited to corn and alfalfa hay; Ashe—moderately suited to grass-legume hay, poorly suited to corn, and not suited to alfalfa hay and tobacco
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Edneytown—well suited; Ashe—poorly suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Edneytown—well suited to yellow-poplar and eastern white pine; Ashe—well suited to chestnut oak and moderately suited to eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: Edneytown—L; Ashe—JJ
Hydric soils: No

16D—Edneytown-Ashe complex, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Edneytown and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Ashe and similar soils: Typically 40 percent, ranging from about 35 to 45 percent

Typical Profile

Edneytown

Surface layer:
0 to 4 inches—brown loam

Subsurface layer:
4 to 7 inches—yellowish brown loam

Subsoil:
7 to 20 inches—strong brown sandy clay loam
20 to 27 inches—strong brown sandy loam

Substratum:
27 to 44 inches—brownish yellow loamy sand
44 to 62 inches—brownish yellow loamy sand

Ashe

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 18 inches—brownish yellow gravelly sandy loam

Substratum:
18 to 28 inches—yellowish brown gravelly sandy loam

Hard bedrock:
28 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Hayesville soils, which are similar to the Edneytown soil and have more clay in the subsoil; in similar landform positions
- Soils that are similar to the Edneytown soil and have a dark surface layer; on elevated summits and north-facing backslopes
- Edneyville soils, which are similar to the Edneytown soil and have less clay in the subsoil; in similar landform positions
- Tate soils, which are similar to the Edneytown soil and have a thicker solum; on footslopes, toeslopes, and lower backslopes
- Soils that are similar to the Edneytown soil and have a red subsoil; in similar landform positions
- Glenelg soils, which are similar to the Edneytown soil and can have loam, silt loam, and silty clay loam textures in the argillic horizon; in similar landform positions
- Myersville soils, which are similar to the Edneytown soil and are deep to bedrock; in similar landform positions
- Peaks soils, which are similar to the Ashe soil, are moderately deep to hard bedrock, and have less clay and more rock fragments in the subsoil; in similar landform positions
- Soils that are similar to the Ashe soil and have a dark surface layer; on elevated summits and north-facing backslopes
- Cowee soils, which are similar to the Ashe soil and have more clay in the subsoil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Edneytown—moderate (about 7.2 inches); Ashe—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Edneytown—moderately high (about 0.57 in/hr); Ashe—high (about 1.98 in/hr)
Depth class: Edneytown—very deep (more than 60 inches); Ashe—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Edneytown—more than 60 inches; Ashe—20 to 40 inches to bedrock (lithic)
Drainage class: Edneytown—well drained; Ashe—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Edneytown—high; Ashe—very high
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

Suitability: Edneytown—well suited to tobacco and moderately suited to corn, grass-legume hay, and alfalfa hay; Ashe—poorly suited to corn and grass-legume hay and not suited to alfalfa hay and tobacco

- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Edneytown—well suited; Ashe—poorly suited

- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Edneytown—well suited to yellow-poplar and eastern white pine; Ashe—well suited to chestnut oak and moderately suited to eastern white pine

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited

- Avoid planting in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e
Virginia soil management group: Edneytown—L; Ashe—JJ
Hydric soils: No

17C—Edneytown-Urban land complex, 0 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 400 acres
Shape of areas: Irregular

Map Unit Composition

Edneytown and similar soils: Typically 55 percent, ranging from about 50 to 60 percent
Urban land: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Edneytown

Surface layer:
0 to 4 inches—brown loam

Subsurface layer:
4 to 7 inches—yellowish brown loam

Subsoil:
7 to 20 inches—strong brown sandy clay loam
20 to 27 inches—strong brown sandy loam

Substratum:
27 to 44 inches—brownish yellow loamy sand
44 to 62 inches—brownish yellow loamy sand

Urban land

This part of the map unit consists of areas covered by highways, streets, parking lots, buildings, and other impervious surfaces.

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions
- Ashe soils, which are moderately deep to bedrock; in similar landform positions

Similar components:
- Hayesville soils, which have more clay in the subsoil; in similar landform positions
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes
- Edneyville soils, which have less clay in the subsoil; in similar landform positions
- Tate soils, which have a thicker solum; on footslopes, toeslopes, and lower backslopes
- Soils that have a red subsoil; in similar landform positions
- Glenelg soils, which can have loam, silt loam, and silty clay loam textures in the argillic horizon; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions

Properties and Qualities of the Edneytown Soil

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations of Native Soil Areas

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Edneytown—7e; Urban land—8
Virginia soil management group: Edneytown—L; Urban land—none assigned
Hydric soils: No

18C—Edneyville-Ashe complex, 8 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders

Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Edneyville and similar soils: Typically 55 percent, ranging from about 50 to 60 percent
Ashe and similar soils: Typically 25 percent, ranging from about 20 to 30 percent

Typical Profile

Edneyville

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsurface layer:
5 to 11 inches—yellowish brown loam

Subsoil:
11 to 26 inches—yellowish brown sandy loam
26 to 34 inches—yellowish brown sandy loam

Substratum:
34 to 62 inches—brownish yellow sandy loam

Ashe

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 18 inches—brownish yellow gravelly sandy loam

Substratum:
18 to 28 inches—yellowish brown gravelly sandy loam

Hard bedrock:
28 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments in the subsoil and are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Edneytown and Glenelg soils, which have more clay in the subsoil; in similar landform positions
- Tate soils, which are similar to the Edneytown soil and have more clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Soils that are similar to the Edneytown soil and have a dark surface layer; on elevated summits and north-facing backslopes
- Myersville soils, which are similar to the Edneytown soil, have more clay in the subsoil, and are deep to bedrock; in similar landform positions
- Peaks soils, which are similar to the Ashe soil, are moderately deep to hard bedrock, and have more rock fragments in the subsoil; in similar landform positions
- Cowee soils, which are similar to the Ashe soil and have more clay in the subsoil; in similar landform positions
- Soils that are similar to the Ashe soil and have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Edneyville—moderate (about 8.0 inches); Ashe—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Edneyville—very deep (more than 60 inches); Ashe—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Edneyville—more than 60 inches; Ashe—20 to 40 inches to bedrock (lithic)
Drainage class: Edneyville—well drained; Ashe—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Edneyville—low; Ashe—very high
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

Suitability: Edneyville—well suited to tobacco, moderately suited to grass-legume hay, poorly suited to corn, and not suited to alfalfa hay; Ashe—moderately suited to grass-legume hay, poorly suited to corn, and not suited to tobacco and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Edneyville—well suited; Ashe—poorly suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Edneyville—well suited to yellow-poplar and eastern white pine and moderately suited to northern red oak; Ashe—well suited to chestnut oak and moderately suited to eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

- These soils are well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: Edneyville—GG; Ashe—JJ
Hydric soils: No

18D—Edneyville-Ashe complex, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Edneyville and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Ashe and similar soils: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Edneyville

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsurface layer:
5 to 11 inches—yellowish brown loam

Subsoil:
11 to 26 inches—yellowish brown sandy loam
26 to 34 inches—yellowish brown sandy loam

Substratum:
34 to 62 inches—brownish yellow sandy loam

Ashe

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 18 inches—brownish yellow gravelly sandy loam

Substratum:
18 to 28 inches—yellowish brown gravelly sandy loam

Hard bedrock:
28 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments in the subsoil and are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Edneytown and Glenelg soils, which have more clay in the subsoil; in similar landform positions
- Tate soils, which are similar to the Edneytown soil and have more clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Soils that are similar to the Edneytown soil and have a dark surface layer; on elevated summits and north-facing backslopes
- Myersville soils, which are similar to the Edneytown soil, have more clay in the subsoil, and are deep to bedrock; in similar landform positions
- Peaks soils, which are similar to the Ashe soil, are moderately deep to hard bedrock, and have more rock fragments in the subsoil; in similar landform positions
- Cowee soils, which are similar to the Ashe soil and have more clay in the subsoil; in similar landform positions
- Soils that are similar to the Ashe soil and have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Edneyville—moderate (about 8.0 inches); Ashe—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Edneyville—very deep (more than 60 inches); Ashe—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Edneyville—more than 60 inches; Ashe—20 to 40 inches to bedrock (lithic)
Drainage class: Edneyville—well drained; Ashe—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Edneyville—medium; Ashe—very high
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

Suitability: Edneyville—well suited; Ashe—poorly suited

- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.

Woodland

Suitability: Edneyville—well suited to yellow-poplar and eastern white pine and moderately suited to northern red oak; Ashe—well suited to chestnut oak and moderately suited to eastern white pine

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

- These soils are well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: Edneyville—GG; Ashe—JJ
Hydric soils: No

19D—Edneyville-Ashe complex, 8 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Edneyville and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Ashe and similar soils: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Edneyville

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsurface layer:
5 to 11 inches—yellowish brown loam

Subsoil:
11 to 26 inches—yellowish brown sandy loam
26 to 34 inches—yellowish brown sandy loam

Substratum:
34 to 62 inches—brownish yellow sandy loam

Ashe

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 18 inches—brownish yellow gravelly sandy loam

Substratum:
18 to 28 inches—yellowish brown gravelly sandy loam

Hard bedrock:
28 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments in the subsoil and are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in similar landform positions

Similar components:
- Edneytown and Glenelg soils, which have more clay in the subsoil; in similar landform positions
- Tate soils, which are similar to the Edneyville soil and have more clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Soils that are similar to the Edneyville soil and have a dark surface layer; on elevated summits and north-facing backslopes

- Myersville soils, which are similar to the Edneyville soil, have more clay in the subsoil, and are deep to bedrock; in similar landform positions
- Areas that are similar to the Edneyville soil and have fewer stones on the surface; in similar landform positions
- Peaks soils, which are similar to the Ashe soil, are moderately deep to hard bedrock, and have more rock fragments in the subsoil; in similar landform positions
- Cowee soils, which are similar to the Ashe soil and have more clay in the subsoil; in similar landform positions
- Soils that are similar to the Ashe soil and have a dark surface layer; on elevated summits and north-facing backslopes
- Areas that are similar to the Ashe soil and have fewer stones on the surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Edneyville—moderate (about 8.0 inches); Ashe—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Edneyville—very deep (more than 60 inches); Ashe—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Edneyville—more than 60 inches; Ashe—20 to 40 inches to bedrock (lithic)
Drainage class: Edneyville—well drained; Ashe—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Edneyville—medium; Ashe—very high
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Edneyville—well suited to yellow-poplar and eastern white pine and moderately suited to northern red oak; Ashe—well suited to chestnut oak and moderately suited to eastern white pine

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- Bedrock may interfere with the construction of haul roads and log landings.

- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

- These soils are well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: Edneyville—GG; Ashe—JJ
Hydric soils: No

20B—Elsinboro fine sandy loam, 3 to 8 percent slopes, rarely flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces in valleys
Position on the landform: Treads
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Elsinboro and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Surface layer:
0 to 10 inches—dark yellowish brown fine sandy loam

Subsurface layer:
10 to 18 inches—brown fine sandy loam

Subsoil:
18 to 45 inches—strong brown clay loam

Substratum:
45 to 62 inches—strong brown cobbly sandy loam

Minor Components

Dissimilar components:
- Elsinboro soils that have cobbly surface horizons
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil; on flood plains
- Craigsville soils, which have more rock fragments and less clay in the subsoil; on flood plains
- Kinkora soils, which are poorly drained and have more clay in the subsoil; in similar landform positions
- Comus soils, which have more sand and less clay in the subsoil; on flood plains
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions

Similar components:
- Delanco soils, which are moderately well drained; in similar landform positions
- Braddock soils, which have more clay in the subsoil; in similar landform positions
- Tate soils on footslopes, toeslopes, and lower backslopes
- Elsinboro soils that are in less sloping areas

Soil Properties and Qualities

Available water capacity: Moderate (about 7.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Alluvium derived from igneous and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to corn, tobacco, and grass-legume hay; moderately suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- This soil is well suited to haul roads and log landings.
- This soil is well suited to equipment operations.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas.

Building sites

- Flooding is a limitation affecting building site development.

Septic tank absorption fields

- The excessive permeability limits the proper treatment of the effluent from conventional septic systems, which may pollute the water table.
- This soil is well suited to septic tank absorption fields.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e
Virginia soil management group: L
Hydric soil: No

21B—Glenelg and Hayesville loams, 3 to 8 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits
Size of areas: 5 to 75 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Hayesville and similar soils: Typically 40 percent, ranging from about 35 to 45 percent

Typical Profile

Glenelg

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

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Hayesville

Surface layer:
0 to 6 inches—brown loam

Subsurface layer:
6 to 11 inches—strong brown loam

Subsoil:
11 to 43 inches—red clay
43 to 49 inches—red clay loam

Substratum:
49 to 62 inches—red sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions
- Ashe and Brownwood soils, which are moderately deep to bedrock and have less clay in the subsoil; in similar landform positions
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes

Similar components:
- Edneytown soils, which are similar to the Glenelg soil and can have sandy clay loam textures in the argillic horizon but not silt loam, loam, or silty clay loam; in similar landform positions
- Edneyville soils, which are similar to the Glenelg soil and have less clay in the subsoil; in similar landform positions
- Myersville soils, which are similar to the Glenelg soil and are deep to bedrock; in similar landform positions
- Tate soils, which are similar to the Glenelg soil; on footslopes, toeslopes, and lower backslopes
- Soils that are similar to the Glenelg soil and have dark surface layers; on elevated summits and north-facing backslopes
- Edneytown soils, which are similar to the Hayesville soil and have less clay in the subsoil; in similar landform positions
- Myersville soils, which are similar to the Hayesville soil, have less clay in the subsoil, and are deep to bedrock; in similar landform positions
- Soils that are similar to the Hayesville soil and have dark surface layers; on elevated summits and north-facing backslopes
- Tate soils, which are similar to the Hayesville soil; on footslopes, toeslopes, and lower backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)

Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

Suitability: Glenelg—well suited to corn, tobacco, and grass-legume hay and moderately suited to alfalfa hay; Hayesville—well suited tobacco and grass-legume hay and moderately suited to alfalfa hay and corn
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Glenelg—well suited to eastern white pine and moderately suited to yellow-poplar; Hayesville—well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- These soils are well suited to equipment operations.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways. The high clay content of the Hayesville soil increases disease problems, especially phytophthora.

Building sites

- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- These soils are well suited to septic tank absorption fields.

Local roads and streets

- These soils are well suited to local roads and streets.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e
Virginia soil management group: Glenelg—N; Hayesville—X
Hydric soils: No

22C—Glenelg loam, 8 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

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

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions
- Ashe and Brownwood soils, which have less clay in the subsoil and are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes

Similar components:
- Edneytown soils, which can have sandy clay loam textures in the argillic horizon but not silt loam, loam, or silty clay loam; in similar landform positions
- Edneyville soils, which have less clay in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which have more clay in the subsoil; in similar landform positions
- Tate soils on footslopes, toeslopes, and lower backslopes
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)

Figure 7.—Pasture in an area of Glenelg loam, 8 to 15 percent slopes, in the foreground. Glenelg loam, 15 to 25 percent slopes, is in the background.

Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

Suitability: Well suited to tobacco and grass-legume hay; moderately suited to corn and alfalfa hay

- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited (fig. 7)

- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: N
Hydric soil: No

22D—Glenelg loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 450 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

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

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions
- Ashe and Brownwood soils, which have less clay in the subsoil and are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes

Similar components:
- Edneytown soils, which can have sandy clay loam textures in the argillic horizon but not silt loam, loam, or silty clay loam; in similar landform positions
- Edneyville soils, which have less clay in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which have more clay in the subsoil; in similar landform positions
- Tate soils on footslopes, toeslopes, and lower backslopes
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

Suitability: Well suited to tobacco; moderately suited to corn, grass-legume hay, and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential

negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e
Virginia soil management group: N
Hydric soil: No

22E—Glenelg loam, 25 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

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

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions
- Ashe and Brownwood soils, which have less clay in the subsoil and are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes

Similar components:
- Edneytown soils, which can have sandy clay loam textures in the argillic horizon but not silt loam, loam, or silty clay loam; in similar landform positions
- Edneyville soils, which have less clay in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which have more clay in the subsoil; in similar landform positions
- Tate soils on footslopes, toeslopes, and lower backslopes
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: N
Hydric soil: No

22F—Glenelg loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and very steep shoulders and summits
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg and similar soils: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

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

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions
- Ashe and Brownwood soils, which have less clay in the subsoil and are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes

Similar components:
- Edneytown soils, which can have sandy clay loam textures in the argillic horizon but not silt loam, loam, or silty clay loam; in similar landform positions
- Edneyville soils, which have less clay in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which have more clay in the subsoil; in similar landform positions
- Tate soils on footslopes, toeslopes, and lower backslopes
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to yellow-poplar; well suited to eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: N
Hydric soil: No

23C—Glenelg loam, 8 to 15 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

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

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in similar landform positions

- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Ashe and Brownwood soils, which have less clay in the subsoil and are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes

Similar components:
- Edneytown soils, which can have sandy clay loam textures in the argillic horizon but not silt loam, loam, or silty clay loam; in similar landform positions
- Edneyville soils, which have less clay in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which have more clay in the subsoil; in similar landform positions
- Tate soils on footslopes, toeslopes, and lower backslopes
- Soils that have dark surface layers; on elevated summits and north-facing backslopes
- Areas with fewer stones on the surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Large stones on the surface may restrict the operation of some farm machinery.

Woodland

Suitability: Moderately suited to yellow-poplar; well suited to eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6s
Virginia soil management group: N
Hydric soil: No

23D—Glenelg loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

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

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Ashe and Brownwood soils, which have less clay in the subsoil and are moderately deep to bedrock; in similar landform positions

- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes

Similar components:
- Edneytown soils, which can have sandy clay loam textures in the argillic horizon but not silt loam, loam, or silty clay loam; in similar landform positions
- Edneyville soils, which have less clay in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which have more clay in the subsoil; in similar landform positions
- Tate soils on footslopes, toeslopes, and lower backslopes
- Soils that have dark surface layers; on elevated summits and north-facing backslopes
- Areas with fewer stones on the surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to yellow-poplar; well suited to eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- The low strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: N
Hydric soil: No

23E—Glenelg loam, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

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

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Ashe and Brownwood soils, which have less clay in the subsoil and are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes

Similar components:
- Edneytown soils, which can have sandy clay loam textures in the argillic horizon but not silt loam, loam, or silty clay loam; in similar landform positions

- Edneyville soils, which have less clay in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which have more clay in the subsoil; in similar landform positions
- Tate soils on footslopes, toeslopes, and lower backslopes
- Soils that have dark surface layers; on elevated summits and north-facing backslopes
- Areas with fewer stones on the surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to yellow-poplar; well suited to eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: N
Hydric soil: No

24C—Glenelg-Urban land complex, 0 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 425 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg and similar soils: Typically 55 percent, ranging from about 50 to 60 percent
Urban land: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Glenelg

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

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Urban land

This part of the map unit consists of areas covered by highways, streets, parking lots, buildings, and other impervious surfaces.

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions
- Ashe and Brownwood soils, which have less clay in the subsoil and are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes

Similar components:
- Edneytown soils, which can have sandy clay loam textures in the argillic horizon but not silt loam, loam, or silty clay loam; in similar landform positions

- Edneyville soils, which have less clay in the subsoil; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Hayesville soils, which have more clay in the subsoil; in similar landform positions
- Tate soils on footslopes, toeslopes, and lower backslopes
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Properties and Qualities of the Glenelg Soil

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations of Native Soil Areas

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Glenelg—7e; Urban land—8
Virginia soil management group: Glenelg—N; Urban land—none assigned
Hydric soils: No

25C—Greenlee very cobbly loam, 0 to 15 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Greenlee and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 7 inches—dark brown very cobbly loam

Subsurface layer:
7 to 14 inches—dark yellowish brown very cobbly sandy loam

Subsoil:
14 to 39 inches—yellowish brown very cobbly sandy loam
39 to 53 inches—yellowish brown very cobbly sandy loam

Substratum:
53 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Areas with rubbly surfaces; in similar landform positions
- Tate soils, which have fewer rock fragments and more clay in the subsoil; in similar landform positions
- Craigsville soils, which are susceptible to flooding; on flood plains

Similar components:
- Greenlee soils that have fewer stones or cobbles on the surface
- Greenlee soils that have bouldery surfaces
- Soils that have a thicker dark surface layer; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 5.5 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Colluvium and/or local alluvium derived from metamorphic rock and/or igneous rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Large stones on the surface may restrict the operation of some farm machinery.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Rock fragments make excavation difficult and cutbanks unstable.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6s
Virginia soil management group: CC
Hydric soil: No

25D—Greenlee very cobbly loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Greenlee and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 7 inches—dark brown very cobbly loam

Subsurface layer:
7 to 14 inches—dark yellowish brown very cobbly sandy loam

Subsoil:
14 to 39 inches—yellowish brown very cobbly sandy loam
39 to 53 inches—yellowish brown very cobbly sandy loam

Substratum:
53 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Areas with rubbly surfaces; in similar landform positions
- Tate soils, which have fewer rock fragments and more clay in the subsoil; in similar landform positions
- Craigsville soils, which are susceptible to flooding; on flood plains

Similar components:
- Greenlee soils that have fewer stones or cobbles on the surface
- Greenlee soils that have bouldery surfaces
- Soils that have a thicker dark surface layer; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 5.5 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Colluvium and/or local alluvium derived from metamorphic rock and/or igneous rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.

- The use of mechanical planting equipment is impractical because of the slope.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Rock fragments make excavation difficult and cutbanks unstable.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: CC
Hydric soil: No

26A—Hatboro sandy loam, 0 to 3 percent slopes, frequently flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Flood plains in valleys
Position on the landform: Steps and channels; many areas are backswamps or depressions
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Hatboro and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 8 inches—brown sandy loam; yellowish brown masses of oxidized iron

Subsoil:
8 to 28 inches—light brownish gray sandy clay loam; yellowish brown masses of oxidized iron
28 to 45 inches—grayish brown sandy clay loam; strong brown masses of oxidized iron

Substratum:
45 to 62 inches—grayish brown silt loam; strong brown masses of oxidized iron

Minor Components

Dissimilar components:
- Elsinboro soils, which are well drained and have more clay in the subsoil; on treads
- Delanco soils, which are moderately well drained and have more clay in the subsoil; on treads, footslopes, and toeslopes
- Craigsville soils, which are well drained and have more rock fragments in the subsoil; in similar landform positions
- Hatboro soils that have a cobbly or stony surface
- Comus soils, which are well drained and have less clay in the subsoil; in similar landform positions

Similar components:
- Kinkora soils, which have more clay in the subsoil; on treads
- Codorus soils, which are somewhat poorly drained; in similar landform positions
- Soils that have a dark surface layer; in similar landform positions

Soil Properties and Qualities

Available water capacity: High (about 9.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Poorly drained
Depth to seasonal water saturation: About 0 to 6 inches
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: Frequent
Depth of ponding: 0.1 to 0.5 foot
Shrink-swell potential: Low
Runoff class: Negligible
Surface fragments: None
Parent material: Alluvium derived from igneous and/or metamorphic rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Poorly suited
- Flooding may damage pastures.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- Frost action may damage the root systems of plants.

Woodland

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should focus on streamside management zones and stream crossings and should include general adherence to all applicable best management practices.
- Flooding may damage haul roads.
- Flooding and ponding restrict the safe use of roads by log trucks.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding and ponding are limitations affecting building site development.
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields

- Flooding and ponding are limitations affecting septic tank absorption fields.
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Flooding may damage local roads and streets.
- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.
- The low strength may cause structural damage to local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6w
Virginia soil management group: HH
Hydric soil: Yes

27B—Hayesville loam, 3 to 8 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills
Position on the landform: Summits
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Hayesville and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsurface layer:
6 to 11 inches—strong brown loam

Subsoil:
11 to 43 inches—red clay
43 to 49 inches—red clay loam

Substratum:
49 to 62 inches—red sandy loam

Minor Components

Dissimilar components:
- Edneyville soils, which have less clay in the subsoil; in similar landform positions

- Peaks soils, which are moderately deep to bedrock and have less clay and more rock fragments in the subsoil; in similar landform positions
- Greenlee soils, which have more rock fragments and less clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Cowee soils, which are moderately deep to soft bedrock and have less clay in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Myersville soils, which are deep to bedrock and have less clay in the subsoil; in similar landform positions
- Edneytown and Glenelg soils, which have less clay in the subsoil; in similar landform positions
- Tate soils, which have less clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

Suitability: Well suited to tobacco and grass-legume hay; moderately suited to corn and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.
- Soil crusting results in a decrease in water infiltration and hinders the emergence of seedlings.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.

- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- The high clay content increases disease problems, especially phytophthora.

Building sites

- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- The excessive permeability limits the proper treatment of the effluent from conventional septic systems, which may pollute the water table.
- This soil is well suited to septic tank absorption fields.

Local roads and streets

- The low strength may cause structural damage to local roads and streets.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e
Virginia soil management group: X
Hydric soil: No

27C—Hayesville loam, 8 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Hayesville and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsurface layer:
6 to 11 inches—strong brown loam

Subsoil:
11 to 43 inches—red clay
43 to 49 inches—red clay loam

Substratum:
49 to 62 inches—red sandy loam

Minor Components

Dissimilar components:
- Edneyville soils, which have less clay in the subsoil; in similar landform positions

- Peaks soils, which are moderately deep to bedrock and have less clay and more rock fragments in the subsoil; in similar landform positions
- Greenlee soils, which have more rock fragments and less clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Cowee soils, which are moderately deep to soft bedrock and have less clay in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Myersville soils, which are deep to bedrock and have less clay in the subsoil; in similar landform positions
- Edneytown and Glenelg soils, which have less clay in the subsoil; in similar landform positions
- Tate soils, which have less clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

Suitability: Well suited to tobacco; moderately suited to corn, grass-legume hay, and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.
- Soil crusting results in a decrease in water infiltration and hinders the emergence of seedlings.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- The high clay content increases disease problems, especially phytophthora.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: X
Hydric soil: No

27D—Hayesville loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Hayesville and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsurface layer:
6 to 11 inches—strong brown loam

Subsoil:
11 to 43 inches—red clay
43 to 49 inches—red clay loam

Substratum:
49 to 62 inches—red sandy loam

Minor Components

Dissimilar components:
- Edneyville soils, which have less clay in the subsoil; in similar landform positions
- Peaks soils, which are moderately deep to bedrock and have less clay and more rock fragments in the subsoil; in similar landform positions
- Greenlee soils, which have more rock fragments and less clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Cowee soils, which are moderately deep to soft bedrock and have less clay in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Myersville soils, which are deep to bedrock and have less clay in the subsoil; in similar landform positions
- Edneytown and Glenelg soils, which have less clay in the subsoil; in similar landform positions
- Tate soils, which have less clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay and alfalfa hay; poorly suited to corn; not suited to tobacco
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.
- Soil crusting results in a decrease in water infiltration and hinders the emergence of seedlings.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential

negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- The high clay content increases disease problems, especially phytophthora.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e
Virginia soil management group: X
Hydric soil: No

28C—Hayesville-Urban land complex, 0 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Hayesville and similar soils: Typically 55 percent, ranging from about 50 to 60 percent
Urban land: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Hayesville

Surface layer:
0 to 6 inches—brown loam

Subsurface layer:
6 to 11 inches—strong brown loam

Subsoil:
11 to 43 inches—red clay
43 to 49 inches—red clay loam

Substratum:
49 to 62 inches—red sandy loam

Urban land

This part of the map unit consists of areas covered by highways, streets, parking lots, buildings, and other impervious surfaces.

Minor Components

Dissimilar components:
- Edneyville soils, which have less clay in the subsoil; in similar landform positions
- Peaks soils, which are moderately deep to bedrock and have less clay and more rock fragments in the subsoil; in similar landform positions
- Greenlee soils, which have more rock fragments and less clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Cowee and Ashe soils, which are moderately deep to soft bedrock and have less clay in the subsoil; in similar landform positions
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Myersville soils, which are deep to bedrock and have less clay in the subsoil; in similar landform positions
- Edneytown and Glenelg soils, which have less clay in the subsoil; in similar landform positions
- Tate soils, which have less clay in the subsoil; on footslopes, toeslopes, and lower backslopes
- Soils that have dark surface layers; on elevated summits and north-facing backslopes

Properties and Qualities of the Hayesville Soil

Available water capacity: Moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations for Native Soil Areas

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Hayesville—7e; Urban land—8
Virginia soil management group: Hayesville—X; Urban land—none assigned
Hydric soils: No

29C—Junaluska channery loam, 8 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders

Map Unit Composition

Junaluska and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

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

Subsoil:
5 to 20 inches—strong brown channery clay loam
20 to 30 inches—yellowish red channery clay loam

Soft bedrock:
30 to 45 inches—dark yellowish brown weathered bedrock

Hard bedrock:
45 inches—unweathered phyllite bedrock

Minor Components

Dissimilar components:
- Sylco soils, which have more rock fragments in the subsoil and do not have a subsoil layer with an accumulation of clay; in similar landform positions
- Sylvatus soils, which are shallow to bedrock and have more rock fragments in the subsoil; in similar landform positions
- Glenelg and Hayesville soils, which are very deep to bedrock; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Rock outcrops in similar landform positions
- Junaluska soils that have stones on the soil surface

Similar components:
- Soils that have yellower subsoils; in similar landform positions

- Soils that have darker surface layers; on elevated summits and north-facing backslopes
- Cowee soils, which have weathered from gneiss or schist bedrock; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 3.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from phyllite

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay and alfalfa hay; poorly suited to corn; not suited to tobacco
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to northern red oak and chestnut oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: U
Hydric soil: No

29D—Junaluska channery loam, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and steep backslopes

Map Unit Composition

Junaluska and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

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

Subsoil:
5 to 20 inches—strong brown channery clay loam
20 to 30 inches—yellowish red channery clay loam

Soft bedrock:
30 to 45 inches—dark yellowish brown weathered bedrock

Hard bedrock:
45 inches—unweathered phyllite bedrock

Minor Components

Dissimilar components:
- Sylco soils, which have more rock fragments in the subsoil and do not have a subsoil layer with an accumulation of clay; in similar landform positions
- Sylvatus soils, which are shallow to bedrock and have more rock fragments in the subsoil; in similar landform positions
- Glenelg and Hayesville soils, which are very deep to bedrock; in similar landform positions

- Myersville soils, which are deep to bedrock; in similar landform positions
- Rock outcrops in similar landform positions
- Junaluska soils that have stones on the soil surface

Similar components:
- Soils that have yellower subsoils; in similar landform positions
- Soils that have darker surface layers; on elevated summits and north-facing backslopes
- Cowee soils, which have weathered from gneiss or schist bedrock; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 3.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from phyllite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to northern red oak and chestnut oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- The low strength interferes with the construction of haul roads and log landings.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: U
Hydric soil: No

29E—Junaluska channery loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and very steep shoulders and summits

Map Unit Composition

Junaluska and similar soils: Typically 85 percent, ranging from about 80 to 95 percent

Typical Profile

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

Subsoil:
5 to 20 inches—strong brown channery clay loam
20 to 30 inches—yellowish red channery clay loam

Soft bedrock:
30 to 45 inches—dark yellowish brown weathered bedrock

Hard bedrock:
45 inches—unweathered phyllite bedrock

Minor Components

Dissimilar components:
- Sylco soils, which have more rock fragments in the subsoil and do not have a subsoil layer with an accumulation of clay; in similar landform positions
- Sylvatus soils, which are shallow to bedrock and have more rock fragments in the subsoil; in similar landform positions
- Glenelg and Hayesville soils, which are very deep to bedrock; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Rock outcrops in similar landform positions
- Junaluska soils that have stones on the soil surface

Similar components:
- Soils that have yellower subsoils; in similar landform positions
- Soils that have darker surface layers; on elevated summits and north-facing backslopes
- Cowee soils, which have weathered from gneiss or schist bedrock; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 3.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from phyllite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to northern red oak and chestnut oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.

- The low strength interferes with the construction of haul roads and log landings.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: U
Hydric soil: No

30A—Kinkora fine sandy loam, 0 to 3 percent slopes, rarely flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces in valleys
Position on the landform: Depressions or backswamps on treads
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Kinkora and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 7 inches—dark grayish brown fine sandy loam; light brownish gray iron depletions

Subsurface layer:
7 to 16 inches—dark grayish brown fine sandy loam; yellowish brown masses of oxidized iron

Subsoil:
16 to 27 inches—grayish brown clay loam; yellowish brown masses of oxidized iron
27 to 38 inches—grayish brown clay loam; yellowish brown masses of oxidized iron

Substratum:
38 to 48 inches—gray gravelly loam
48 to 62 inches—gray gravelly loamy sand

Minor Components

Dissimilar components:
- Elsinboro soils, which are well drained; in similar landform positions
- Delanco soils, which are moderately well drained and have less clay in the subsoil; in similar landform positions
- Craigsville soils, which are well drained and have more rock fragments in the subsoil; on flood plains
- Comus soils, which are well drained and have less clay in the subsoil; on flood plains
- Kinkora soils that have cobbly or stony surfaces

Similar components:
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil; on flood plains
- Soils that have darker surface layers; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.6 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Poorly drained
Depth to seasonal water saturation: About 0 to 6 inches
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: Occasional
Depth of ponding: 0.1 to 0.5 foot
Shrink-swell potential: High
Runoff class: Negligible
Surface fragments: None
Parent material: Alluvium derived from metamorphic rock and/or igneous rock

Use and Management Considerations

Cropland

Suitability: Poorly suited to corn; not suited to tobacco, grass-legume hay, and alfalfa hay
- The high clay content restricts the rooting depth of crops.
- Frost action may damage the root system of winter grain crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pastureland

Suitability: Poorly suited

- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- Frost action may damage the root systems of plants.

Woodland

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- Ponding restricts the safe use of roads by log trucks.
- This soil is well suited to haul roads and log landings.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding and ponding are limitations affecting building site development.
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields

- Ponding is a limitation affecting septic tank absorption fields.
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.
- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4w
Virginia soil management group: OO
Hydric soil: Yes

31D—Marbleyard-Unicoi complex, 8 to 35 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Marbleyard and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Unicoi and similar soils: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Marbleyard

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark brown very cobbly sandy loam

Subsoil:
4 to 9 inches—yellowish brown very cobbly sandy loam
9 to 23 inches—yellowish brown extremely cobbly sandy loam

Substratum:
23 to 36 inches—brownish yellow extremely gravelly sandy loam

Hard bedrock:
36 inches—light gray and very pale brown quartzite bedrock

Unicoi

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 5 inches—brown very gravelly sandy loam

Subsoil:
5 to 14 inches—yellowish brown very gravelly sandy loam

Substratum:
14 to 19 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
19 inches—metasandstone bedrock

Minor Components

Dissimilar components:
- Greenlee soils, which are well drained and very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Junaluska soils, which are moderately deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Tate soils, which are well drained, are very deep to bedrock, and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in similar landform positions

Similar components:
- Marbleyard soils that have fewer stones or cobbles on the surface
- Soils that are similar to the Marbleyard soil and have dark surface layers; on elevated summits and north-facing backslopes
- Sylco soils, which are similar to the Marbleyard soil, are well drained, and have more silt in the subsoil; in similar landform positions
- Unicoi soils that have fewer stones or cobbles on the surface
- Soils that are similar to the Unicoi soil and have dark surface layers; on elevated summits and north-facing backslopes
- Sylvatus soils, which are similar to the Unicoi soil, are well drained, and have more silt in the subsoil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Marbleyard—very low (about 2.0 inches); Unicoi—very low (about 0.9 inch)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Marbleyard—moderately deep (20 to 40 inches); Unicoi—shallow (10 to 20 inches)
Depth to root-restrictive feature: Marbleyard—20 to 40 inches to bedrock (lithic); Unicoi—10 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent subrounded stones
Parent material: Residuum weathered from metasandstone and/or quartzite

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to chestnut oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The volume of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

- These soils are unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.
- Rock fragments make excavation difficult and cutbanks unstable.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: Marbleyard—FF; Unicoi—JJ
Hydric soils: No

32B—Myersville loam, 3 to 8 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits

Map Unit Composition

Myersville and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 8 inches—strong brown loam
8 to 21 inches—strong brown and yellowish red channery clay loam
21 to 25 inches—yellowish red and yellowish brown channery loam

Substratum:
25 to 58 inches—dark olive brown and reddish yellow parachannery loam

Soft bedrock:
58 to 70 inches—amphibolite bedrock

Hard bedrock:
70 inches—amphibolite bedrock

Minor Components

Dissimilar components:
- Ashe soils, which are moderately deep bedrock and have less clay in the subsoil; in similar landform positions
- Cowee soils, which are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Areas with stony surfaces; in similar landform positions

Similar components:
- Edneytown, Edneyville, Glenelg, and Hayesville soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Soils that have darker surface layers; on elevated summits and north-facing slopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from amphibolite, hornblende schist, and/or hornblende gneiss and/or other types of schist and/or gneiss

Use and Management Considerations

Cropland

Suitability: Well suited to corn, grass-legume hay, and alfalfa hay; not suited to tobacco
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.

- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- This soil is well suited to equipment operations.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- This soil is well suited to building sites.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e
Virginia soil management group: D
Hydric soil: No

32C—Myersville loam, 8 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders

Map Unit Composition

Myersville and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 8 inches—strong brown loam
8 to 21 inches—strong brown and yellowish red channery clay loam
21 to 25 inches—yellowish red and yellowish brown channery loam

Substratum:
25 to 58 inches—dark olive brown and reddish yellow parachannery loam

Soft bedrock:
58 to 70 inches—amphibolite bedrock

Hard bedrock:
70 inches—amphibolite bedrock

Minor Components

Dissimilar components:
- Ashe soils, which are moderately deep to bedrock and have less clay in the subsoil; in similar landform positions
- Cowee soils, which are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Areas with stony surfaces; in similar landform positions

Similar components:
- Edneytown, Edneyville, Glenelg, and Hayesville soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Soils that have darker surface layers; on elevated summits and north-facing slopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from amphibolite, hornblende schist, and/or hornblende gneiss and/or other types of schist and/or gneiss

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; moderately suited to alfalfa hay; not suited to tobacco
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.

- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: D
Hydric soil: No

32D—Myersville loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes

Map Unit Composition

Myersville and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 8 inches—strong brown loam
8 to 21 inches—strong brown and yellowish red channery clay loam
21 to 25 inches—yellowish red and yellowish brown channery loam

Substratum:
25 to 58 inches—dark olive brown and reddish yellow parachannery loam

Soft bedrock:
58 to 70 inches—amphibolite bedrock

Hard bedrock:
70 inches—amphibolite bedrock

Minor Components

Dissimilar components:
- Ashe soils, which are moderately deep to bedrock and have less clay in the subsoil; in similar landform positions
- Cowee soils, which are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Areas with stony surfaces; in similar landform positions

Similar components:
- Edneytown, Edneyville, Glenelg, and Hayesville soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Soils that have darker surface layers; on elevated summits and north-facing slopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from amphibolite, hornblende schist, and/or hornblende gneiss and/or other types of schist and/or gneiss

Use and Management Considerations

Cropland

Suitability: Well suited to grass-legume hay; moderately suited to corn and alfalfa hay; not suited to tobacco
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e
Virginia soil management group: D
Hydric soil: No

32E—Myersville loam, 25 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits

Map Unit Composition

Myersville and similar soils: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 8 inches—strong brown loam
8 to 21 inches—strong brown and yellowish red channery clay loam
21 to 25 inches—yellowish red and yellowish brown channery loam

Substratum:
25 to 58 inches—dark olive brown and reddish yellow parachannery loam

Soft bedrock:
58 to 70 inches—amphibolite bedrock

Hard bedrock:
70 inches—amphibolite bedrock

Minor Components

Dissimilar components:
- Ashe soils, which are moderately deep bedrock and have less clay in the subsoil; in similar landform positions
- Cowee soils, which are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Areas with stony surfaces; in similar landform positions

Similar components:
- Edneytown, Edneyville, Glenelg, and Hayesville soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Soils that have darker surface layers; on elevated summits and north-facing slopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from amphibolite, hornblende schist, and/or hornblende gneiss and/or other types of schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.

Woodland

Suitability: Well suited to northern red oak; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A

timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- The low strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: D
Hydric soil: No

33C—Myersville loam, 8 to 15 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders

Map Unit Composition

Myersville and similar soils: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 8 inches—strong brown loam
8 to 21 inches—strong brown and yellowish red channery clay loam
21 to 25 inches—yellowish red and yellowish brown channery loam

Substratum:
25 to 58 inches—dark olive brown and reddish yellow parachannery loam

Soft bedrock:
58 to 70 inches—amphibolite bedrock

Hard bedrock:
70 inches—amphibolite bedrock

Minor Components

Dissimilar components:
- Ashe soils, which are moderately deep to bedrock and have less clay in the subsoil; in similar landform positions
- Cowee soils, which are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Edneytown, Edneyville, Glenelg, and Hayesville soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Soils that have darker surface layers; on elevated summits and north-facing slopes
- Areas with fewer stones on the soil surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent subangular stones
Parent material: Residuum weathered from amphibolite, hornblende schist, and/or hornblende gneiss and/or other types of schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Large stones on the surface may restrict the operation of some farm machinery.

Woodland

Suitability: Well suited to northern red oak; moderately suited to yellow-poplar

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6s
Virginia soil management group: D
Hydric soil: No

33D—Myersville loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes

Map Unit Composition

Myersville and similar soils: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 8 inches—strong brown loam
8 to 21 inches—strong brown and yellowish red channery clay loam
21 to 25 inches—yellowish red and yellowish brown channery loam

Substratum:
25 to 58 inches—dark olive brown and reddish yellow parachannery loam

Soft bedrock:
58 to 70 inches—amphibolite bedrock

Hard bedrock:
70 inches—amphibolite bedrock

Minor Components

Dissimilar components:
- Ashe soils, which are moderately deep to bedrock and have less clay in the subsoil; in similar landform positions
- Cowee soils, which are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Edneytown, Edneyville, Glenelg, and Hayesville soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Soils that have darker surface layers; on elevated summits and north-facing slopes
- Areas with fewer stones on the soil surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent subangular stones
Parent material: Residuum weathered from amphibolite, hornblende schist, and/or hornblende gneiss and/or other types of schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: D
Hydric soil: No

33E—Myersville loam, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits

Map Unit Composition

Myersville and similar soils: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 8 inches—strong brown loam
8 to 21 inches—strong brown and yellowish red channery clay loam
21 to 25 inches—yellowish red and yellowish brown channery loam

Substratum:
25 to 58 inches—dark olive brown and reddish yellow parachannery loam

Soft bedrock:
58 to 70 inches—amphibolite bedrock

Hard bedrock:
70 inches—amphibolite bedrock

Minor Components

Dissimilar components:
- Ashe soils, which are moderately deep to bedrock and have less clay in the subsoil; in similar landform positions
- Cowee soils, which are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Edneytown, Edneyville, Glenelg, and Hayesville soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Soils that have darker surface layers; on elevated summits and north-facing slopes
- Areas with fewer stones on the soil surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent subangular stones
Parent material: Residuum weathered from amphibolite, hornblende schist, and/or hornblende gneiss and/or other types of schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: D
Hydric soil: No

34C—Myersville-Urban land complex, 0 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders

Map Unit Composition

Myersville and similar soils: Typically 55 percent, ranging from about 50 to 60 percent
Urban land: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Myersville

Surface layer:
0 to 4 inches—dark yellowish brown loam

Subsoil:
4 to 8 inches—strong brown loam
8 to 21 inches—strong brown and yellowish red channery clay loam
21 to 25 inches—yellowish red and yellowish brown channery loam

Substratum:
25 to 58 inches—dark olive brown and reddish yellow parachannery loam

Soft bedrock:
58 to 70 inches—amphibolite bedrock

Hard bedrock:
70 inches—amphibolite bedrock

Urban land

This part of the map unit consists of areas covered by highways, streets, parking lots, buildings, and other impervious surfaces.

Minor Components

Dissimilar components:
- Ashe soils, which are moderately deep to bedrock and have less clay in the subsoil; in similar landform positions
- Cowee soils, which are moderately deep to bedrock; in similar landform positions
- Greenlee soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which are moderately deep to bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Areas with stony surfaces; in similar landform positions

Similar components:
- Edneytown, Edneyville, Glenelg, and Hayesville soils, which are very deep to bedrock; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Soils that have darker surface layers; on elevated summits and north-facing slopes

Properties and Qualities of the Myersville Soil

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from amphibolite, hornblende schist, and/or hornblende gneiss and/or other types of schist and/or gneiss

Use and Management Considerations of Native Soil Areas

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Myersville—7s; Urban land—8
Virginia soil management group: Myersville—D; Urban land—none assigned
Hydric soils: No

35D—Peaks very gravelly loam, 8 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Peaks and similar soils: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil; in similar landform positions
- Edneytown, Hayesville, and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Cowee soils, which have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Greenlee soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in similar landform positions
- Peaks soils that have cobbly or stony surfaces

- Myersville soils, which are deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions

Similar components:
- Ashe soils, which have fewer rock fragments in the subsoil; in similar landform positions
- Soils that are shallow to hard bedrock; in similar landform positions
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- Bedrock may interfere with the construction of haul roads and log landings.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: JJ
Hydric soil: No

35E—Peaks very gravelly loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 450 acres
Shape of areas: Irregular

Map Unit Composition

Peaks and similar soils: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil; in similar landform positions
- Edneytown, Hayesville, and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Cowee soils, which have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Greenlee soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in similar landform positions
- Peaks soils that have cobbly or stony surfaces
- Myersville soils, which are deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions

Similar components:
- Ashe soils, which have fewer rock fragments in the subsoil; in similar landform positions
- Soils that are shallow to hard bedrock; in similar landform positions
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soil: No

36D—Peaks very gravelly loam, 8 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 400 acres
Shape of areas: Irregular

Map Unit Composition

Peaks and similar soils: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil; in similar landform positions
- Edneytown, Hayesville, and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Cowee soils, which have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Greenlee soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in similar landform positions
- Myersville soils, which are deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions

Similar components:
- Ashe soils, which have fewer rock fragments in the subsoil; in similar landform positions
- Soils that are shallow to hard bedrock; in similar landform positions
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes
- Peaks soils that have fewer stones on the surface

Soil Properties and Qualities

Available water capacity: Very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high

Surface fragments: About 0.10 to 3.00 percent subrounded stones
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- Bedrock may interfere with the construction of haul roads and log landings.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: JJ
Hydric soil: No

36E—Peaks very gravelly loam, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Peaks and similar soils: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil; in similar landform positions
- Edneytown, Hayesville, and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Cowee soils, which have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Greenlee soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in similar landform positions
- Myersville soils, which are deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions

Similar components:
- Ashe soils, which have fewer rock fragments in the subsoil; in similar landform positions
- Soils that are shallow to hard bedrock; in similar landform positions
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes
- Peaks soils that have fewer stones on the surface

Soil Properties and Qualities

Available water capacity: Very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent subrounded stones
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soil: No

36F—Peaks very gravelly loam, 55 to 90 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes and very steep shoulders and summits
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Peaks and similar soils: Typically 75 percent, ranging from about 70 to 80 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil; in similar landform positions
- Edneytown, Hayesville, and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Cowee soils, which have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Greenlee soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in similar landform positions
- Myersville soils, which are deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions

Similar components:
- Ashe soils, which have fewer rock fragments in the subsoil; in similar landform positions
- Soils that are shallow to hard bedrock; in similar landform positions
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes
- Peaks soils that have fewer stones on the surface

Soil Properties and Qualities

Available water capacity: Very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent subrounded stones
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soil: No

37F—Peaks-Rock outcrop complex, 25 to 90 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes and very steep shoulders and summits
Size of areas: 5 to 450 acres
Shape of areas: Irregular

Map Unit Composition

Peaks and similar soils: Typically 50 percent, ranging from about 45 to 55 percent
Rock outcrop: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Peaks

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Rock outcrop

This part of the map unit consists of outcrops of quartz monzonite, gneiss, mica schist, and other metamorphic and igneous rocks, which are as much as 50 feet high and less than 10 feet apart.

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil; in similar landform positions
- Edneytown, Hayesville, and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Cowee soils, which have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Greenlee soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Myersville soils, which are deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions

Similar components:
- Ashe soils, which have fewer rock fragments in the subsoil; in similar landform positions
- Soils that are shallow to hard bedrock; in similar landform positions
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes
- Peaks soils that have fewer stones on the surface
- Areas which have rock outcrops that are spaced more than 200 feet apart; in similar landform positions

Properties and Qualities of the Peaks Soil

Available water capacity: Very low (about 1.6 inches)

Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent subrounded stones
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The volume of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

- This map unit is unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Peaks—7s; Rock outcrop—8
Virginia soil management group: Peaks—JJ; Rock outcrop—none assigned
Hydric soils: No

38D—Rock outcrop-Clingman complex, 8 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on high mountains (fig. 8)
Position on the landform: Summits, shoulders, and backslopes
Note: Areas of this map unit occur at high elevations where windy conditions are common

Map Unit Composition

Rock outcrop: Typically 55 percent, ranging from about 50 to 60 percent
Clingman and similar soils: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Rock outcrop

This part of the map unit consists of outcrops of schist and gneiss bedrock.

Clingman

Organic layer:
0 to 2 inches—very dark brown and black peat
2 to 12 inches—very dark brown and black mucky peat

Surface layer:
12 to 16 inches—very dark grayish brown fine sandy loam

Hard bedrock:
16 inches—amphibolite bedrock

Figure 8.—An area of Rock outcrop-Clingman complex, 8 to 35 percent slopes, on the summit of Buffalo Mountain.

Minor Components

Dissimilar components:

- Cowee and Unaka soils, which formed in residuum weathered from mineral material and are moderately deep to bedrock; on lower mountain slopes
- Porters soils, which formed in residuum weathered from mineral material and are deep to bedrock; on lower mountain slopes
- Tate and Greenlee soils, which formed in colluvium derived from mineral material and are very deep to bedrock; on footslopes, toeslopes, and lower backslopes

Similar components:

- Peaks soils, which formed in residuum weathered from mineral material, on lower mountain slopes

- Areas that contain rock outcrops which are spaced more than 10 feet apart; in similar landform positions

Properties and Qualities of the Clingman Soil

Available water capacity: Moderate (about 7.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very shallow or shallow
Depth to root-restrictive feature: 3 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Organic material over residuum weathered from amphibolite schist and gneiss

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.

Christmas trees

- This map unit is unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of the low strength, the soil is unfavorable for supporting heavy loads.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.

- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Rock outcrop—8; Clingman—7s
Virginia soil management group: None assigned
Hydric soils: No

38F—Rock outcrop-Clingman complex, 35 to 95 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on high mountains
Position on the landform: Summits, shoulders, and backslopes
Note: Areas of this map unit occur at high elevations where windy conditions are common

Map Unit Composition

Rock outcrop: Typically 55 percent, ranging from about 50 to 60 percent
Clingman and similar soils: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Rock outcrop

This part of the map unit consists of outcrops of schist and gneiss bedrock.

Clingman

Organic layer:
0 to 2 inches—very dark brown and black peat
2 to 12 inches—very dark brown and black mucky peat

Surface layer:
12 to 16 inches—very dark grayish brown fine sandy loam

Hard bedrock:
16 inches—amphibolite bedrock

Minor Components

Dissimilar components:
- Cowee and Unaka soils, which formed in residuum weathered from mineral material and are moderately deep to bedrock; on lower mountain slopes
- Porters soils, which formed in residuum weathered from mineral material and are deep to bedrock; on lower mountain slopes
- Tate and Greenlee soils, which formed in colluvium derived from mineral material and are very deep to bedrock; on footslopes, toeslopes, and lower backslopes

Similar components:
- Peaks soils, which formed in residuum weathered from mineral material; on lower mountain slopes
- Areas that contain rock outcrops which are spaced more than 10 feet apart; in similar landform positions

Properties and Qualities of the Clingman Soil

Available water capacity: Moderate (about 7.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very shallow or shallow
Depth to root-restrictive feature: 3 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Organic material over residuum weathered from amphibolite schist and gneiss

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, the use of equipment for planting and seeding is impractical.

Christmas trees

- This map unit is unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of the low strength, the soil is unfavorable for supporting heavy loads.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Rock outcrop—8; Clingman—7s
Virginia soil management group: None assigned
Hydric soils: No

39C—Sylco-Sylvatus complex, 8 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 125 acres
Shape of areas: Irregular

Map Unit Composition

Sylco and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Sylvatus and similar soils: Typically 40 percent, ranging from about 35 to 45 percent

Typical Profile

Sylco

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

Subsoil:
4 to 22 inches—brown very channery silt loam

Substratum:
22 to 27 inches—brown extremely channery silt loam

Hard bedrock:
27 inches—phyllite bedrock

Sylvatus

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

Subsoil:
2 to 11 inches—yellowish brown very channery silt loam

Substratum:
11 to 16 inches—yellowish brown extremely channery silt loam

Hard bedrock:
16 inches—phyllite bedrock

Minor Components

Dissimilar components:
- Junaluska, Brownwood, and Cowee soils, which have fewer rock fragments in the subsoil and are moderately deep to bedrock; in similar landform positions
- Glenelg soils, which have fewer rock fragments in the subsoil and are very deep to bedrock; in similar landform positions
- Brownwood soils in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes

- Greenlee soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Marbleyard and Peaks soils, which are similar to the Sylco soil but have more sand and less silt; in similar landform positions
- Soils that are similar to the Sylco soil and have dark surface layers; on elevated summits and north-facing backslopes
- Unicoi soils, which are similar to the Sylvatus soil, are excessively drained, and have more sand and less silt in the subsoil; in similar landform positions
- Soils that are similar to the Sylvatus soil and have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Sylco—very low (about 2.9 inches); Sylvatus—very low (about 1.5 inches)
Slowest saturated hydraulic conductivity: Sylco—high (about 1.98 in/hr); Sylvatus—moderately high (about 0.57 in/hr)
Depth class: Sylco—moderately deep (20 to 40 inches); Sylvatus—shallow (10 to 20 inches)
Depth to root-restrictive feature: Sylco—20 to 40 inches to bedrock (lithic); Sylvatus—10 to 20 inches to bedrock (lithic)
Drainage class: Sylco—somewhat excessively drained; Sylvatus—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from phyllite and metasandstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

Suitability: Poorly suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Moderately suited to eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.

- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

- These soils are well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Sylco—3e; Sylvatus—6s
Virginia soil management group: JJ
Hydric soils: No

39D—Sylco-Sylvatus complex, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Sylco and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Sylvatus and similar soils: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Sylco

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

Subsoil:
4 to 22 inches—brown very channery silt loam

Substratum:
22 to 27 inches—brown extremely channery silt loam

Hard bedrock:
27 inches—phyllite bedrock

Sylvatus

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

Subsoil:
2 to 11 inches—yellowish brown very channery silt loam

Substratum:
11 to 16 inches—yellowish brown extremely channery silt loam

Hard bedrock:
16 inches—phyllite bedrock

Minor Components

Dissimilar components:
- Junaluska, Brownwood, and Cowee soils, which have fewer rock fragments in the subsoil and are moderately deep to bedrock; in similar landform positions
- Glenelg soils, which have fewer rock fragments in the subsoil and are very deep to bedrock; in similar landform positions
- Brownwood soils in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Greenlee soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Marbleyard and Peaks soils, which are similar to the Sylco soil but have more sand and less silt in the soil; in similar landform positions
- Soils that are similar to the Sylco soil and have dark surface layers; on elevated summits and north-facing backslopes
- Unicoi soils, which are similar to the Sylvatus soil, are excessively drained, and have more sand and less silt in the subsoil; in similar landform positions
- Soils that are similar to the Sylvatus soil and have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Sylco—very low (about 2.9 inches); Sylvatus—very low (about 1.5 inches)
Slowest saturated hydraulic conductivity: Sylco—high (about 1.98 in/hr); Sylvatus—moderately high (about 0.57 in/hr)
Depth class: Sylco—moderately deep (20 to 40 inches); Sylvatus—shallow (10 to 20 inches)
Depth to root-restrictive feature: Sylco—20 to 40 inches to bedrock (lithic); Sylvatus—10 to 20 inches to bedrock (lithic)
Drainage class: Sylco—somewhat excessively drained; Sylvatus—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low

Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from phyllite and metasandstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

Suitability: Poorly suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Moderately suited to eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

- These soils are well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: JJ
Hydric soils: No

39E—Sylco-Sylvatus complex, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes, steep shoulders, and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Sylco and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Sylvatus and similar soils: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Sylco

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

Subsoil:
4 to 22 inches—brown very channery silt loam

Substratum:
22 to 27 inches—brown extremely channery silt loam

Hard bedrock:
27 inches—phyllite bedrock

Sylvatus

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

Subsoil:
2 to 11 inches—yellowish brown very channery silt loam

Substratum:
11 to 16 inches—yellowish brown extremely channery silt loam

Hard bedrock:
16 inches—phyllite bedrock

Minor Components

Dissimilar components:
- Junaluska, Brownwood, and Cowee soils, which have fewer rock fragments in the subsoil and are moderately deep to bedrock; in similar landform positions
- Glenelg soils, which have fewer rock fragments in the subsoil and are very deep to bedrock; in similar landform positions
- Brownwood soils in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes

- Greenlee soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in similar landform positions
- Rock outcrops in similar landform positions

Similar components:
- Marbleyard and Peaks soils, which are similar to the Sylco soil but have more sand and less silt in the soil; in similar landform positions
- Soils that are similar to the Sylco soil and have dark surface layers; on elevated summits and north-facing backslopes
- Unicoi soils, which are similar to the Sylvatus soil, are excessively drained, and have more sand and less silt in the subsoil; in similar landform positions
- Soils that are similar to the Sylvatus soil and have dark surface layers; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Sylco—very low (about 2.9 inches); Sylvatus—very low (about 1.5 inches)
Slowest saturated hydraulic conductivity: Sylco—high (about 1.98 in/hr); Sylvatus—moderately high (about 0.57 in/hr)
Depth class: Sylco—moderately deep (20 to 40 inches); Sylvatus—shallow (10 to 20 inches)
Depth to root-restrictive feature: Sylco—20 to 40 inches to bedrock (lithic); Sylvatus—10 to 20 inches to bedrock (lithic)
Drainage class: Sylco—somewhat excessively drained; Sylvatus—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from phyllite and metasandstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soils: No

40D—Sylco-Sylvatus complex, 8 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Sylco and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Sylvatus and similar soils: Typically 40 percent, ranging from about 35 to 45 percent

Typical Profile

Sylco

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

Subsoil:
4 to 22 inches—brown very channery silt loam

Substratum:
22 to 27 inches—brown extremely channery silt loam

Hard bedrock:
27 inches—phyllite bedrock

Sylvatus

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

Subsoil:
2 to 11 inches—yellowish brown very channery silt loam

Substratum:
11 to 16 inches—yellowish brown extremely channery silt loam

Hard bedrock:
16 inches—phyllite bedrock

Minor Components

Dissimilar components:
- Junaluska, Brownwood, and Cowee soils, which have fewer rock fragments in the subsoil and are moderately deep to bedrock; in similar landform positions
- Glenelg soils, which have fewer rock fragments in the subsoil and are very deep to bedrock; in similar landform positions
- Brownwood soils in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Greenlee soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in similar landform positions

Similar components:
- Marbleyard and Peaks soils, which are similar to the Sylco soil but have more sand and less silt in the soil; in similar landform positions
- Soils that are similar to the Sylco soil and have dark surface layers; on elevated summits and north-facing backslopes
- Areas of Sylco soils that have fewer stones on the surface; in similar landform positions
- Unicoi soils, which are similar to the Sylvatus soil, are excessively drained, and have more sand and less silt in the subsoil; in similar landform positions
- Soils that are similar to the Sylvatus soil and have dark surface layers; on elevated summits and north-facing backslopes
- Areas of Sylvatus soils that have fewer stones on the surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Sylco—very low (about 2.9 inches); Sylvatus—very low (about 1.5 inches)
Slowest saturated hydraulic conductivity: Sylco—high (about 1.98 in/hr); Sylvatus—moderately high (about 0.57 in/hr)
Depth class: Sylco—moderately deep (20 to 40 inches); Sylvatus—shallow (10 to 20 inches)
Depth to root-restrictive feature: Sylco—20 to 40 inches to bedrock (lithic); Sylvatus—10 to 20 inches to bedrock (lithic)
Drainage class: Sylco—somewhat excessively drained; Sylvatus—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None

Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from phyllite and metasandstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- Bedrock may interfere with the construction of haul roads and log landings.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

- These soils are well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s

Virginia soil management group: JJ
Hydric soils: No

40E—Sylco-Sylvatus complex, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes, steep shoulders, and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Sylco and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Sylvatus and similar soils: Typically 40 percent, ranging from about 35 to 45 percent

Typical Profile

Sylco

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

Subsoil:
4 to 22 inches—brown very channery silt loam

Substratum:
22 to 27 inches—brown extremely channery silt loam

Hard bedrock:
27 inches—phyllite bedrock

Sylvatus

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

Subsoil:
2 to 11 inches—yellowish brown very channery silt loam

Substratum:
11 to 16 inches—yellowish brown extremely channery silt loam

Hard bedrock:
16 inches—phyllite bedrock

Minor Components

Dissimilar components:
- Junaluska, Brownwood, and Cowee soils, which have fewer rock fragments in the subsoil and are moderately deep to bedrock; in similar landform positions
- Glenelg soils, which have fewer rock fragments in the subsoil and are very deep to bedrock; in similar landform positions
- Brownwood soils in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes

- Greenlee soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in similar landform positions

Similar components:
- Marbleyard and Peaks soils, which are similar to the Sylco soil but have more sand and less silt in the soil; in similar landform positions
- Soils that are similar to the Sylco soil and have dark surface layers; on elevated summits and north-facing backslopes
- Aresa of Sylco soils that have fewer stones on the surface; in similar landform positions
- Unicoi soils, which are similar to the Sylvatus soils, are excessively drained, and have more sand and less silt in the subsoil; in similar landform positions
- Soils that are similar to the Sylvatus soil and have dark surface layers; on elevated summits and north-facing backslopes
- Areas of Sylvatus soils that have fewer stones on the surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Sylco—very low (about 2.9 inches); Sylvatus—very low (about 1.5 inches)
Slowest saturated hydraulic conductivity: Sylco—high (about 1.98 in/hr); Sylvatus—moderately high (about 0.57 in/hr)
Depth class: Sylco—moderately deep (20 to 40 inches); Sylvatus—shallow (10 to 20 inches)
Depth to root-restrictive feature: Sylco—20 to 40 inches to bedrock (lithic); Sylvatus—10 to 20 inches to bedrock (lithic)
Drainage class: Sylco—somewhat excessively drained; Sylvatus—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from phyllite and metasandstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.

- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soils: No

41B—Tate loam, 3 to 8 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes and toeslopes
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Tate and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

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

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil; on flood plains
- Comus soils, which have less clay in the subsoil; on flood plains
- Areas with stony surfaces; in similar landform positions

Similar components:
- Braddock soils, which have more clay in the subsoil; in similar landform positions
- Delanco soils, which are moderately well drained; in similar landform positions
- Soils that have redder subsoils; in similar landform positions
- Soils that have darker surface layers; on north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to corn, tobacco, and grass-legume hay; moderately suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.

- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- This soil is well suited to building sites.

Septic tank absorption fields

- The excessive permeability limits the proper treatment of the effluent from conventional septic systems, which may pollute the water table.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e
Virginia soil management group: O
Hydric soil: No

41C—Tate loam, 8 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes and toeslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Tate and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

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

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil; on flood plains

- Hatboro soils, which are poorly drained and have less clay in the subsoil; on flood plains
- Comus soils, which have less clay in the subsoil; on flood plains
- Areas with stony surfaces; in similar landform positions

Similar components:
- Braddock soils, which have more clay in the subsoil; in similar landform positions
- Delanco soils, which are moderately well drained; in similar landform positions
- Soils that have redder subsoils; in similar landform positions
- Soils that have darker surface layers; on north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to tobacco and grass-legume hay; moderately suited to corn and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems, which may pollute the water table.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: O
Hydric soil: No

41D—Tate loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Tate and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

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

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil; on flood plains
- Comus soils, which have less clay in the subsoil; on flood plains
- Areas with stony surfaces; in similar landform positions

Similar components:
- Braddock soils, which have more clay in the subsoil; in similar landform positions
- Delanco soils, which are moderately well drained; in similar landform positions
- Soils that have redder subsoils; in similar landform positions
- Soils that have darker surface layers; on north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to tobacco; moderately suited to corn, grass-legume hay, and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems, which may pollute the water table.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e
Virginia soil management group: O
Hydric soil: No

42C—Tate loam, 8 to 15 percent slopes, stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes and toeslopes (fig. 9)
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Tate and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

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

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil; on flood plains
- Comus soils, which have less clay in the subsoil; on flood plains

Figure 9.—An area of Tate loam, 8 to 15 percent slopes, stony, at the base of Buffalo Mountain.

Similar components:
- Braddock soils, which have more clay in the subsoil; in similar landform positions
- Delanco soils, which are moderately well drained; in similar landform positions
- Soils that have redder subsoils; in similar landform positions
- Soils that have darker surface layers, on north-facing backslopes
- Areas that have fewer stones on the surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches

Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.01 to 0.10 percent subrounded stones
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay; not suited to corn, tobacco, and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- Rock fragments on the surface may restrict the operation of farm machinery and interfere with the emergence of seedlings.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Rock fragments on the surface may restrict the operation of farm machinery.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems, which may pollute the water table.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4s
Virginia soil management group: O
Hydric soil: No

42D—Tate loam, 15 to 25 percent slopes, stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Tate and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

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

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil; on flood plains
- Comus soils, which have less clay in the subsoil; on flood plains

Similar components:
- Braddock soils, which have more clay in the subsoil; in similar landform positions
- Delanco soils, which are moderately well drained; in similar landform positions
- Soils that have redder subsoils; in similar landform positions
- Soils that have darker surface layers; on north-facing backslopes
- Areas that have fewer stones on the surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet

Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.01 to 0.10 percent subrounded stones
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Rock fragments on the surface may restrict the operation of farm machinery.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems, which may pollute the water table.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland

Land capability class: 6s
Virginia soil management group: O
Hydric soil: No

43C—Tate-Urban land complex, 0 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes and toeslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Tate and similar soils: Typically 55 percent, ranging from about 50 to 60 percent
Urban land: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Tate

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

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Urban land

This part of the map unit consists of areas covered by highways, streets, parking lots, buildings, and other impervious surfaces.

Minor Components

Dissimilar components:
- Greenlee soils, which have more rock fragments and less clay in the subsoil; in similar landform positions
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil; on flood plains
- Comus soils, which have less clay in the subsoil; on flood plains
- Areas with stony surfaces; in similar landform positions

Similar components:
- Braddock soils, which have more clay in the subsoil; in similar landform positions
- Delanco soils, which are moderately well drained; in similar landform positions
- Soils that have redder subsoils; in similar landform positions
- Soils that have darker surface layers; on north-facing backslopes

Properties and Qualities of the Tate Soil

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)

Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations of Native Soil Areas

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of the effluent from conventional septic systems.
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems, which may pollute the water table.

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Tate—7e; Urban land—8
Virginia soil management group: Tate—O; Urban land—none assigned
Hydric soils: No

44D—Udorthents, 0 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills; stream terraces and flood plains in valleys
Position on the landform: Summits, shoulders, and backslopes on ridges and hills; treads and risers on stream terraces; steps and channels on flood plains
Size of areas: 5 to 300 acres
Shape of areas: Variable; depending on ownership boundaries

Map Unit Composition

Udorthents and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Udorthents vary to the extent that a typical profile is not available. Udorthents have resulted from disturbance of soil by land leveling, excavation, or filling. They consist of loamy and clayey soil material and varying amounts of rock fragments. Depth to hard bedrock varies from a few inches to more than 5 feet. Areas range from severely compacted to slightly compacted. Drainage is variable.

Use and Management Considerations

Onsite investigation is needed to determine the suitability of any area for specific uses.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: None assigned
Virginia soil management group: None assigned
Hydric soils: Unranked

45D—Udorthents-Urban land complex, 0 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills; stream terraces and flood plains in valleys
Position on the landform: Summits, shoulders, and backslopes on ridges and hills; treads and risers on stream terraces; steps and channels on flood plains

Map Unit Composition

Udorthents: Typically 50 percent, ranging from about 45 to 55 percent
Urban land: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Udorthents

Udorthents have resulted from disturbance of soil by land leveling, excavation, or filling. They consist of loamy and clayey soil material and varying amounts of rock fragments. Depth to hard bedrock varies from a few inches to more than 5 feet. Areas range from severely compacted to slightly compacted. Drainage is variable.

Urban land

Urban land consists of areas covered by highways, streets, parking lots, buildings, and other impervious surfaces.

Use and Management Considerations

Onsite investigation is needed to determine the suitability of any area for specific uses.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Udorthents—none assigned; Urban land—8
Virginia soil management group: None assigned
Hydric soils: Unranked

46D—Unaka loam, 8 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes

Map Unit Composition

Unaka and similar soils: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Surface layer:
0 to 5 inches—very dark brown loam
5 to 10 inches—dark brown loam

Subsoil:
10 to 24 inches—dark yellowish brown loam

Hard bedrock:
24 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Peaks soils, which have more rock fragments in the subsoil; in similar landform positions
- Glenelg, Edneyville, and Edneytown soils, which are very deep to bedrock; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions
- Areas that have Rock outcrops in similar landform positions

Similar components:
- Ashe soils, which have less clay in the subsoil; in similar landform positions
- Cowee soils, which are moderately deep to soft bedrock and have a zone of clay accumulation in the subsoil; in similar landform positions
- Porters soils, which are deep to bedrock; in similar landform positions
- Unaka soils that have fewer rock fragments on the surface; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 3.8 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, yellow-poplar, and eastern white pine

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: U
Hydric soil: No

47C—Unaka-Porters complex, 8 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Unaka and similar soils: Typically 50 percent, ranging from about 45 to 55 percent
Porters and similar soils: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Unaka

Surface layer:
0 to 5 inches—very dark brown loam
5 to 10 inches—dark brown loam

Subsoil:
10 to 24 inches—dark yellowish brown loam

Hard bedrock:
24 inches—gneiss bedrock

Porters

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 8 inches—very dark grayish brown loam

Subsurface layer:
8 to 11 inches—dark yellowish brown loam

Subsoil:
11 to 39 inches—dark yellowish brown loam
39 to 46 inches—olive brown, yellowish brown, and dark yellowish brown gravelly loam

Soft bedrock:
46 to 55 inches—weathered amphibolite bedrock

Hard bedrock:
55 inches—unweathered amphibolite bedrock

Minor Components

Dissimilar components:
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Areas that have stony surfaces

Similar components:
- Ashe soils, which are similar to the Unaka soil but have less clay in the subsoil; in similar landform positions
- Cowee soils, which are similar to the Unaka soil, are moderately deep to soft bedrock, and have a zone of clay accumulation in the subsoil; in similar landform positions
- Ashe soils, which are similar to the Porters soil, are moderately deep to bedrock, and have less clay in the subsoil; in similar landform positions
- Cowee soils, which are similar to the Porters soil and are moderately deep to soft bedrock; in similar landform positions
- Edneytown, Edneyville, and Glenelg soils, which are similar to the Porters soil and very deep to bedrock; in similar landform positions
- Myersville soils, which are similar to the Porters soil and have a zone of clay accumulation in the subsoil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Unaka—low (about 3.8 inches); Porters—moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Unaka—moderately deep (20 to 40 inches); Porters—deep (40 to 60 inches)
Depth to root-restrictive feature: Unaka—20 to 40 inches to bedrock (lithic); Porters—40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Unaka—very high; Porters—low
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn, grass-legume hay, and alfalfa hay; not suited to tobacco
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Unaka—moderately suited to northern red oak, yellow-poplar, and eastern white pine; Porters—well suited to northern red oak and eastern white pine and moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of the low strength, these soils are unfavorable for supporting heavy loads.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: U
Hydric soils: No

47D—Unaka-Porters complex, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and moderately steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Unaka and similar soils: Typically 55 percent, ranging from about 50 to 60 percent
Porters and similar soils: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Unaka

Surface layer:
0 to 5 inches—very dark brown loam
5 to 10 inches—dark brown loam

Subsoil:
10 to 24 inches—dark yellowish brown loam

Hard bedrock:
24 inches—gneiss bedrock

Porters

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 8 inches—very dark grayish brown loam

Subsurface layer:
8 to 11 inches—dark yellowish brown loam

Subsoil:
11 to 39 inches—dark yellowish brown loam
39 to 46 inches—olive brown, yellowish brown, and dark yellowish brown gravelly loam

Soft bedrock:
46 to 55 inches—weathered amphibolite bedrock

Hard bedrock:
55 inches—unweathered amphibolite bedrock

Minor Components

Dissimilar components:
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil; in similar landform positions
- Rock outcrops in similar landform positions
- Areas that have stony surfaces

Similar components:
- Ashe soils, which are similar to the Unaka soil and have less clay in the subsoil; in similar landform positions
- Cowee soils, which are similar to the Unaka soil, are moderately deep to soft bedrock, and have a zone of clay accumulation in the subsoil; in similar landform positions
- Ashe soils, which are similar to the Porters soil, are moderately deep to bedrock, and have less clay in the subsoil; in similar landform positions
- Cowee soils, which are similar to the Porters soil and are moderately deep to soft bedrock; in similar landform positions
- Edneytown, Edneyville, and Glenelg soils, which are similar to the Porters soil and are very deep to bedrock; in similar landform positions
- Myersville soils, which are similar to the Porters soil and have a zone of clay accumulation in the subsoil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Unaka—low (about 3.8 inches); Porters—moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Unaka—moderately deep (20 to 40 inches); Porters—deep (40 to 60 inches)
Depth to root-restrictive feature: Unaka—20 to 40 inches to bedrock (lithic); Porters—40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Unaka—very high; Porters—medium
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.

Woodland

Suitability: Unaka—moderately suited to northern red oak, yellow-poplar, and eastern white pine; Porters—well suited to northern red oak and eastern white pine and moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The use of mechanical planting equipment is impractical because of the slope.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of the low strength, these soils are unfavorable for supporting heavy loads.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: U
Hydric soils: No

48D—Unaka-Rock outcrop complex, 8 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes

Map Unit Composition

Unaka and similar soils: Typically 55 percent, ranging from about 50 to 60 percent
Rock outcrop: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Unaka

Surface layer:
0 to 5 inches—very dark brown loam
5 to 10 inches—dark brown loam

Subsoil:
10 to 24 inches—dark yellowish brown loam

Hard bedrock:
24 inches—gneiss bedrock

Rock outcrop

This part of the map unit consists of outcrops of schist and gneiss, which are about 10 to 200 feet apart.

Minor Components

Dissimilar components:
- Peaks soils, which have more rock fragments in the subsoil; in similar landform positions
- Glenelg, Edneyville, and Edneytown soils, which are very deep to bedrock; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions

Similar components:
- Ashe soils, which have less clay in the subsoil; in similar landform positions
- Cowee soils, which are moderately deep to soft bedrock and have a zone of clay accumulation in the subsoil; in similar landform positions
- Porters soils, which are deep to bedrock; in similar landform positions
- Areas that have rock outcrops which are spaced more than 200 feet apart; in similar landform positions

Properties and Qualities of the Unaka Soil

Available water capacity: Low (about 3.8 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low

Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, yellow-poplar, and eastern white pine

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited

- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Unaka—7s; Rock outcrop—8
Virginia soil management group: Unaka—U; Rock outcrop—none assigned
Hydric soils: No

48E—Unaka-Rock outcrop complex, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits

Map Unit Composition

Unaka and similar soils: Typically 50 percent, ranging from about 45 to 55 percent
Rock outcrop: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Unaka

Surface layer:
0 to 5 inches—very dark brown loam
5 to 10 inches—dark brown loam

Subsoil:
10 to 24 inches—dark yellowish brown loam

Hard bedrock:
24 inches—gneiss bedrock

Rock outcrop

This part of the map unit consists of outcrops of schist and gneiss, which are about 10 to 200 feet apart.

Minor Components

Dissimilar components:
- Peaks soils, which have more rock fragments in the subsoil; in similar landform positions
- Glenelg, Edneyville, and Edneytown soils, which are very deep to bedrock; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions

Similar components:
- Ashe soils, which have less clay in the subsoil; in similar landform positions
- Cowee soils, which are moderately deep to soft bedrock and have a zone of clay accumulation in the subsoil; in similar landform positions
- Porters soils, which are deep to bedrock; in similar landform positions
- Areas that have rock outcrops which are spaced more than 200 feet apart; in similar landform positions

Properties and Qualities of the Unaka Soil

Available water capacity: Low (about 3.8 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)

Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Unaka—7s; Rock outcrop—8
Virginia soil management group: Unaka—U; Rock outcrop—none assigned
Hydric soils: No

48F—Unaka-Rock outcrop complex, 55 to 80 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and very steep shoulders and summits

Map Unit Composition

Unaka and similar soils: Typically 45 percent, ranging from about 40 to 50 percent
Rock outcrop: Typically 40 percent, ranging from about 35 to 45 percent

Typical Profile

Unaka

Surface layer:
0 to 5 inches—very dark brown loam
5 to 10 inches—dark brown loam

Subsoil:
10 to 24 inches—dark yellowish brown loam

Hard bedrock:
24 inches—gneiss bedrock

Rock outcrop

This part of the map unit consists of outcrops of schist and gneiss, which are about 10 to 200 feet apart.

Minor Components

Dissimilar components:
- Peaks soils, which have more rock fragments in the subsoil; in similar landform positions
- Glenelg, Edneyville, and Edneytown soils, which are very deep to bedrock; in similar landform positions
- Myersville soils, which are deep to bedrock; in similar landform positions

Similar components:
- Ashe soils, which have less clay in the subsoil; in similar landform positions
- Cowee soils, which are moderately deep to soft bedrock and have a zone of clay accumulation in the subsoil; in similar landform positions

- Porters soils, which are deep to bedrock; in similar landform positions
- Areas that have rock outcrops which are spaced more than 200 feet apart; in similar landform positions

Properties and Qualities of the Unaka Soil

Available water capacity: Low (about 3.8 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Avoid planting in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Unaka—7s; Rock outcrop—8
Virginia soil management group: Unaka—U; Rock outcrop—none assigned
Hydric soils: No

49E—Unicoi-Marbleyard complex, 35 to 55 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes, steep shoulders, and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Unicoi and similar soils: Typically 50 percent, ranging from about 45 to 55 percent
Marbleyard and similar soils: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Unicoi

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 5 inches—brown very gravelly sandy loam

Subsoil:
5 to 14 inches—yellowish brown very gravelly sandy loam

Substratum:
14 to 19 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
19 inches—metasandstone bedrock

Marbleyard

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark brown very cobbly sandy loam

Subsoil:
4 to 9 inches—yellowish brown very cobbly sandy loam
9 to 23 inches—yellowish brown extremely cobbly sandy loam

Substratum:
23 to 36 inches—brownish yellow extremely gravelly sandy loam

Hard bedrock:
36 inches—light gray and very pale brown quartzite bedrock

Minor Components

Dissimilar components:
- Greenlee soils, which are well drained and very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Junaluska soils, which are moderately deep to bedrock and have more clay and fewer rock fragments in the subsoil; in similar landform positions
- Tate soils, which are well drained, very deep to bedrock, and have more clay and fewer rock fragments in the subsoil; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in similar landform positions

Similar components:
- Unicoi soils that have fewer stones or cobbles on the surface
- Soils that are similar to the Unicoi soil and have dark surface layers; on elevated summits and north-facing backslopes
- Sylvatus soils, which are similar to the Unicoi soil, are well drained, and have more silt in the subsoil; in similar landform positions
- Marbleyard soils that have fewer stones or cobbles on the surface
- Soils that are similar to the Marbleyard soil and have dark surface layers; on elevated summits and north-facing backslopes
- Sylco soils, which are similar to the Marbleyard soil, are well drained, and have more silt in the subsoil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Unicoi—very low (about 0.9 inch); Marbleyard—very low (about 2.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Unicoi—shallow (10 to 20 inches); Marbleyard—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Unicoi—10 to 20 inches to bedrock (lithic); Marbleyard—20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent subrounded stones
Parent material: Residuum weathered from metasandstone and/or quartzite

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to chestnut oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The volume of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

- These soils are unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Unicoi—JJ; Marbleyard—FF
Hydric soils: No

W—Water

This map unit is in the Blue Ridge Major Land Resource Area (MLRA 130). It includes streams, rivers, and ponds or other areas covered with water most of the time.

This map unit is not assigned any interpretive groups.

Use and Management of the Soils

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

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

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

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

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

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

Interpretive Ratings

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

Rating Class Terms

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

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

Fred Rogers, District Conservationist, Natural Resources Conservation Service, helped prepare this section.

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

Effective pasture management practices include maintaining a mixture of grasses and legumes, rotating pasture, deferring grazing, controlling undesirable vegetation, and using proper stocking rates.

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

The farms in Floyd County have decreased in number and increased in size since 1960. Livestock and forage production are the main sources of income on these farms. The main types of livestock are beef and dairy cattle. Other types include hogs and sheep. The main forage crops are mixed grass-legume hay and alfalfa hay. Corn is grown mainly for silage. Grain and specialty crops are grown in small areas. Grain crops include corn, oats, and wheat. Specialty crops include Christmas trees, grapes, pumpkins, and cabbage.

Soil and water conservation practices are necessary on almost all of the cropland in the county. The most common conservation practices are conservation tillage, stripcropping, crop rotations that include grasses and legumes, winter cover crops, grassed waterways, and diversions. The most common system of conservation tillage is no-till planting. Rye is the primary cover crop in areas where no-till corn is grown.

The slope, stoniness, and depth to bedrock limit many areas to less intensive uses, such as hay and pasture (fig. 10). Grass-clover hay is the primary hay crop, but alfalfa has made a comeback since the early 1960’s when it was almost eliminated by alfalfa weevil. No-till alfalfa has been particularly successful. The grasses grown for hay in the county are mainly orchardgrass and fescue mixed with red clover. The pastures dominantly support cool-season grasses, such as orchardgrass and fescue. Pastures in areas where access to farm machinery is limited tend to support fescue.

Many farmers use their grassland for both hay and pasture. This dual use is most common in areas where fescue is stockpiled for winter grazing. One or two hay cuttings are made in the spring and summer, additional nitrogen fertilizer is applied in August, and cattle graze the accumulated growth during the winter. Another common dual use is one in which cattle are allowed to graze the regrowth after a first cutting of orchardgrass.

Yields per Acre

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

Figure 10.—Pastureland is a suitable use for many areas in Floyd County that are too steep for use as cropland.

The yields are based on VALUES, the Virginia Agronomic Land Use Evaluation System *(20)*. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

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

Realistic yield goals can be maintained over a long-term basis through proper nutrient management and other soil amendments such as lime. Applications of nitrogen and phosphorus from organic and inorganic forms should be done according to approved nutrient management practices and regulations.

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

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

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

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for forestland or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit *(17)*. Only class and subclass are used in this survey.

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

Class 1 soils have slight limitations that restrict their use.

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

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

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

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

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

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

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

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

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

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

Virginia Soil Management Groups

The *Virginia Agronomic Land Use Evaluation System (VALUES)* is a system to rank soils for management and productivity *(20)*. Developed by Virginia Tech, VALUES places each soil series in Virginia into one of 43 management groups. The format of the management groups, A through QQ, include the following soil characteristics:

regional occurrence; parent material; landscape position or influence; solum thickness; dominant profile features, texture or other feature; plant available water-supplying capacity; and internal soil drainage. Yields that are both economically and environmentally feasible were assigned to each management group, based on yields of field trial crop data and research. The following paragraphs describe the soil management groups in Floyd County.

Group A. The soils in this group formed in alluvial parent materials and are on nearly level or gently sloping landscapes of flood plains or stream terraces. They are deep or very deep, are medium textured throughout, have a high water-supplying capacity, and are well drained.

Group B. The soils in this group formed in alluvium or colluvium and generally are associated with stream terraces or the base of slopes. They are very deep, have loamy textures throughout, have a high water-supplying capacity, and are well drained or moderately well drained.

Group D. The soils in this group formed from a variety of residual parent materials. They are on upland landscapes. They are moderately deep, have fine-loamy textures, have a moderately high water-supplying capacity, and are well drained or moderately well drained.

Group L. The soils in this group formed from old transported deposits of alluvium, colluvium, or residuum from gneiss, schist, or granite. They are common on stream terraces, footslopes, and older, elevated, upland landscapes that were once stream terraces. They are deep or very deep. They have medium textured surfaces, have more clayey subsurface layers, and commonly have gravel and rounded stones. They have a moderate or high water-supplying capacity and typically are well drained.

Group N. The soils in this group formed from residuum ranging from weathered mafic rock to Triassic sediments, gneiss, and schist. They are very deep to moderately deep, have medium textured surface layers and reddish brown clayey subsurface layers, have a moderate water-supplying capacity, and are well drained.

Group O. The soils in this group formed from transported materials ranging from mountain colluvium to old alluvium on dissected uplands and old elevated river terrace deposits. They range from very deep to shallow, have brown loamy to very dark red clayey subsurface horizons, may have significant amounts of coarse fragments in some areas, have a moderate water-supplying capacity, and are well drained.

Group U. The soils in this group formed from a variety of residual parent materials ranging from Triassic sediments to gneiss, schist, granite, metagraywacke, or phylitte to colluvium from these materials. They are very deep to shallow, commonly have fine-loamy subsurface textures, commonly have coarse fragments making up to one-third of the soil volume, and, as a result, have a moderate or moderately low water-supplying capacity. They are well drained or moderately well drained.

Group X. The soils in this group formed from a variety of residual materials, including slates, granites, gneisses, and schists. They are very deep to moderately deep. They have clayey subsurface horizons with coarse fragments or gravel in some areas, have a moderate water-supplying capacity, and are well drained or moderately well drained.

Group CC. The soils in this group formed from a range of parent materials that include alluvium, colluvium, and loamy saprolites. They are represented by a variety of landscapes, including uplands, stream terraces, and colluvial positions to bottomlands. The common soil features are moderately deep sola, very deep bedrock, clayey-skeletal to coarse-loamy subsurface horizons (some with as much as 70 percent coarse fragments), and a moderately low water-supplying capacity. The soils are well drained.

Group FF. The soils in this group formed in residual parent materials which weathered from slate, loamy granitic saprolites, metasandstone, phyllite, or mountain colluvium. They are on steeply dissected uplands and mountain side slopes. They are moderately shallow soils, mostly with loamy-skeletal subsurface horizons that may contain 80 percent, or more, coarse fragments. As a result, the water-supplying capacity of the soils is low or very low. The soils are well drained or moderately well drained.

Group GG. The soils in this group formed from coarse textured residuum. They are in upland positions and are very deep to moderately deep. They have loamy-skeletal subsurface horizons, commonly with more than 60 percent coarse fragments or are otherwise coarse-textured, have a low water-supplying capacity, and are well drained.

Group HH. The soils in this group formed from loamy sediments on flood plains. They are moderately deep or deep, have fine-loamy or clayey subsurface textures, have a moderate water-supplying capacity, and range from somewhat poorly drained to moderately well drained.

Group JJ. The soils in this group formed from residual parent materials which weathered from granite saprolites, rhythmite, tillite, metasandstone, quartzite, gneiss, rhyolite, granite, phyllites, or schists. They are shallow to moderately deep and predominantly have loamy-skeletal textures throughout, ranging from 30 to 70 percent coarse fragments. They have a very low water-supplying capacity and are well drained.

Group OO. The soils in this group formed from alluvium or other sediments on terraces, levees, and broad nearly level landscapes. They have fine, loamy to silty textures throughout, have a high water-supplying capacity, and are poorly drained.

The management groups for the map units in the survey area are given in the section “Detailed Soil Map Units” and in the yields table.

Prime Farmland

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

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

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

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

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

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

Hydric Soils

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

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology *(3, 8, 9, 10)*. Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part *(4)*. These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established *(5)*. These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” *(13)* and “Keys to Soil Taxonomy” *(15)* and in the “Soil Survey Manual” *(18)*.

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in “Field Indicators of Hydric Soils in the United States” *(6)*.

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

The following map units meet the description of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (6, 8).

15B	Delanco-Kinkora complex, 0 to 8 percent slopes, rarely flooded (Kinkora component only is hydric)
26A	Hatboro sandy loam, 0 to 3 percent slopes, frequently flooded
30A	Kinkora fine sandy loam, 0 to 3 percent slopes, rarely flooded

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

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

6A	Codorus loam, 0 to 3 percent slopes, frequently flooded
7A	Comus fine sandy loam, 0 to 5 percent slopes, frequently flooded
12A	Craigsville cobbly sandy loam, 0 to 3 percent slopes, frequently flooded
13B	Delanco fine sandy loam, 3 to 8 percent slopes, rarely flooded
14C	Delanco fine sandy loam, 8 to 15 percent slopes
20B	Elsinboro fine sandy loam, 3 to 8 percent slopes, rarely flooded
41B	Tate loam, 3 to 8 percent slopes
41C	Tate loam, 8 to 15 percent slopes
41D	Tate loam, 15 to 25 percent slopes
42C	Tate loam, 8 to 15 percent slopes, stony
42D	Tate loam, 15 to 25 percent slopes, stony
43C	Tate-Urban land complex, 0 to 15 percent slopes

Agricultural Waste Management

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

Table 7, parts I, II, and III, show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of this table, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the table are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

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

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

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include saturated hydraulic conductivity (K_{sat}), depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erosion factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include saturated hydraulic conductivity (K_{sat}), depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erosion factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, saturated hydraulic conductivity (K_{sat}), slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding. The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

Overland flow of wastewater is a process in which wastewater is applied to the upper reaches of sloped land and allowed to flow across vegetated surfaces, sometimes called terraces, to runoff-collection ditches. The length of the run generally is 150 to 300 feet. The application rate ranges from 2.5 to 16.0 inches per week. It commonly exceeds the rate needed for irrigation of cropland. The wastewater leaves solids and nutrients on the vegetated surfaces as it flows downslope in a thin film. Most of the water reaches the collection ditch, some is lost through evapotranspiration, and a small amount may percolate to the ground water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, and the design and construction of the system. Reaction and the cation-exchange capacity affect absorption. Reaction, salinity, and the sodium adsorption ratio affect plant growth and microbial activity. Slope, saturated hydraulic conductivity (K_{sat}), depth to a water table, ponding, flooding, depth to bedrock or a cemented pan, stones, and cobbles affect design and construction. Permanently frozen soils are unsuitable for waste treatment.

Rapid infiltration of wastewater is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil. The wastewater may eventually reach the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches. As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. Depth to a water table, ponding, flooding, and depth to bedrock or a cemented pan affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Saturated hydraulic conductivity (K_{sat}) and reaction affect performance. Permanently frozen soils are unsuitable for waste treatment.

Slow rate treatment of wastewater is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water may percolate to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, saturated hydraulic conductivity (K_{sat}), depth to bedrock or a cemented pan, reaction, the cation-exchange capacity, and slope. Reaction, the sodium adsorption ratio, salinity, and bulk density affect plant growth and microbial activity. The wind erodibility group, the soil erosion factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Forestland Productivity and Management

Dennis Anderson, Area Forester, Donald Garman, Forester, and Harold D. Hannah, Regional Forester, Virginia Department of Forestry, helped prepare this section.

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

Chestnut-oak-hickory forests once covered most of Floyd County. As the area was settled, the forests were cleared for agriculture and pasture. The river valleys and broad ridges were the prime targets, but eventually many steep knobs and lower slopes of the bigger mountains were added to the agricultural area. This left mostly the rough, steep, and inaccessible land in forest.

Around 1900, as the need for lumber and wood products grew, the best timber was removed from all the remaining forest. The blight destroyed the American chestnut in the 1920’s. When World War II started, many farms were abandoned as men went to war and others flocked to the cities for work. Farms began to revert back to forest. The light-seeded species, such as yellow-poplar, ash, black locust, maple, and white pine, invaded the abandoned farmland as well as the areas once occupied by chestnut; some fields were taken over by eastern white pine and black locust. This trend continued until the 1970’s. By this time, urban development began to decrease forest acreage as well as agricultural land.

In 1992, about 59 percent of Floyd County was covered mostly by oak, hickory, yellow-poplar, and other hardwoods. White pine makes up 20 percent of the forest type, and it is often in pure stands but is usually in mixture with the hardwoods.

Floyd County has a strong wholesale nursery stock industry. White pine is the primary species used. Pines 3 to 20 feet tall are dug, wrapped in burlap, and shipped all over the eastern and central parts of the county. They are used primarily for landscaping. Other species utilized include Norway spruce, dogwood, hemlock, Fraser fir, birch, maples, oaks, and boxwood.

The quality of trees in Floyd County varies from excellent in moist coves and on north-facing lower slopes to very poor on the dry, high ridgetops and west-facing slopes. Quality has been affected by wildfire and the high-grading type of harvests which removed only the best stems of certain species periodically. As a result, some areas contain a high percentage of trees generally not currently suitable for lumber.

The forests of Floyd County are important environmentally. They prevent and minimize erosion and help keep streams cool; the streams provide habitat for trout and other aquatic life. Caution should be used when clearing land or harvesting timber near or adjacent to streams and drainageways. Forests also improve air quality by converting carbon dioxide into oxygen.

Forestland Productivity

In table 8, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the “National Forestry Manual” *(11)*, which is available at the local office of the Natural Resources Conservation Service or on the Internet.

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

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

Forestland Management

In table 9, parts I through V, interpretive ratings are given for various aspects of forestland management. The ratings are both verbal and numerical.

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

Proper planning for timber harvesting is essential to minimize the potential impact to soil and water quality. A harvest plan should include logging roads, log decks, streamside management zones, stream crossings, skid trails, schedule of activities, and Best Management Practices (BMP’s) for each activity.

Forests should be managed to increase economic and environmental benefits. A forest stewardship plan should be developed to guide management and utilization of the woodlands.

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

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

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the

“National Forestry Manual” *(11)*, which is available at the local office of the Natural Resources Conservation Service or on the Internet.

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

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

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

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erosion factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

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

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

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

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

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *potential for damage to soil by fire* are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope. The soils are described as having a low, moderate, or high potential for this kind of damage. The ratings indicate an evaluation of the potential impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer.

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

Christmas Tree Production

Jimmy Osborne, Virginia Polytechnic Institute and State University Cooperative Extension Agent, Grayson County, helped prepare this section.

General management needed for Christmas tree production (principally Fraser fir) is suggested in this section. Planners of Christmas tree management systems for the production of Christmas trees for individual fields or farms should consider the detailed information given in the description of each soil under “Detailed Soil Map Units.” Specific information can be obtained from the local Cooperative Extension Service.

Many of the farms in Floyd County have gradually converted from livestock and forage production to the production of Christmas trees (fig. 11). Fraser fir is the dominant variety of tree grown in Floyd County for Christmas tree production. The recommended production capacity for Fraser fir is about 1,500 trees per acre at 5’ X 5’ spacing. A viability of around 85 percent at harvest, or about 1,275 trees per acre, is expected for economic feasibility. Major soil factors to consider when selecting a potential site for Christmas tree production are: adequate soil drainage, soil texture, depth to bedrock, and topsoil thickness. Well drained soils which have an average of less than 35 percent clay in the subsoil, which are at least 20 inches deep to bedrock, and which have a minimum of 4 inches of topsoil are preferred. Disease problems (primarily phytophthora) increase dramatically on wetter soils and on soils which average more than 35 percent clay in the subsoil. Sites on north-northeast aspects are favored over sites on south-southwest aspects. South-southwest aspects tend to be more droughty than north-northeast aspects. Fraser fir stands on south-southwest aspects require a high level of soil surface cover management. Herbicidal applications must not be allowed to reduce the ground vegetation to bare cover, especially on south-southwest aspects. Optimum soil surface cover management practices are increasingly important in order to control erosion on the steeper slopes.

Recreational Development

The county has many areas which offer opportunities for various outdoor recreational activities. The Blue Ridge Parkway provides opportunities for fishing,

Figure 11.—Fraser fir growing on Glenelg loam, 15 to 25 percent slopes. Christmas trees are an important specialty crop in Floyd County.

hiking, camping, biking, horseback riding, and bird watching. There are many interesting sites along the Blue Ridge Parkway in Floyd County which draw large numbers of visitors. Mabry Mill is a common attraction (fig. 12). Buffalo Mountain offers hiking, bird watching, and wildlife viewing. It is considered to be one of Virginia's greatest natural heritage areas.

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

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

The ratings in the table are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are

Figure 12.—Mabry Mill along the Blue Ridge Parkway in Floyd County. This historic old mill is one of the most photographed sites on the entire parkway.

limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

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

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

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

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

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

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

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

Wildlife Habitat

Floyd County has many varied species of wildlife within its boundaries. White-tailed deer, black bear, wild turkey, ruffed grouse, raccoon, chipmunk, fox squirrel, red squirrel, gray squirrel, opossum, bobcat, red fox, gray fox, and wood thrush are common in the forested mountain areas, especially on Peaks, Junaluska, Marbleyard, Unicoi, Sylco, and Sylvatus soils. Cottontail rabbit, groundhog, quail, mourning dove, and woodcock are on upland pastures and open fields throughout the county, especially on Ashe, Glenelg, Edneytown, Edneyville, Hayesville, Cowee, Brownwood, and Myersville soils.

Beaver, muskrat, river otter, and mink inhabit areas along the Little River and its tributaries, especially on Comus, Craigsville, Delanco, and Elsinboro soils.

Mallard, wood duck, black duck, Canadian goose, blue-winged teal, and numerous warblers inhabit the wetland areas of Hatboro soils during migration periods. Bog turtles also occupy these areas, especially along the Blue Ridge Parkway.

Little River and its major tributaries offer smallmouth bass, rock bass, bluegill, yellow perch, catfish, carp, brown trout, brook trout, and rainbow trout. Stocked trout fishing is permitted in season. Native brook trout inhabit some of the remote mountain streams in the county.

Numerous song and garden birds, most of which are migratory, inhabit the survey area. Birds of prey, such as hawks and owls, are common.

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 the appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

Engineering

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

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

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

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

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

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

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

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

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Table 11, parts I and II, show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

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

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

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

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

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

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

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Table 12, parts I and II, show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches or between a depth of 24 inches and a restrictive layer is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Saturated hydraulic conductivity (K_{sat}), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation.

Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

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

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

Saturated hydraulic conductivity (K_{sat}) is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a K_{sat} rate of more than 14 micrometers per second are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

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

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include saturated hydraulic conductivity (K_{sat}), depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

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

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

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

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

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If the downward movement of water through the soil profile is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

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

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

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

Construction Materials

Table 13, parts I and II, give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

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

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

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

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

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

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

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

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

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

Water Management

Table 14 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation.

Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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

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

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

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

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

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Soil Properties

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

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

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

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

Engineering Properties

Table 15 gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

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

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

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

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

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

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

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

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

Physical Soil Properties

Table 16 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

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

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

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

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

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

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (K_{sat}), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

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

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

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

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

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

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

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

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

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

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

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the “National Soil Survey Handbook” *(12)*, which is available at the local office of the Natural Resources Conservation Service or on the Internet.

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

Chemical Properties

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

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

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

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

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

Water Features

Table 18 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

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

The four hydrologic soil groups are:

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

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

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

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

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

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

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

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

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

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

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

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

Soil Features

Table 19 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

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

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

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

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

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

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories *(13, 15)*. Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 20 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

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

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

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

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

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

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

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” *(18)* and in the “Field Book for Describing and Sampling Soils” *(14)*. Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” *(13)* and in “Keys to Soil Taxonomy” *(15)*. Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Ashe Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from gneiss and/or schist
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 8 to 55 percent

Associated Soils

- Brownwood soils, which have more mica
- Cowee soils, which have more clay in the subsoil
- Edneytown soils, which have more clay in the subsoil and are very deep to bedrock
- Edneyville soils, which are very deep to bedrock
- Glenelg soils, which have more clay in the subsoil and are very deep to bedrock
- Hayesville soils, which have more clay in the subsoil and are very deep to bedrock
- Myersville soils, which have more clay in the subsoil and are deep to bedrock
- Peaks soils, which have more rock fragments in the subsoil

Taxonomic Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Ashe loam in an area of Ashe-Edneyville complex, 35 to 55 percent slopes; in Floyd County, Virginia; 0.40 mile northeast (26 degrees) of the junction of Highways VA-737 and VA-738 and 0.57 mile southeast (144 degrees) of the junction of Highways VA-606 and VA-738; Alum Ridge, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 59 minutes 12.00 seconds N. and long. 80 degrees 26 minutes 42.00 seconds W.

A—0 to 4 inches; dark yellowish brown (10YR 4/4) loam; moderate fine granular structure; friable; common fine roots; few fine mica flakes; 5 percent gneiss gravel; very strongly acid; abrupt smooth boundary.

Bw—4 to 18 inches; brownish yellow (10YR 6/6) gravelly sandy loam; weak fine granular structure; friable; few fine roots; few fine mica flakes; 20 percent gneiss gravel; very strongly acid; clear smooth boundary.

C—18 to 28 inches; yellowish brown (10YR 5/4) gravelly sandy loam; massive; friable; few fine roots; few fine mica flakes; 30 percent gneiss gravel; very strongly acid; clear smooth boundary.

R—28 inches; hard gneiss bedrock.

Range in Characteristics

Solum thickness: 14 to 40 inches

Depth to bedrock: 20 to 40 inches to hard bedrock
Rock fragments: 0 to 15 percent, by volume, in the A horizon and 5 to 35 percent in the Bw and C horizons
Reaction: Very strongly acid to moderately acid throughout the profile, except where surface layers have been limed
Mica flakes: Few or common throughout the profile

A horizon:
Hue—10YR or 2.5Y
Value—3 or 4; value of 3 is limited to thin upper A horizons; soil materials have value of 4 when mixed to a depth of 7 inches
Chroma—2 to 6
Texture—loam

Ap horizon (if it occurs):
Hue—10YR or 2.5Y
Value—3 or 4
Chroma—2 to 6
Fine-earth texture—sandy loam, fine sandy loam, or loam

Bw horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy loam, fine sandy loam, or loam

C horizon:
Hue—7.5YR to 2.5Y (or horizon is multicolored with no dominant hue, value, or chroma)
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy loam, fine sandy loam, loam, loamy sand, or loamy fine sand

Cr horizon (if it occurs):
Type of bedrock—weathered gneiss or schist that is partly consolidated but can be dug with difficulty with hand tools

R horizon:
Type of bedrock—hard, unweathered gneiss or schist

Braddock Series

Physiographic province: Blue Ridge
Landform: Stream terraces, coves, and benches on foothills
Parent material: Alluvium and/or colluvium derived from igneous rock and/or metamorphic rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 3 to 25 percent

Associated Soils

- Delanco soils, which are moderately well drained and have less clay in the subsoil
- Tate soils, which have less clay in the subsoil
- Elsinboro soils, which have less clay in the subsoil

- Greenlee soils, which have less clay and more rock fragments in the subsoil
- Kinkoro soils, which are poorly drained

Taxonomic Classification

Fine, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Braddock cobbly loam; in Grayson County, Virginia:

A—0 to 8 inches; brown (7.5YR 4/4) cobbly loam; moderate medium granular structure; friable; many very fine and fine roots; common fine mica flakes; 5 percent gravel and 15 percent cobbles; slightly acid; abrupt smooth boundary.

BA—8 to 15 inches; strong brown (7.5YR 4/6) cobbly clay loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; common fine mica flakes; 5 percent gravel and 15 percent cobbles; moderately acid; clear smooth boundary.

Bt1—15 to 51 inches; red (2.5YR 5/6) clay; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; few very fine and fine roots; common distinct clay films on all faces of peds; common fine mica flakes; strongly acid; gradual smooth boundary.

Bt2—51 to 62 inches; red (2.5YR 4/6) clay loam; weak medium subangular blocky structure; firm, moderately sticky, slightly plastic; common distinct clay films on all faces of peds; common fine mica flakes; strongly acid.

Range in Characteristics

Solum thickness: More than 40 inches
Depth to bedrock: More than 60 inches
Rock fragments: 15 to 25 percent in the A and BA horizons, 0 to 25 percent in the upper part of the Bt horizon, and 0 to 40 percent in the lower part of the Bt, BC, and C horizons
Reaction: Reaction in unlimed areas is extremely acid to strongly acid

Ap or A horizon:
Hue—7.5YR or 10YR
Value—2 to 5
Chroma—1 to 6
Fine-earth texture—loam

E horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, sandy loam, or fine sandy loam

BA horizon or BE horizon (if it occurs):
Hue—2.5YR to 7.5YR
Value—4 or 5
Chroma—4 to 8
Fine-earth texture—sandy clay loam, clay loam, or clay

Bt horizon:
Hue—10R to 5YR
Value—3 to 5
Chroma—6 to 8
Fine-earth texture—clay, sandy clay, clay loam, or silty clay loam

BC horizon (if it occurs):
Hue—10R to 5YR
Value—3 to 5
Chroma—6 to 8
Fine-earth texture—sandy clay loam, clay loam, sandy clay, silty clay loam, or clay

C or 2C horizon (if it occurs):
Hue—10R to 7.5YR
Value—3 to 8
Chroma—1 to 8
Fine-earth texture—sandy loam, loam, sandy clay loam, clay loam, silty clay loam, clay, or sandy clay

Brownwood Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum from mica schist and mica gneiss
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 8 to 55 percent

Associated Soils

- Ashe soils, which have less mica
- Cowee soils, which have more clay in the subsoil
- Edneytown, Edneyville, Glenelg, and Hayesville soils, which are very deep to bedrock
- Myersville soils, which are deep to bedrock
- Peaks soils, which have more rock fragments in the subsoil

Taxonomic Classification

Coarse-loamy, paramicaceous, mesic Typic Dystrudepts

Typical Pedon

Brownwood fine sandy loam in an area of Brownwood-Chandler complex, 45 to 95 percent slopes, very stony; in Franklin County, Virginia; about 4,600 feet north and 51 degrees east of the intersection of State Routes 640 and 666, in woodland; Endicott, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 58 minutes 42.60 seconds N. and long. 80 degrees 7 minutes 36.20 seconds W.

Oe—0 to 2 inches; moderately decomposed plant material.
A—2 to 6 inches; dark brown (10YR 3/3) fine sandy loam; weak very fine granular structure; very friable, nonsticky, nonplastic; many very fine, fine, medium, coarse, and very coarse roots; few fine mica flakes; 5 percent subangular mica schist flagstones and 5 percent subangular mica schist channers; very strongly acid; clear smooth boundary.
BA—6 to 10 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak fine subangular blocky structure; very friable, nonsticky, nonplastic; many very fine, fine, medium, coarse, and very coarse roots; common fine mica flakes; 5 percent subangular mica schist flagstones; very strongly acid; clear smooth boundary.
Bw1—10 to 16 inches; strong brown (7.5YR 4/6) fine sandy loam; weak fine subangular blocky structure; very friable, nonsticky, nonplastic; common very fine, fine, medium, coarse, and very coarse roots; many fine mica flakes; 2 percent

subangular mica schist cobbles and 3 percent subangular mica schist channers; strongly acid; gradual wavy boundary.

Bw2—16 to 35 inches; strong brown (7.5YR 4/6) cobbly fine sandy loam; weak fine subangular blocky structure; very friable, nonsticky, nonplastic; common very fine, fine, medium, coarse, and very coarse roots; many fine mica flakes; 5 percent subangular mica schist channers and 20 percent subangular mica schist cobbles; very strongly acid; gradual irregular boundary.

Cr—35 to 45 inches; soft mica schist bedrock.

R—45 inches; hard mica schist bedrock.

Range in Characteristics

Diagnostic subsurface horizon and thickness: Cambic horizon; 10 to 35 inches
Depth to soft bedrock: 20 to 40 inches
Depth to hard bedrock: 40 to 60 inches
Mica content: Few to many in the surface and subsurface layers and many in the subsoil and substratum
Reaction: Very strongly acid or strongly acid, except in limed areas
Rock fragments: 0 to 15 percent in the surface layer and 0 to 35 percent in the subsurface layer, subsoil, and substratum

A or Ap horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Texture—fine sandy loam or loam

AB or BA horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 or 5
Fine-earth texture—fine sandy loam or loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—sandy loam, fine sandy loam, or loam

BC horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy loam, fine sandy loam, or loam

C horizon (if it occurs):
Hue—7.5YR or 10YR or multicolored
Value—4 or 5
Chroma—2 to 8
Fine-earth texture—loamy sand, sandy loam, fine sandy loam, or loam

Cr horizon:
Bedrock—soft, weathered mica schist or mica gneiss

R horizon:
Bedrock—soft, weathered mica schist or mica gneiss

Clingman Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on high mountains
Parent material: Organic material over residuum weathered from amphibolite schist and gneiss
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very shallow or shallow
Slope range: 8 to 95 percent

Associated Soils

- Porters soils, which are deep to bedrock
- Unaka soils, which are moderately deep to bedrock

Taxonomic Classification

Dysic, frigid Lithic Udifolists

Typical Pedon

Clingman peat in an area of Rock outcrop-Clingman complex, 8 to 35 percent slopes; in Floyd County, Virginia; on Buffalo Mountain, about 1.33 miles southeast of the junction of Highways VA-784 and VA-785, about 1.45 miles northeast of the junction of Highways VA-758 and VA-629, in an alpine bald about 50 yards west of the former lookout tower; Willis, Virginia USGS 7.5 Minute Quadrangle; lat. 36 degrees 47 minutes 46.00 seconds N. and long. 80 degrees 28 minutes 36.00 seconds W.

Oi—0 to 2 inches; black (10YR 2/1) broken face and very dark brown (7.5YR 2/2) rubbed peat; 70 percent unrubbed fiber, 45 percent rubbed; massive; loose; many very fine, fine, and medium roots; 5 percent twigs; extremely acid; clear smooth boundary.
Oe—2 to 12 inches; very dark brown (10YR 2/2) rubbed and black (10YR 2/1) broken face mucky peat; 50 percent unrubbed fiber, 25 percent rubbed; massive; very friable; many very fine, fine, and medium roots; extremely acid; clear smooth boundary.
A—12 to 16 inches; very dark grayish brown (10YR 3/2) fine sandy loam; weak fine granular structure; friable; common very fine, fine, and medium roots; 10 percent schist gravel; very strongly acid; abrupt smooth boundary.
R—16 inches; hard, silica-rich, amphibolite schist bedrock with quartz veins.

Range in Characteristics

Thickness of organic tiers: 3 to 18 inches
Depth to bedrock: 3 to 20 inches to hard bedrock
Reaction: Extremely acid in the organic horizons and extremely acid to strongly acid in the mineral horizons
Rock fragments (content, size): 0 to 15 percent, by volume, in the mineral horizons; gravel, cobbles, and stones
Content of flakes of mica: None to many throughout the profile

Oi horizon:
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—1 to 3
Composition—slightly decomposed leaves, needles, twigs, and roots
Organic material—fibric material; peat

Oe horizon:
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—1 to 3
Composition—moderately decomposed organic matter
Organic material—hemic material; mucky peat

Oa horizon (if it occurs):
Hue—2.5YR to 10YR (or horizon is neutral in hue and has value of 2 to 4)
Value—2 to 4
Composition—highly decomposed organic matter
Organic material—sapric material; muck

A horizon:
Hue—7.5YR or 10YR
Value—2 to 6
Chroma—1 to 6
Texture—sandy loam, fine sandy loam, or loam

R horizon:
Texture—silica-rich, amphibolite schist or gneiss

Codorus Series

Physiographic province: Blue Ridge
Landform: Flood plains in valleys
Parent material: Alluvium derived from igneous rock and/or metamorphic rock
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Hatboro soils, which are poorly drained
- Comus soils, which are well drained
- Craigsville soils, which are well drained and have more rock fragments in the subsoil

Taxonomic Classification

Fine-loamy, mixed, active, mesic Fluvaquentic Dystrudepts

Typical Pedon

Codorus loam, 0 to 3 percent slopes, frequently flooded; in Grayson County, Virginia; about 5.3 miles southeast of Galax, Virginia, about 1.0 mile southeast of the junction of Highways VA-799 and VA-790, about 1.25 mile southwest of the junction of Highways VA-718 and VA-799, in a pasture; Lambsburg, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 35 minutes 8.00 seconds N. and long. 80 degrees 51 minutes 58.00 seconds W.

Ap—0 to 7 inches; brown (10YR 4/3) loam; weak fine granular structure; friable; common fine and many very fine roots; common fine mica flakes; slightly acid; abrupt smooth boundary.
Bw1—7 to 12 inches; brown (10YR 5/3) loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; common fine mica flakes; moderately acid; clear smooth boundary.
Bw2—12 to 19 inches; brown (10YR 5/3) loam; weak fine subangular blocky structure;

friable, slightly sticky, slightly plastic; common very fine and fine roots; few fine prominent yellowish brown (10YR 5/8) masses of oxidized iron; common fine mica flakes; strongly acid; gradual smooth boundary.

Bw3—19 to 37 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common medium distinct gray (10YR 5/1) iron depletions; strongly acid; abrupt smooth boundary.

C1—37 to 49 inches; yellowish brown (10YR 5/4) gravelly sandy loam; massive; friable, nonsticky, nonplastic; common medium distinct gray (10YR 5/1) iron depletions; 20 percent well rounded gravel; strongly acid; gradual smooth boundary.

C2—49 to 62 inches; yellowish brown (10YR 5/4) very gravelly sandy loam; massive; friable, nonsticky, nonplastic; common medium distinct gray (10YR 5/1) iron depletions; 45 percent well rounded gravel; strongly acid.

Range in Characteristics

Solum thickness: 30 to 60 inches
Depth to bedrock: More than 72 inches
Rock fragments: 0 to 15 percent in the A and B horizons, 0 to 25 percent in the C horizon above a depth of 40 inches, and 0 to 70 percent in the C horizon below a depth of 40 inches
Reaction: Reaction in unlimed areas is very strongly acid to moderately acid in the upper part of the solum and strongly acid to slightly acid in the lower part of the solum and in the substratum

A or Ap horizon:
Hue—10YR
Value—3 to 6
Chroma—2 or 3
Texture—loam

B horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Redoximorphic features—in shades of brown and gray
Texture—loam, silt loam, clay loam, or silty clay loam

C horizon:
Hue—7.5YR to 2.5Y
Value—3 to 5
Chroma—3 or 4
Redoximorphic features—in shades of brown and gray
Fine-earth texture—loam, silt loam, clay loam, or silty clay loam

Cg horizon (if it occurs):
Hue—neutral or 7.5YR or 10YR
Value—3 to 5
Chroma—1 or 2 or 0 to 2
Redoximorphic features—in shades of brown
Fine-earth texture—loam, silt loam, clay loam, or silty clay loam

Comus Series

Physiographic province: Blue Ridge
Landform: Flood plains in valleys
Parent material: Alluvium derived from igneous rock and/or metamorphic rock

Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 5 percent

Associated Soils

- Hatboro soils, which are poorly drained
- Codorus soils, which are somewhat poorly drained
- Craigsville soils, which have more rock fragments in the subsoil

Taxonomic Classification

Coarse-loamy, mixed, active, mesic Fluventic Dystrudepts

Typical Pedon

Comus fine sandy loam, 0 to 3 percent slopes, frequently flooded; in Grayson County, Virginia; about 2.75 miles south of Fries, Virginia, about 1.35 miles west of the junction of Highways VA-641 and VA-634 and 2.45 miles northwest of the junction of Highways US-58 and VA-94, in a pasture along the New River; Galax, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 40 minutes 22.00 seconds N. and long. 80 degrees 58 minutes 58.00 seconds W.

Ap—0 to 9 inches; dark yellowish brown (10YR 3/4) fine sandy loam; weak fine and medium granular structure; friable; common fine roots and many very fine roots; few fine mica flakes; strongly acid; abrupt smooth boundary.
Bw—9 to 31 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky, nonplastic; common very fine roots; few fine mica flakes; strongly acid; clear smooth boundary.
C1—31 to 53 inches; brown (10YR 4/3) fine sandy loam; few fine prominent yellowish brown (10YR 5/8) mottles; massive; friable, slightly sticky, nonplastic; few very fine roots; common fine mica flakes; strongly acid; clear smooth boundary.
2C2—53 to 62 inches; brown (10YR 4/3) gravelly loamy sand; massive; loose, nonsticky, nonplastic; 20 percent quartz gravel; strongly acid.

Range in Characteristics

Solum thickness: 24 to 40 inches
Depth to bedrock: More than 72 inches
Rock fragments: 0 to 15 percent in the A and B horizons and 0 to 40 percent in the C horizon
Reaction: Reaction in unlimed areas is very strongly acid to moderately acid

Ap horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—1 to 4
Texture—fine sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—loam, silt loam, or fine sandy loam

C or 2C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 6

Fine-earth texture—loam, silt loam, fine sandy loam, or sandy loam; textures include loamy sand or loamy fine sand below a depth of 40 inches

Cowee Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from mica schist and/or gneiss
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 0 to 55 percent

Associated Soils

- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil
- Glenelg soils, which are very deep to bedrock
- Peaks soils, which have less clay and more rock fragments in the subsoil
- Ashe and Brownwood soils, which have less clay in the subsoil
- Edneytown and Edneyville soils, which are very deep to bedrock
- Myersville soils, which are deep to bedrock

Taxonomic Classification

Fine-loamy, parasesquic, mesic Typic Hapludults

Typical Pedon

Cowee loam, 7 to 15 percent slopes; in Grayson County, Virginia; about 6.5 miles southeast of Galax, Virginia, about 1.0 mile east of the junction of Highways VA-89 and VA-613, about 1.0 mile northeast of the junction of Highway VA-89 and the Blue Ridge Parkway, and 75 feet north of Highway VA-804, in a hardwood forest; Cumberland Knob, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 34 minutes 46.00 seconds N. and long. 80 degrees 53 minutes 25.00 seconds W.

Oe—0 to 2 inches; moderately decomposed plant material.
A—2 to 6 inches; brown (7.5YR 4/4) loam; moderate fine granular structure; friable; many fine and medium roots; common fine mica flakes; 10 percent schist gravel; strongly acid; abrupt wavy boundary.
Bt—6 to 27 inches; yellowish red (5YR 5/6) clay loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine and medium roots; common distinct clay films on all faces of peds; common fine mica flakes; 10 percent schist gravel; strongly acid; clear wavy boundary.
C—27 to 39 inches; multicolored gravelly sandy loam; massive; very friable, nonsticky, nonplastic; few fine and medium roots; common fine and medium mica flakes; 25 percent schist gravel; strongly acid; abrupt wavy boundary.
Cr—39 to 45 inches; weathered, multicolored, interbedded mica gneiss and mica schist bedrock; rippable.

Range in Characteristics

Solum thickness: 15 to 39 inches
Depth to bedrock: 20 to 40 inches to soft bedrock; more than 40 inches to hard bedrock
Rock fragments: 0 to 35 percent throughout the profile
Reaction: Reaction in unlimed areas is extremely acid to moderately acid
Mica flakes: Few or common

A or Ap horizon:
Hue—5YR to 10YR
Value—3 to 5
Chroma—2 to 8
Fine-earth texture—loam

E horizon (if it occurs):
Hue—5YR or 7.5YR
Value—4 to 5
Chroma—4 to 8
Fine-earth texture—loam, sandy loam, or fine sandy loam

Bt horizon:
Hue—5YR or 7.5YR (with 7.5YR restricted to individual subhorizons)
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy clay loam, loam, clay loam, sandy loam, or fine sandy loam

C horizon:
Hue—5YR or 7.5YR (or multicolored)
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy loam, fine sandy loam, or loam

Cr horizon:
Texture—horizon is weathered, multicolored, felsic to mafic crystalline rock such as gneiss or schist that is rippable

Craigsville Series

Physiographic province: Blue Ridge
Landform: Flood plains in valleys
Parent material: Alluvium derived from igneous rock and/or metamorphic rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Comus soils, which have fewer rock fragments in the subsoil
- Hatboro soils, which are poorly drained and have fewer rock fragments in the subsoil
- Codorus soils, which are somewhat poorly drained and have fewer rock fragments in the subsoil

Taxonomic Classification

Loamy-skeletal, mixed, superactive, mesic Fluventic Dystrudepts

Typical Pedon

Craigsville cobbly sandy loam, 0 to 3 percent slopes, frequently flooded; in Grayson County, Virginia; about 4.15 miles southeast of Whitetop, Virginia; about 0.3 mile northwest of the junction of Highways VA-751-S and US-58, about 0.4 mile southeast of the junction of Highways US-58 and VA-750, about 100 yards northwest of Mt. Rogers School, in a pasture along Helton Creek; Park, North Carolina USGS 7.5

Minute Quadrangle, NAD27; lat. 36 degrees 35 minutes 39.00 seconds N. and long. 81 degrees 52 minutes 6.00 seconds W.

Ap—0 to 6 inches; brown (10YR 4/3) cobbly sandy loam; weak fine granular structure; very friable; many very fine and fine roots; 15 percent cobbles and 15 percent gravel; strongly acid; clear wavy boundary.
Bw1—6 to 19 inches; yellowish brown (10YR 5/6) very cobbly sandy loam; weak fine subangular blocky structure; friable; common very fine and fine roots; 20 percent gravel and 20 percent cobbles; very strongly acid; gradual wavy boundary.
Bw2—19 to 32 inches; yellowish brown (10YR 5/6) very cobbly sandy loam; weak fine and medium subangular blocky structure; friable; few very fine and fine roots; 25 percent gravel and 30 percent cobbles; very strongly acid; clear wavy boundary.
2C—32 to 62 inches; yellowish brown (10YR 5/6) extremely cobbly loamy sand; massive; very friable; 30 percent gravel and 35 percent cobbles; very strongly acid.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: More than 60 inches
Rock fragments: 15 to 35 percent in the A horizon and 35 to 70 percent in the B and C horizons
Reaction: Reaction in unlimed areas is very strongly acid or strongly acid

A or Ap horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Fine-earth texture—sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Fine-earth texture—loam or sandy loam

C or 2C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—loamy sand or sandy loam

Delanco Series

Physiographic province: Blue Ridge
Landform: Stream terraces and alluvial fans in valleys; coves in foothills
Parent material: Alluvium derived from igneous rock and/or metamorphic rock
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 15 percent

Associated Soils

- Braddock soils, which have more clay in the subsoil and are well drained
- Greenlee soils, which have more rock fragments in the subsoil and are well drained
- Kinkora soils, which have more clay in the subsoil and are poorly drained
- Elsinboro and Tate soils, which are well drained

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Aquic Hapludults

Typical Pedon

Delanco fine sandy loam, 2 to 7 percent slopes, rarely flooded; in Grayson County, Virginia; about 3.5 miles southeast of Independence, Virginia; about 0.65 mile southeast of the junction of Highways VA-700 and VA-701, about 1.1 miles southwest of the junction of Highways VA-700 and VA-697, in a hayfield; Sparta East, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 34 minutes 26.00 seconds N. and long. 81 degrees 6 minutes 44.00 seconds W.

Ap—0 to 10 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak fine granular structure; friable; common fine and many very fine roots; common fine mica flakes; 2 percent quartz gravel and 3 percent gneiss gravel; strongly acid; abrupt smooth boundary.

E—10 to 16 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; common fine mica flakes; 2 percent quartz gravel and 3 percent gneiss gravel; strongly acid; clear smooth boundary.

Bt—16 to 41 inches; yellowish brown (10YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine and fine roots; common distinct clay films on all faces of peds; many medium prominent light brownish gray (10YR 6/2) iron depletions; common fine mica flakes; 5 percent gneiss gravel and 5 percent quartz gravel; strongly acid; clear smooth boundary.

BC—41 to 47 inches; yellowish brown (10YR 5/6) loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; many medium prominent light brownish gray (10YR 6/2) iron depletions; common fine mica flakes; 2 percent quartz gravel and 3 percent gneiss gravel; strongly acid; clear smooth boundary.

C—47 to 62 inches; yellowish brown (10YR 5/6) sandy loam; massive; friable, slightly sticky, slightly plastic; many medium prominent light brownish gray (10YR 6/2) iron depletions; common fine mica flakes; 2 percent quartz gravel and 3 percent gneiss gravel; strongly acid.

Range in Characteristics

Solum thickness: 26 to 56 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent in the A horizon, 0 to 20 percent in the E and B horizons, and 5 to 25 percent in the C horizon
Reaction: Reaction in unlimed areas is extremely acid to strongly acid

A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—fine sandy loam

E horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Fine-earth texture—loam or fine sandy loam

Bt horizon:
Hue—7.5YR or 10YR

Value—3 to 7
Chroma—4 to 8
Redoximorphic features—in shades of gray and brown
Fine-earth texture—clay loam or sandy clay loam

BC horizon:
Hue—2.5YR to 10YR
Value—3 to 6
Chroma—1 to 6
Redoximorphic features—in shades of gray and brown
Fine-earth texture—silt loam, loam, or sandy loam

C horizon:
Hue—2.5YR to 10YR
Value—3 to 6
Chroma—1 to 6
Redoximorphic features—in shades of gray and brown
Fine-earth texture—silt loam, loam, or sandy loam

Edneytown Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from gneiss and/or schist
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 35 percent

Associated Soils

- Hayesville soils, which have more clay in the subsoil
- Edneyville soils, which have less clay in the subsoil
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil
- Myersville soils, which are deep to bedrock
- Glenelg soils, which can have loam, silt loam, and silty clay loam textures in the subsoil
- Ashe, Brownwood, and Cowee soils, which are moderately deep to bedrock

Taxonomic Classification

Fine-loamy, mixed, active, mesic Typic Hapludults

Typical Pedon

Edneytown loam, 7 to 15 percent slopes; in Grayson County, Virginia; about 2.5 miles northwest of Fries, Virginia, about 0.75 mile northwest of the junction of Highways VA-647 and VA-759, about 1.0 mile north of the junction of Highways VA-646 and VA-648, in a pasture; Brierpatch Mountain, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 43 minutes 35.00 seconds N. and long. 81 degrees 0 minutes 58.00 seconds W.

Ap—0 to 4 inches; brown (10YR 4/3) loam; moderate fine granular structure; friable; many very fine roots; few fine mica flakes; strongly acid; abrupt wavy boundary.

E—4 to 7 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine roots; few fine mica flakes; strongly acid; abrupt wavy boundary.

Bt—7 to 20 inches; strong brown (7.5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine roots; common discontinuous clay films on all faces of peds; few fine mica flakes; strongly acid; clear wavy boundary.
BC—20 to 27 inches; strong brown (7.5YR 5/8) sandy loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; few fine mica flakes; strongly acid; clear wavy boundary.
C1—27 to 44 inches; brownish yellow (10YR 6/6) loamy sand; massive; loose, nonsticky, nonplastic; few fine mica flakes; very strongly acid; gradual wavy boundary.
C2—44 to 62 inches; brownish yellow (10YR 6/8) loamy sand; massive; loose, nonsticky, nonplastic; few fine mica flakes; very strongly acid.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent throughout the profile
Reaction: Reaction in unlimed areas is very strongly acid or strongly acid

Ap horizon:
Hue—10YR
Value—3 to 6
Chroma—1 to 4
Texture—loam

E horizon:
Hue—10YR
Value—4 to 6
Chroma—3 to 6
Texture—loam, fine sandy loam, or sandy loam

Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Texture—clay loam or sandy clay loam

BC horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—6 to 8
Texture—sandy loam or sandy clay loam

C horizon:
Hue—7.5YR or 10YR
Value—5 to 8
Chroma—3 to 8
Texture—loam, fine sandy loam, sandy loam, or loamy sand

Edneyville Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from gneiss and/or schist
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High

Depth class: Very deep
Slope range: 8 to 55 percent

Associated Soils

- Edneytown soils, which have more clay in the subsoil
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil
- Ashe, Brownwood, and Cowee soils, which are moderately deep to bedrock
- Hayesville soils, which have more clay in the subsoil
- Myersville soils, which are deep to bedrock
- Glenelg soils, which which have more clay in the subsoil

Taxonomic Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Edneyville loam, 15 to 35 percent slopes; in Grayson County, Virginia; about 3.5 miles northwest of Fries, Virginia, about 0.2 mile southwest of the junction of Highways VA-604 and VA-644, about 0.2 mile northeast of the junction of Highways VA-646 and VA-604, in a pasture; Brierpatch Mountain, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 44 minutes 25.00 seconds N. and long. 81 degrees 0 minutes 53.00 seconds W.

Ap—0 to 5 inches; dark yellowish brown (10YR 4/4) loam; weak very fine granular structure; friable; many very fine roots; few fine mica flakes; strongly acid; abrupt wavy boundary.

AB—5 to 11 inches; yellowish brown (10YR 5/4) loam; weak medium granular structure; friable, slightly sticky, slightly plastic; common very fine roots; few fine mica flakes; strongly acid; clear wavy boundary.

Bw—11 to 26 inches; yellowish brown (10YR 5/4) sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine roots; few fine mica flakes; strongly acid; clear wavy boundary.

BC—26 to 34 inches; yellowish brown (10YR 5/4) sandy loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; few fine mica flakes; strongly acid; gradual wavy boundary.

C—34 to 62 inches; brownish yellow (10YR 6/6) sandy loam; massive; very friable, slightly sticky, nonplastic; few fine mica flakes; 5 percent quartz gravel and 5 percent gneiss gravel; very strongly acid.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent in the A horizon and 0 to 35 percent in the AB, B, BC, and C horizons
Reaction: Reaction in unlimed areas is very strongly acid to moderately acid

Ap horizon:
Hue—7.5YR or 10YR
Value—2 to 5
Chroma—1 to 4
Texture—loam

AB horizon:
Hue—7.5YR or 10YR
Value—4 to 6

Chroma—2 to 4
Fine-earth texture—loam, fine sandy loam, or sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

BC horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, fine sandy loam, sandy loam, or loamy sand

Elsinboro Series

Physiographic province: Blue Ridge
Landform: Stream terraces in valleys
Parent material: Alluvium derived from igneous rock and/or metamorphic rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 3 to 8 percent

Associated Soils

- Braddock soils, which have more clay in the subsoil
- Delanco soils, which are moderately well drained
- Kinkora soils, which are poorly drained and have more clay in the subsoil
- Greenlee soils, which have more rock fragments in the subsoil
- Tate soils, which formed from colluvial material

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Elsinboro fine sandy loam, 2 to 7 percent slopes, rarely flooded; in Grayson County, Virginia; about 1.5 miles west-southwest of Oldtown, Virginia, about 1.25 miles northwest of the junction of Highways VA-94 and US-58, about 1.2 miles northwest of the junction of Highways VA-634 and VA-882, in a cornfield; Galax, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 38 minutes 53.00 seconds N. and long. 80 degrees 59 minutes 8.00 seconds W.

Ap—0 to 10 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak very fine granular structure; friable; common fine and many very fine roots; few fine mica flakes; strongly acid; abrupt smooth boundary.
E—10 to 18 inches; brown (7.5YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; common fine mica flakes; strongly acid; clear smooth boundary.
Bt—18 to 45 inches; strong brown (7.5YR 5/6) clay loam; moderate medium

subangular blocky structure; firm, slightly sticky, slightly plastic; few very fine and fine roots; common discontinuous clay films on all faces of peds; common fine mica flakes; strongly acid; clear smooth boundary.

2C—45 to 62 inches; strong brown (7.5YR 5/6) cobbly sandy loam; massive; very friable, slightly sticky, nonplastic; common fine mica flakes; 5 percent gneiss gravel, 5 percent quartz gravel, 7 percent gneiss cobbles, and 8 percent quartz cobbles; strongly acid.

Range in Characteristics

Solum thickness: 28 to 50 inches
Depth to bedrock: More than 72 inches
Rock fragments: 0 to 15 percent in the A horizon and 0 to 25 percent in the E, B, and C horizons
Reaction: Reaction in unlimed areas is very strongly acid or strongly acid

Ap horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Texture—fine sandy loam

E horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Fine-earth texture—loam, silt loam, fine sandy loam, or sandy loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Fine-earth texture—silt loam, loam, silty clay loam, clay loam, or sandy clay loam

C horizon (if it occurs) or 2C horizon:
Hue—2.5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—silt loam, loam, sandy loam, fine sandy loam, or sandy clay loam

Glenelg Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from mica schist and/or gneiss
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 55 percent

Associated Soils

- Hayesville soils, which have more clay in the subsoil
- Ashe, Brownwood, and Cowee soils, which are moderately deep to bedrock
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments and less clay in the subsoil
- Myersville soils, which are deep to bedrock

- Edneyville soils, which have less clay in the subsoil
- Edneytown soils, which do not have silt loam, loam, or silty clay loam textures in the subsoil

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Glenelg loam, 2 to 7 percent slopes; in Grayson County, Virginia; about 3.2 miles southwest of Baywood, Virginia, about 1.0 mile west of the junction of Highways VA-629 and VA-626, about 0.1 mile north-northeast of the junction of Highways VA-628 and VA-629, in a hayfield; Sparta East, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 35 minutes 11.00 seconds N. and long. 81 degrees 4 minutes 44.00 seconds W.

Ap—0 to 4 inches; dark grayish brown (10YR 4/2) loam; moderate fine and medium granular structure; friable; many fine roots; few fine mica flakes; slightly acid; abrupt smooth boundary.

Bt—4 to 24 inches; strong brown (7.5YR 5/6) clay loam; moderate fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine roots; many distinct clay films on all faces of peds; common fine mica flakes; moderately acid; gradual smooth boundary.

C1—24 to 45 inches; yellowish brown (10YR 5/6) fine sandy loam; massive; friable, slightly sticky, slightly plastic; many fine mica flakes; 5 percent mica schist gravel; strongly acid; diffuse smooth boundary.

C2—45 to 62 inches; dark yellowish brown (10YR 4/4) fine sandy loam; massive; friable, slightly sticky, slightly plastic; many fine mica flakes; 10 percent mica schist gravel; very strongly acid.

Range in Characteristics

Solum thickness: 18 to 30 inches
Depth to bedrock: More than 72 inches
Rock fragments: 0 to 15 percent in the A horizon, 0 to 35 percent in the B horizon, and 5 to 35 percent in the C horizon
Reaction: Reaction in unlimed areas is very strongly acid to slightly acid

Ap horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Texture—loam

E horizon (if it occurs):
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Fine-earth texture—loam or silt loam

Bt horizon:
Hue—5YR to 10YR
Value—4 or 5
Chroma—4 to 8
Fine-earth texture—loam, silt loam, silty clay loam, or clay loam

C horizon:
Hue—5YR to 10YR

Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, silt loam, fine sandy loam, or loamy sand

Greenlee Series

Physiographic province: Blue Ridge
Landform: Coves, benches, and saddles on low mountains and foothills
Parent material: Colluvium and/or local alluvium derived from metamorphic rock and/or igneous rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 0 to 35 percent

Associated Soils

- Braddock soils, which have more clay and fewer rock fragments in the subsoil
- Tate soils, which have fewer rock fragments in the subsoil
- Delanco soils, which are moderately well drained
- Elsinboro soils, which have fewer rock fragments in the subsoil and formed from alluvium
- Kinkoro soils, which have fewer rock fragments in the subsoil and are poorly drained

Taxonomic Classification

Loamy-skeletal, mixed, semiactive, mesic Typic Dystrudepts

Typical Pedon

Greenlee very cobbly loam, 35 to 55 percent slopes, very stony; in Grayson County, Virginia; about 2.26 miles east-northeast of Whitetop Virginia, about 0.75 mile north of the junction of Highways US-58 and VA-783, about 1.17 miles northeast of the junction of Highways VA-362 and US-58, in a hardwood forest; Park, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 37 minutes 14.00 seconds N. and long. 81 degrees 33 minutes 46.00 seconds W.

Oe—0 to 2 inches; moderately decomposed plant material.

A—2 to 7 inches; dark brown (10YR 3/3) very cobbly loam; moderate medium granular structure; friable; many fine and medium roots; 15 percent subrounded rhyolite gravel and 30 percent subrounded rhyolite cobbles; extremely acid; clear wavy boundary.

AB—7 to 14 inches; dark yellowish brown (10YR 4/4) very cobbly sandy loam; moderate fine granular structure; friable; common fine and medium roots; 15 percent subrounded rhyolite gravel and 30 percent subrounded rhyolite cobbles; very strongly acid; clear wavy boundary.

Bw1—14 to 39 inches; yellowish brown (10YR 5/4) very cobbly sandy loam; weak fine subangular blocky structure; friable; few fine roots; 10 percent subrounded rhyolite gravel and 40 percent subrounded rhyolite cobbles; very strongly acid; gradual wavy boundary.

Bw2—39 to 53 inches; yellowish brown (10YR 5/4) very cobbly sandy loam; weak fine subangular blocky structure; friable; 15 percent subrounded rhyolite gravel and 45 percent subrounded rhyolite cobbles; very strongly acid; gradual wavy boundary.

C—53 to 62 inches; yellowish brown (10YR 5/4) extremely cobbly sandy loam; structureless, massive; very friable; 15 percent subrounded rhyolite gravel and 60 percent subrounded rhyolite cobbles; very strongly acid.

Range in Characteristics

Solum thickness: 20 to 60 inches or more
Depth to bedrock: More than 60 inches
Rock fragments: 35 to 60 percent in the A and B horizons and 35 to 80 percent in the C horizon
Reaction: Reaction in unlimed areas is extremely acid to moderately acid

A horizon:
Hue—10YR or 7.5YR
Value—2 to 5
Chroma—1 to 4
Fine-earth texture—loam

AB or BA horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—loam, fine sandy loam, sandy loam, or sandy clay loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, fine sandy loam, sandy loam, or sandy clay loam

BC horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Fine-earth texture—loam, sandy loam, fine sandy loam, loamy fine sand, or loamy sand

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, sandy loam, fine sandy loam, loamy sand, or sand

Hatboro Series

Physiographic province: Blue Ridge
Landform: Flood plains in valleys
Parent material: Alluvium derived from igneous rock and/or metamorphic rock
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Codorus soils, which are somewhat poorly drained
- Comus soils, which are well drained
- Craigsville soils, which are well drained and have more rock fragments in the subsoil

Taxonomic Classification

Fine-loamy, mixed, active, nonacid, mesic Fluvaquentic Endoaquepts

Typical Pedon

Hatboro sandy loam, 0 to 3 percent slopes, frequently flooded; in Grayson County, Virginia; about 2.3 miles southeast of Elk Creek, Virginia, about 0.3 mile northwest of the junction of Highways VA-656 and VA-660, about 0.8 mile northeast of the junction of Highways VA-660 and VA-696, in a pasture along Turkey Fork; Elk Creek, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 44 minutes 24.00 seconds N. and long. 81 degrees 14 minutes 22.00 seconds W.

Ap—0 to 8 inches; brown (10YR 4/3) sandy loam; weak fine granular structure; friable; common fine and many very fine roots; few fine faint yellowish brown (10YR 5/4) masses of oxidized iron; common fine mica flakes; slightly acid; abrupt smooth boundary.

Bg1—8 to 28 inches; light brownish gray (2.5Y 6/2) sandy clay loam; weak medium subangular blocky structure; firm, slightly sticky, slightly plastic; few fine and common very fine roots; common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; common fine mica flakes; moderately acid; gradual smooth boundary.

Bg2—28 to 45 inches; grayish brown (2.5Y 5/2) sandy clay loam; weak medium subangular blocky structure; firm, slightly sticky, slightly plastic; few very fine roots; common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; common fine mica flakes; moderately acid; abrupt smooth boundary.

Cg—45 to 62 inches; grayish brown (2.5Y 5/2) silt loam; massive; friable, slightly sticky, slightly plastic; common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; moderately acid.

Range in Characteristics

Solum thickness: 40 to 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 10 percent in the A and B horizons and 0 to 80 percent in the C horizon
Reaction: Reaction in unlimed areas is very strongly acid to neutral to a depth of 30 inches and moderately acid or slightly acid below a depth of 30 inches

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Redoximorphic features—in shades of brown and/or gray
Texture—sandy loam

B horizon:
Hue—neutral or 10YR to 5Y
Value—4 to 7
Chroma—0 to 2
Redoximorphic features—in shades of brown and/or gray
Texture—sandy clay loam, clay loam, silty clay loam, or silt loam

C horizon:
Hue—neutral or 10YR to 5Y
Value—4 to 7
Chroma—0 to 2
Redoximorphic features—in shades of brown and/or gray
Fine-earth texture—sandy clay loam, clay loam, silty clay loam, or silt loam in the upper part and stratified sand, silt, silt and clay sediments, and gravel in the lower part

Hayesville Series

Physiographic province: Blue Ridge
Landform: Ridges and hills on low mountains and foothills
Parent material: Residuum weathered from gneiss and/or schist
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 25 percent

Associated Soils

- Edneyville, Edneytown, and Glenelg soils, which have less clay in the subsoil
- Ashe, Cowee, and Brownwood soils, which are moderately deep to bedrock and have less clay in the subsoil
- Myersville soils, which are deep to bedrock and have less clay in the subsoil
- Peaks soils, which are moderately deep to bedrock and have less clay and more rock fragments in the subsoil

Taxonomic Classification

Fine, kaolinitic, mesic Typic Kanhapludults

Typical Pedon

Hayesville loam, 2 to 7 percent slopes; in Grayson County, Virginia; about 0.7 mile northeast of Baywood, Virginia, about 1.0 mile northeast of the junction of Highways VA-624 and VA-626, about 100 yards northeast of the junction of Highways VA-623 and VA-626, in a hayfield; Sparta East, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 36 minutes 54.00 seconds N. and long. 81 degrees 0 minutes 6.00 seconds W.

Ap—0 to 6 inches; brown (7.5YR 4/4) loam; moderate fine and medium granular structure; friable; many fine roots; few fine mica flakes; slightly acid; abrupt smooth boundary.
E—6 to 11 inches; strong brown (7.5YR 5/6) loam; moderate fine granular structure; friable, slightly sticky, slightly plastic; common fine roots; common fine mica flakes; moderately acid; abrupt smooth boundary.
Bt—11 to 43 inches; red (2.5YR 4/8) clay; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine roots; many distinct clay films on all faces of peds; common fine mica flakes; strongly acid; clear smooth boundary.
BC—43 to 49 inches; red (2.5YR 4/8) clay loam; weak fine subangular blocky structure; friable, moderately sticky, slightly plastic; common fine mica flakes; strongly acid; gradual smooth boundary.
C—49 to 62 inches; red (2.5YR 4/6) sandy loam; massive; friable, slightly sticky, slightly plastic; many fine mica flakes; strongly acid.

Range in Characteristics

Solum thickness: 30 to 60 inches or more
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent in the A horizon, 0 to 35 percent in the E horizon, and 0 to 15 percent in the B and C horizons
Reaction: Reaction in unlimed areas is very strongly acid to moderately acid

Ap horizon:
Hue—5YR to 10YR
Value—3 to 4

Chroma—2 to 4
Texture—loam

E horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam or fine sandy loam

Bt horizon:
Hue—2.5YR or 5YR
Value—4 or 5
Chroma—6 to 8
Fine-earth texture—clay or clay loam

BC horizon:
Hue—2.5YR or 5YR
Value—4 to 6
Chroma—6 to 8
Fine-earth texture—sandy clay loam, clay loam, or loam

C horizon:
Hue—2.5YR to 7.5YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy loam, fine sandy loam, loam, or sandy clay loam

Junaluska Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from phyllite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 8 to 55 percent

Associated Soils

- Marbleyard soils, which have more rock fragments and more sand in the subsoil
- Sylco soils, which have more rock fragments in the subsoil
- Sylvatus soils, which have more rock fragments in the subsoil and are shallow to bedrock
- Unaka soils, which do not have a layer in the subsoil with an accumulation of clay

Taxonomic Classification

Fine-loamy, mixed, subactive, mesic Typic Hapludults

Typical Pedon

Junaluska channery loam, 8 to 15 percent slopes; in Floyd County, Virginia; 1.4 miles northeast (83 degrees) from the junction of Highways US-221 and VA-668 and 0.9 mile northwest (276 degrees) from the junction of Highways VA-639 and VA-664; Endicott, Virginia USGS 7.5 Minute Quadrangle:

Ap—0 to 5 inches; dark brown (10YR 3/3) channery loam; weak very fine granular structure; friable, slightly sticky, slightly plastic; common fine roots; common fine mica flakes; 25 percent phyllite channers; strongly acid; clear smooth boundary.

Bt1—5 to 20 inches; strong brown (7.5YR 4/6) channery clay loam; weak fine subangular blocky structure; friable, moderately sticky, slightly plastic; few fine roots; common faint clay films on all faces of peds; common fine mica flakes; 20 percent phyllite channers; moderately acid; clear smooth boundary.
Bt2—20 to 30 inches; yellowish red (5YR 4/6) channery clay loam; weak medium subangular blocky structure; friable, moderately sticky, moderately plastic; few fine roots; many distinct clay films on all faces of peds; common fine mica flakes; 20 percent phyllite channers; strongly acid; abrupt smooth boundary.
Cr—30 to 45 inches; dark yellowish brown (10YR 4/4) partially weathered phyllite bedrock that can be hand-dug with difficulty with a spade.
R—45 inches; unweathered, hard phyllite bedrock.

Range in Characteristics

Solum thickness: 15 to 39 inches
Depth to bedrock: 20 to 40 inches to soft bedrock and more than 40 inches to hard bedrock
Rock fragments: 15 to 35 percent in the A horizon and 0 to 35 percent in the B and C horizons
Reaction: Reaction in unlimed areas is extremely acid to moderately acid

Ap horizon:
Hue—5YR to 10YR
Value—3 to 5
Chroma—3 to 8
Fine-earth texture—loam

A horizon (if it occurs):
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 8
Fine-earth texture—loam, fine sandy loam, or silt loam

Bt horizon:
Hue—2.5YR to 7.5YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, sandy clay loam, silty clay loam, or clay loam

C horizon (if it occurs):
Hue—2.5YR to 10YR
Value—3 to 8
Chroma—3 to 8
Fine-earth texture—loamy fine sand, sandy loam, fine sandy loam, or loam

Cr horizon:
Hue—2.5YR to 10YR
Value—3 to 8
Chroma—3 to 8
Composition—soft, partially weathered phyllite bedrock

R horizon:
Composition—hard, unweathered phyllite bedrock

Kinkora Series

Physiographic province: Blue Ridge
Landform: Stream terraces in valleys

Parent material: Alluvium derived from metamorphic rock and/or igneous rock
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately low
Depth class: Very deep
Slope range: 0 to 8 percent

Associated Soils

- Greenlee soils, which are well drained and have more rock fragments and less clay in the subsoil
- Delanco soils, which are moderately well drained and have less clay in the subsoil
- Elsinboro and Tate soils, which are well drained and have less clay in the subsoil
- Braddock soils, which are well drained

Taxonomic Classification

Fine, mixed, semiactive, mesic Typic Endoaquults

Typical Pedon

Kinkora fine sandy loam, 0 to 3 percent slopes, rarely flooded; in Grayson County, Virginia; about 1.0 mile northwest of Mouth of Wilson, Virginia, about 0.5 mile northwest of the junction of Highways VA-728 and US-58, about 0.35 mile southeast of the junction of Highways VA-721 and US-58, in an area planted with Christmas trees; Mouth of Wilson, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 35 minutes 53.00 seconds N. and long. 81 degrees 21 minutes 6.00 seconds W.

A—0 to 7 inches; dark grayish brown (10YR 4/2) fine sandy loam; moderate medium granular structure; friable; common fine and many very fine roots; few fine faint light brownish gray (10YR 6/2) iron depletions; common fine mica flakes; strongly acid; abrupt smooth boundary.

ABg—7 to 16 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; few fine prominent yellowish brown (10YR 5/8) masses of oxidized iron; common fine mica flakes; strongly acid; clear wavy boundary.

Btg1—16 to 27 inches; grayish brown (10YR 5/2) clay loam; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; few very fine and fine roots; common distinct discontinuous clay films on all faces of peds; common medium prominent yellowish brown (10YR 5/8) masses of oxidized iron; common fine mica flakes; strongly acid; clear wavy boundary.

Btg2—27 to 38 inches; grayish brown (10YR 5/2) clay loam; weak medium subangular blocky structure; firm, moderately sticky, moderately plastic; common distinct discontinuous clay films on all faces of peds; common medium prominent yellowish brown (10YR 5/8) masses of oxidized iron; common fine mica flakes; strongly acid; abrupt smooth boundary.

Cg1—38 to 48 inches; gray (10YR 5/1) gravelly loam; massive; friable, slightly sticky, slightly plastic; common fine mica flakes; 10 percent quartz gravel and 10 percent gneiss gravel; strongly acid; clear smooth boundary.

2Cg2—48 to 62 inches; gray (10YR 5/1) gravelly loamy sand; massive; loose, nonsticky, nonplastic; common fine mica flakes; 15 percent gneiss gravel and 15 percent quartz gravel; strongly acid.

Range in Characteristics

Solum thickness: 24 to 48 inches
Depth to bedrock: More than 72 inches

Rock fragments: 0 to 15 percent in the A and B horizons and 0 to 50 percent in the C horizon
Reaction: Reaction in unlimed areas is extremely acid to strongly acid

A horizon and E horizon (if it occurs):
Hue—10YR to 5Y
Value—4 or 5
Chroma—1 or 2
Redoximorphic features—in shades of brown and gray
Texture—fine sandy loam

ABg horizon:
Hue—10YR to 5Y
Value—4 or 5
Chroma—1 or 2
Redoximorphic features—in shades of brown and gray
Texture—silt loam or fine sandy loam

Btg horizon:
Hue—10YR to 5Y (or horizon is neutral in hue and has value of 5 or 6)
Value—5 or 6
Chroma—0 to 2
Redoximorphic features—in shades of brown and gray
Texture—silty clay loam, clay loam, silty clay, or clay

Cg horizon:
Hue—10YR to 5Y (or horizon is neutral in hue and has value of 5 or 6)
Value—5 or 6
Chroma—0 to 2
Redoximorphic features—in shades of brown and gray
Fine-earth texture—silt loam or loam

2Cg horizon:
Hue—10YR to 5Y (or horizon is neutral in hue and has value of 4 to 6)
Value—4 to 6
Chroma—0 to 2
Redoximorphic features—in shades of brown and gray
Fine-earth texture—sandy loam or loamy sand

Marbleyard Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on low mountains and foothills
Parent material: Residuum weathered from metasandstone and/or quartzite
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 8 to 55 percent

Associated Soils

- Junaluska soils, which have fewer rock fragments in the subsoil
- Unicoi soils, which are shallow to hard bedrock
- Sylco soils, which have more silt and less sand in the subsoil
- Sylvatus soils, which are shallow to bedrock and have more silt and less sand in the subsoil

Taxonomic Classification

Loamy-skeletal, siliceous, semiactive, mesic Typic Dystrudepts

Typical Pedon

Marbleyard very cobbly sandy loam; in Rockbridge County, Virginia; approximately 3,000 feet north and 7 degrees east of the intersection of Highway VA-603 and the head of the Whetstone Ridge Trail along Irish Creek on South Mountain; Cornwall, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 37 degrees 48 minutes 15.00 seconds N. and long. 79 degrees 16 minutes 58.00 seconds W.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 4 inches; dark brown (10YR 3/3) very cobbly sandy loam; weak fine granular structure; very friable, nonsticky, nonplastic; many very fine, fine, medium, and coarse roots; 10 percent quartzite stones, 15 percent quartzite gravel, and 20 percent quartzite cobbles; very strongly acid; gradual wavy boundary.

BE—4 to 9 inches; yellowish brown (10YR 5/4) very cobbly sandy loam; weak fine and medium granular structure; very friable, nonsticky, nonplastic; many very fine, fine, medium, and coarse roots; 15 percent quartzite cobbles and 20 percent quartzite gravel; very strongly acid; gradual wavy boundary.

Bw—9 to 23 inches; yellowish brown (10YR 5/6) extremely cobbly sandy loam; weak fine and medium subangular blocky structure; very friable, nonsticky, nonplastic; common very fine, fine, medium, and coarse roots; 10 percent quartzite stones, 25 percent quartzite gravel, and 30 percent quartzite cobbles; extremely acid; gradual irregular boundary.

C—23 to 36 inches; brownish yellow (10YR 6/6) extremely gravelly sandy loam; single grain; loose; few very fine roots; 20 percent quartzite cobbles and 45 percent quartzite gravel; extremely acid; abrupt wavy boundary.

R—36 inches; very pale brown (10YR 7/4) and light gray (10YR 7/2) hard and fractured quartzite bedrock.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 35 to 60 percent in the A, E, BE, or BA horizon, 35 to 75 percent in the Bw horizon, and 50 to 90 percent in the C horizon
Reaction: Reaction in unlimed areas is extremely acid to strongly acid

A horizon:
Hue—10YR
Value—2 to 4
Chroma—1 to 4
Fine-earth texture—sandy loam

E horizon (if it occurs):
Hue—7.5YR to 2.5Y
Value—5 or 6
Chroma—2 to 4
Fine-earth texture—sandy loam, fine sandy loam, or loam

BE or BA horizon:
Hue—7.5YR to 2.5Y
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—sandy loam, fine sandy loam, or loam

Bw horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy loam, fine sandy loam, or loam

C horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loamy sand, sandy loam, or loam

R horizon:
Bedrock—hard metasandstone or quartzite

Myersville Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum from amphibolite, actinolite schist and gneiss, and hornblende schist and gneiss
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Deep
Slope range: 0 to 55 percent

Associated Soils

- Ashe, Brownwood, and Cowee soils, which are moderately deep to bedrock
- Peaks soils, which are moderately deep to bedrock and have more rock fragments in the subsoil
- Edneytown, Edneyville, Glenelg, and Hayesville soils, which are very deep to bedrock

Taxonomic Classification

Fine-loamy, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Myersville loam, 8 to 15 percent slopes, very stony; in the southwestern part of Franklin County, Virginia; 5,650 feet north and 31 degrees west of the intersection of State Routes 793 and 792, in woodland; Endicott, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 55 minutes 51.20 seconds N. and long. 80 degrees 11 minutes 0.30 seconds W.

A—0 to 4 inches; dark yellowish brown (10YR 4/4) loam; moderate fine granular structure; friable, nonsticky, nonplastic; common very fine, fine, medium, and coarse roots; 5 percent subangular amphibolite channers; strongly acid; clear smooth boundary.

BA—4 to 8 inches; strong brown (7.5YR 5/6 and 4/6) loam; moderate fine subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine, fine, medium, and coarse roots; 7 percent subangular amphibolite channers; strongly acid; clear smooth boundary.

Bt—8 to 21 inches; strong brown (7.5YR 5/6) and yellowish red (5YR 5/8) channery clay loam; moderate fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine and fine roots; few faint clay films on rock fragments and all faces of peds; 17 percent subangular amphibolite channers; moderately acid; gradual smooth boundary.

BCt—21 to 25 inches; yellowish red (5YR 5/6) and yellowish brown (10YR 5/6) channery loam; weak fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; few faint clay films on rock fragments and all faces of peds; 10 percent subangular amphibolite parachanners and 17 percent subangular amphibolite channers; moderately acid; gradual smooth boundary.
Ct—25 to 58 inches; dark olive brown (2.5Y 3/3) and reddish yellow (7.5YR 6/8) parachannery loam; massive; friable, nonsticky, nonplastic; few faint clay films on rock fragments; 10 percent subangular amphibolite parachanners and 20 percent subangular amphibolite channers; moderately acid; clear wavy boundary.
Cr—58 to 70 inches; amphibolite bedrock.
R—70 inches; amphibolite bedrock.

Range in Characteristics

Diagnostic subsurface horizon and thickness: Argillic horizon; 11 to 35 inches
Depth to soft bedrock: 40 to 60 inches
Depth to hard bedrock: More than 60 inches
Mica content: None or few
Reaction: Strongly acid or moderately acid, except in limed areas
Rock fragments: 0 to 15 percent in the surface layer and 0 to 35 percent in the subsurface layer, subsoil, and substratum

A or Ap horizon:
Hue—7.5YR or 10YR
Value—2 to 5
Chroma—2 to 4
Texture—loam or silt loam

AB or BA horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam or silt loam

Bt horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, silt loam, clay loam, or silty clay loam

BC or BCt horizon:
Hue—5YR to 10YR
Value—4 or 5
Chroma—4 to 8
Fine-earth texture—loam, silt loam, clay loam, or silty clay loam

C or Ct horizon:
Hue—7.5YR to 2.5Y or multicolored
Value—3 to 6
Chroma—3 to 8
Fine-earth texture—loam or silt loam

Peaks Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on low mountains and foothills
Parent material: Residuum weathered from gneiss and/or schist

Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 8 to 90 percent

Associated Soils

- Ashe, Brownwood, and Cowee soils, which have fewer rock fragments in the subsoil
- Myersville soils, which are deep to bedrock and have fewer rock fragments in the subsoil
- Edneytown, Glenelg, Hayesville, and Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Peaks very gravelly loam, 35 to 55 percent slopes, extremely stony; in Grayson County, Virginia; about 3.4 miles east-southeast of Troutdale, Virginia, on Razor Ridge about 0.6 mile southeast of Razor Ridge Church, about 0.65 mile southeast of the junction of Highways VA-672 and VA-677, in a pasture; Trout Dale, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 41 minutes 7.00 seconds N. and long. 81 degrees 22 minutes 55.00 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material.
Ap—1 to 4 inches; dark yellowish brown (10YR 3/4) very gravelly loam; moderate fine granular structure; friable; many very fine roots; 45 percent gravel; strongly acid; clear smooth boundary.
E—4 to 8 inches; dark yellowish brown (10YR 4/4) very gravelly loam; weak fine granular structure; friable, nonsticky, nonplastic; common very fine and fine roots; 45 percent gravel; very strongly acid; abrupt smooth boundary.
Bw—8 to 23 inches; yellowish brown (10YR 5/4) very gravelly loam; weak fine subangular blocky structure; friable, slightly sticky, nonplastic; few very fine and fine roots; 55 percent gravel; very strongly acid; gradual smooth boundary.
C—23 to 32 inches; yellowish brown (10YR 5/4) extremely gravelly sandy loam; massive; friable, nonsticky, nonplastic; 75 percent gravel; very strongly acid; abrupt smooth boundary.
R—32 inches; hard gneiss bedrock.

Range in Characteristics

Solum thickness: 14 to 38 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 35 to 55 percent in the A horizon, 15 to 55 percent in the E horizon, 35 to 60 percent in the B horizon, and 35 to 75 percent in the C horizon
Reaction: Reaction in unlimed areas is very strongly acid to moderately acid

A or Ap horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—2 to 4
Fine-earth texture—loam

E horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 4
Fine-earth texture—loam, fine sandy loam, or sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—4 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, fine sandy loam, sandy loam, or loamy sand

R horizon:
Bedrock—hard gneiss or schist

Porters Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from gneiss and/or schist
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Deep
Slope range: 8 to 35 percent

Associated Soils

- Clingman soils, which are very shallow or shallow to bedrock
- Unaka soils, which are moderately deep to bedrock

Taxonomic Classification

Fine-loamy, isotic, mesic Typic Dystrudepts

Typical Pedon

Porters loam, 50 to 95 percent slopes, stony; in Watauga County, North Carolina; 0.4 mile northeast of Zionville on Secondary Road 1233, about 1.4 miles south on U.S. Highway 421 to its intersection with Secondary Road 1388, about 1.3 miles southeast on a private road in the Silverleaf Subdivision, 50 feet southwest of the road, in a forest; Zionville, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 18 minutes 58.00 seconds N. and long. 81 degrees 43 minutes 36.00 seconds W.

Oi—0 to 1 inch; slightly decomposed plant material.
A—1 to 8 inches; very dark grayish brown (10YR 3/2) loam; weak fine granular structure; friable; many fine and medium roots; common fine mica flakes; 2 percent cobbles and 3 percent gravel; strongly acid; clear wavy boundary.
AB—8 to 11 inches; dark yellowish brown (10YR 3/4) loam; weak fine subangular blocky structure; friable; many fine and medium roots; common fine mica flakes; 2 percent cobbles and 3 percent gravel; moderately acid; abrupt wavy boundary.
Bw—11 to 39 inches; dark yellowish brown (10YR 4/6) loam; weak medium subangular blocky structure; friable; common fine and medium roots; common fine mica flakes; 2 percent cobbles and 3 percent gravel; moderately acid; gradual wavy boundary.
BC—39 to 46 inches; yellowish brown (10YR 5/8), olive brown (2.5Y 4/3), and dark yellowish brown (10YR 4/6) gravelly loam; weak medium subangular blocky

structure; friable; few fine roots; common fine mica flakes; 5 percent cobbles and 15 percent gravel; very strongly acid; abrupt wavy boundary.

Cr—46 to 55 inches; soft, weathered, amphibolite bedrock that is partly consolidated but can be dug with difficulty with hand tools; gradual wavy boundary.

R—55 inches; unweathered amphibolite bedrock.

Range in Characteristics

Solum thickness: 20 to 50 inches
Depth to bedrock: 40 to 60 inches
Rock fragments: 0 to 15 percent in the A horizon and 0 to 35 percent in the B horizon
Reaction: Reaction in unlimed areas is very strongly acid to slightly acid
Mica flakes: Few or common in the A and B horizons and few to many in the C horizon

A horizon:
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—1 to 4
Texture—loam

AB horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Fine-earth texture—loam, fine sandy loam, or sandy loam

BA horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—fine sandy loam, sandy loam, or loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam; some pedons have thin subhorizons of sandy clay loam

BC horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

C horizon (if it occurs):
Hue—7.5YR to 2.5Y
Value—3 to 6
Chroma—2 to 8
Fine-earth texture—loam, fine sandy loam, sandy loam, loamy sand, or loamy fine sand

Cr horizon:
Type of bedrock—weathered metamorphic rock that can be dug with difficulty with hand tools

R horizon:
Type of bedrock—unweathered metamorphic rock

Sylco Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on low mountains and foothills
Parent material: Residuum weathered from phyllite and metasandstone
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 8 to 55 percent

Associated Soils

- Sylvatus and Unicoi soils, which are shallow to hard bedrock
- Junaluska soils, which have fewer rock fragments in the subsoil
- Marbleyard soils, which have more sand and less silt in the subsoil

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Sylco channery silt loam in an area of Sylco-Sylvatus complex, 7 to 15 percent slopes; in Grayson County, Virginia; about 3.5 miles southeast of Cripple Creek, Virginia, about 2.0 miles west of the junction of Highways VA-602 and VA-738, about 2.0 miles east of the junction of Highways VA-653 and VA-602, about 0.2 mile north of Cold Springs Church and a cemetery, in a pasture; Cripple Creek, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 47 minutes 5.00 seconds N. and long. 81 degrees 2 minutes 37.00 seconds W.

A—0 to 4 inches; dark yellowish brown (10YR 4/4) channery silt loam; weak medium granular structure; friable; many very fine roots; 20 percent channers; strongly acid; abrupt smooth boundary.
Bw—4 to 22 inches; brown (7.5YR 5/4) very channery silt loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine roots; 45 percent channers; strongly acid; clear smooth boundary.
C—22 to 27 inches; brown (7.5YR 5/4) extremely channery silt loam; massive; friable, slightly sticky, slightly plastic; few fine roots; 70 percent channers; strongly acid; clear wavy boundary.
R—27 inches; hard phyllite bedrock.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 15 to 35 percent in the A horizon, 15 to 45 percent in the B horizon, and 40 to 70 percent in the C horizon
Reaction: Reaction in unlimed areas is extremely acid to strongly acid

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Fine-earth texture—silt loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Fine-earth texture—silt loam, loam, or silty clay loam

C horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Fine-earth texture—silt loam, loam, or silty clay loam

R horizon:
Bedrock—hard phyllite or metasandstone

Sylvatus Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on low mountains and foothills
Parent material: Residuum weathered from phyllite and metasandstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Shallow
Slope range: 8 to 55 percent

Associated Soils

- Sylco soils, which are moderately deep to hard bedrock
- Unicoi soils, which have less silt and more sand in the subsoil
- Junaluska soils, which are moderately deep to hard bedrock and have fewer rock fragments in the subsoil
- Marbleyard soils, which are moderately deep to hard bedrock and have more sand and less silt in the subsoil

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Typical Pedon

Sylvatus channery silt loam in an area of Sylco-Sylvatus complex, 15 to 35 percent slopes; in Grayson County, Virginia; about 3.0 miles southeast of Cripple Creek, Virginia, about 0.7 mile east of the junction of Highways VA-602 and VA-653, about 2.0 miles west of Faith Church, about 0.75 mile south of the Wythe County line, in a pasture; Cripple Creek, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 46 minutes 59.00 seconds N. and long. 81 degrees 4 minutes 12.00 seconds W.

A—0 to 2 inches; dark yellowish brown (10YR 3/4) channery silt loam; weak fine granular structure; friable; many very fine and fine roots; 20 percent channers; very strongly acid; abrupt smooth boundary.
Bw—2 to 11 inches; yellowish brown (10YR 5/6) very channery silt loam; weak fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; 50 percent channers; very strongly acid; clear smooth boundary.
C—11 to 16 inches; yellowish brown (10YR 5/6) extremely channery silt loam; massive; friable, slightly sticky, slightly plastic; 70 percent channers; very strongly acid; clear wavy boundary.
R—16 inches; hard phyllite bedrock.

Range in Characteristics

Solum thickness: 10 to 18 inches
Depth to bedrock: 10 to 20 inches

Rock fragments: 15 to 35 percent in the A horizon, 15 to 75 percent in the B horizon, and 45 to 90 percent in the C horizon
Reaction: Reaction in unlimed areas is extremely acid or very strongly acid

A horizon:
Hue—10YR
Value—2 to 5
Chroma—1 to 4
Fine-earth texture—silt loam

Bw horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Fine-earth texture—silt loam, loam, silty clay loam, or clay loam

C horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—1 to 8
Fine-earth texture—silt loam, loam, silty clay loam, or clay loam

R horizon:
Bedrock—hard phyllite or metasandstone

Tate Series

Physiographic province: Blue Ridge
Landform: Coves, benches, and saddles on low mountains and foothills
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 25 percent

Associated Soils

- Delanco soils, which are moderately well drained
- Braddock soils, which have more clay in the subsoil
- Elsinboro soils, which formed from alluvium
- Greenlee soils, which have more rock fragments in the subsoil
- Kinkora soils, which are poorly drained and have more clay in the subsoil

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Tate loam, 7 to 15 percent slopes; in Grayson County, Virginia; about 3.75 miles northwest of Fries, Virginia, about 0.35 mile northeast of the junction of Highways VA-604 and VA-644, about 0.85 mile northeast of the junction of Highways VA-604 and VA-646, in an alfalfa field; Brierpatch Mountain, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 44 minutes 44.00 seconds N. and long. 81 degrees 0 minutes 20.00 seconds W.

Ap—0 to 6 inches; dark yellowish brown (10YR 4/4) loam; moderate very fine granular structure; friable; few medium roots and many very fine roots; few fine mica flakes; moderately acid; abrupt wavy boundary.

BA—6 to 12 inches; brown (7.5YR 5/4) sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few medium and common very fine roots; few fine mica flakes; moderately acid; abrupt smooth boundary.

Bt—12 to 27 inches; strong brown (7.5YR 5/6) clay loam; moderate medium subangular blocky structure; firm, slightly sticky, slightly plastic; few very fine and fine roots; common discontinuous clay films on all faces of peds; common fine mica flakes; strongly acid; clear wavy boundary.

BC—27 to 47 inches; strong brown (7.5YR 5/6) sandy clay loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine mica flakes; 2 percent gneiss gravel and 3 percent quartz gravel; strongly acid; clear wavy boundary.

C—47 to 62 inches; strong brown (7.5YR 5/6) sandy loam; massive; friable, slightly sticky, slightly plastic; common fine mica flakes; 5 percent gneiss gravel and 5 percent quartz gravel; strongly acid.

Range in Characteristics

Solum thickness: 24 to 60 inches or more
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent in the A horizon, 0 to 35 percent in the BA and Bt horizons, and 5 to 60 percent in the BC and C horizons
Reaction: Reaction in unlimed areas is very strongly acid to slightly acid

Ap horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—loam

BA horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—loam, fine sandy loam, sandy loam, sandy clay loam, or clay loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, clay loam, or sandy clay loam

BC horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, sandy loam, fine sandy loam, or sandy clay loam

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, sandy loam, fine sandy loam, sandy clay loam, or loamy sand

Udorthents

Physiographic province: Blue Ridge
Landform: Variable
Parent material: Fill material from a variety of sources
Drainage class: Variable
Slowest saturated hydraulic conductivity: Unspecified
Depth class: Variable
Slope range: 0 to 25 percent

Typical Pedon

The properties and characteristics of Udorthents vary to the extent that they do not have a typical pedon. Udorthents formed when soils were disturbed by land-leveling, excavation, or filling. They consist of loamy and clayey soil material and varying amounts of rock fragments. Depth to hard bedrock varies from a few inches to more than 5 feet. Areas range from slightly compacted to severely compacted. Unvegetated areas are susceptible to severe erosion. Drainage is variable.

Unaka Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from gneiss and/or schist
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 8 to 80 percent

Associated Soils

- Clingman soils, which are very shallow or shallow to bedrock
- Porters soils, which are deep to bedrock

Taxonomic Classification

Fine-loamy, isotic, mesic Typic Dystrudepts

Typical Pedon

Unaka loam in an area of Unaka-Porters complex, 15 to 35 percent slopes; in Floyd County, Virginia, on Jones Mountain; about 0.75 mile southeast of the junction of Highways VA-805 and VA-726 and 0.66 mile north-northwest of the junction of Highway VA-726 and the Blue Ridge Parkway; Willis, Virginia USGS 7.5 Minute Quadrangle; lat. 36 degrees 48 minutes 9.00 seconds N. and long. 80 degrees 23 minutes 36.00 seconds W.

A1—0 to 5 inches; very dark brown (10YR 2/2) loam; weak fine granular structure; friable; many fine and medium roots; few fine mica flakes; 5 percent gneiss gravel; strongly acid; clear smooth boundary.
A2—5 to 10 inches; dark brown (10YR 3/3) loam; weak fine granular structure; friable; many fine and medium roots; few fine mica flakes; 5 percent gneiss gravel; strongly acid; clear smooth boundary.
Bw—10 to 24 inches; dark yellowish brown (10YR 4/4) loam; weak fine subangular blocky structure; friable, slightly sticky, nonplastic; common fine and medium roots; few fine mica flakes; 5 percent gneiss gravel; strongly acid; abrupt smooth boundary.
R—24 inches; hard gneiss bedrock.

Range in Characteristics

Solum thickness: 18 to 36 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 5 to 15 percent in the A horizon, 5 to 20 percent in the B horizon, and 5 to 35 percent in the C horizon
Reaction: Reaction in unlimed areas is very strongly acid or strongly acid
Mica flakes: Few or common throughout the profile

A horizon:
Hue—10YR
Value—2 or 3
Chroma—2 or 3
Texture—loam or fine sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Fine-earth texture—typically loam; ranging to sandy loam and sandy clay loam in some pedons

C horizon (if it occurs):
Hue—7.5YR or 10YR (or multicolored)
Value—4 or 5 (or multicolored)
Chroma—4 to 6 (or multicolored)
Fine-earth texture—loam or sandy loam

Cr horizon (if it occurs):
Type of bedrock—weathered gneiss or schist

R horizon:
Type of bedrock—hard gneiss or schist

Unicoi Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on low mountains and foothills
Parent material: Residuum weathered from metasandstone and/or quartzite
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Shallow
Slope range: 8 to 55 percent

Associated Soils

- Marbleyard soils, which are moderately deep to bedrock
- Junaluska soils, which have fewer rock fragments in the subsoil
- Sylco soils, which are moderately deep to hard bedrock and have more silt and less sand in the subsoil
- Sylvatus soils, which have more silt and less sand in the subsoil

Taxonomic Classification

Loamy-skeletal, mixed, semiactive, mesic Lithic Dystrudepts

Typical Pedon

Unicoi very gravelly sandy loam, 35 to 55 percent slopes, extremely stony; in Grayson County, Virginia; about 5 miles south of Cripple Creek, Virginia, about 0.85 mile south of Jones Knob, about 0.75 mile northeast of the intersection of Highways VA-604 and VA-653, about 1.25 mile east of the Wythe County line, in a mixed hardwood-pine forest; Cripple Creek, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 45 minutes 20.00 seconds N. and long. 81 degrees 4 minutes 15.00 seconds W.

Oe—0 to 2 inches; moderately decomposed plant material.
A—2 to 5 inches; brown (10YR 4/3) very gravelly sandy loam; weak fine granular structure; friable; many fine and medium roots; 40 percent gravel; extremely acid; abrupt wavy boundary.
Bw—5 to 14 inches; yellowish brown (10YR 5/6) very gravelly sandy loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; 50 percent gravel; extremely acid; gradual wavy boundary.
C—14 to 19 inches; yellowish brown (10YR 5/6) extremely gravelly sandy loam; massive; friable, slightly sticky, slightly plastic; few fine and medium roots; 60 percent gravel; extremely acid; clear wavy boundary.
R—19 inches; hard metasandstone bedrock.

Range in Characteristics

Solum thickness: 7 to 20 inches
Depth to bedrock: 10 to 20 inches
Rock fragments: 35 to 60 percent thoughout the profile
Reaction: Reaction in unlimed areas is extremely acid to strongly acid

A horizon:
Hue—10YR
Value—3 to 6
Chroma—1 to 4
Fine-earth texture—sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

R horizon:
Bedrock—hard metasandstone or quartzite

Formation of the Soils

This section describes the factors and processes that have affected the formation and morphology of the soils in Floyd County.

Factors of Soil Formation

Soil is formed by weathering and other processes that act upon parent material. The characteristics of the soil at any given point depend upon interaction of the five factors of soil formation. These factors are parent material, climate, plants and animals, relief, and time *(7)*.

Climate and plants and animals are the active forces of soil formation. In this survey area, they act on the parent material accumulated through the weathering of rocks and slowly change it into soil. Although all of the five factors affect the formation of every soil, the relative importance of each differs from place to place. In extreme cases one factor may dominate in the formation of a soil and fix most of its properties. Generally, the combined action of the five factors determines the characteristics of each soil.

Parent Material

The unconsolidated mass from which a soil forms is parent material. It is largely responsible for the chemical and mineralogical composition of the soil and the rate at which soil-forming processes take place. There are three kinds of parent material in Floyd County: residual, alluvial, and colluvial.

Some of the residual parent materials are biotite gneiss, amphibolite, mica schist, mica gneiss, metasandstone, quartzite, and phyllite. Soils that formed in residuum from biotite gneiss and mica schist are most extensive on ridges and foothills in the central and southern parts of the county and have a wide range of characteristics. Biotite gneiss-derived soils typically have a loamy surface layer and a clay loam or sandy clay loam subsoil. Examples are Edneytown and Edneyville soils. Residuum from mica schist and mica gneiss on ridges and foothills in the southeastern part of the county weathered to form the parent material of the loamy textured Glenelg and Brownwood soils and the fine textured Hayesville soils. Soils formed from amphibolite include the loamy textured Cowee and Myersville soils. Metamorphosed sedimentary rocks, such as metasandstone, phyllite, and quartzite on mountain ridges along the northwestern rim of Floyd County, weathered to form the parent material of Sylco, Sylvatus, Marbleyard, and Unicoi soils.

Alluvial parent materials are of local origin along the Little River and its tributaries. Soils derived from alluvium have a wide range in texture and development. Examples of such soils are Codorus, Comus, Craigsville, Delanco, Elsinboro, Hatboro, Kinkora, and Braddock.

Colluvial parent materials are dominantly along lower side slopes, in coves, and on benches, and they primarily are moderately coarse textured, medium textured, or moderately fine textured. Examples of colluvial soils are Braddock, Delanco, Greenlee, and Tate soils.

Climate

As a genetic factor, climate affects the physical, chemical, and biological relationships in soils, principally through the influence of precipitation and temperature. Water dissolves minerals and organic residue through the surface layer and subsoil. Temperature determines the types of physical, chemical, and biological activities that take place and the speed at which they act.

Because the precipitation in the county exceeds evapotranspiration, the soils have been leached. Much of the soluble material that originally was present or was released through weathering has been removed. In addition to leaching soluble materials, water that percolates through the soil moves clay from the surface layer to the subsoil. Except for soils that formed in recent alluvium or sand or on very steep slopes, the soils of the county typically contain more clay in the subsoil than in the surface layer.

Also influenced by climate is the formation of blocky structure in the subsoil of well developed soils. The development of peds (aggregates) in the subsoil is caused partly by changes in volume of the soil mass that are primarily the result of alternating periods of wetting and drying.

The climate is uniform throughout most of the county except for the areas at the higher elevations on Buffalo Mountain. These areas are significantly colder and, as a result, the soils at these locations contain more organic matter in the surface layer. In other areas of the survey area, the climate's affect on soil formation may be modified locally by the gradient and aspect of slopes.

Plant and Animal Life

Micro-organisms, vegetation, animals, and humans are major factors in the formation of soils. Vegetation is generally responsible for the amount of organic matter in the soil and the color of the surface layer. Earthworms, cicada, and burrowing animals help keep the soil open and porous. Micro-organisms decompose the vegetation and dead animal matter, thus releasing nutrients for plant food.

Before the survey area was settled, the native vegetation was the major living organism affecting soil development. The native vegetation consisted mainly of hardwoods. Oaks, hickories, chestnuts, maples, beech, and birch were the dominant trees in the original forest cover; hemlock and eastern white pine were the most abundant conifers in the cooler areas; and red spruce and Fraser fir were confined to the higher elevations. Most hardwoods use a large amount of the available calcium and other bases and constantly recycle them through leaf fall and decay. Coniferous trees recycle a smaller amount of bases than deciduous trees; consequently, more bases have been leached from soils that developed under coniferous vegetation than under deciduous vegetation. The soils of the mountainous regions of the county that are underlain by acid parent rock have few remaining bases, even though they developed under a hardwood forest. This is mainly because of the low base content of the original parent material. Because the soils formed under forest vegetation, rapid decay of organic matter and constant recycling of plant nutrients have prevented organic matter from accumulating in large quantities. In addition, the present climate favors the rapid decay of plant materials, oxidation of organic matter, and leaching of plant nutrients.

As farming developed in the area, humans became an important factor in the development of the soils. The clearing of the forests, cultivation, introduction of new plants, and changes in natural drainage all have had their effect on soil development. The most important changes brought about by humans are the mixing of the upper layers of the soil to form a plow layer, the cultivation of steep erodible slopes, and the liming and fertilizing that change the content of plant nutrients, especially in the upper layers of the soils.

Figure 13.—Typical upland topography of Floyd County.

Relief

The underlying formations, the geologic history of the general region, and the effects of dissection by rivers and streams largely determine the relief of an area. Relief affects the formation of soils by influencing the rate of surface runoff, the soil temperature, and the geologic erosion. It can alter the effects of climate acting on the parent material to the extent that several different kinds of soil may form from the same kind of parent material. Relief also affects the amount of radiant energy absorbed by the soils, which in turn affects the type of native vegetation.

Relief affects drainage. Runoff from upland areas tends to accumulate in areas on the nearly level flood plains, resulting in a high water table. Poorly drained Hatboro and Kinkora soils are examples of soils with a high water table.

Many areas in Floyd County range from gently sloping to very steep uplands (fig. 13). The gently sloping to very steep soils generally are well drained or moderately well drained. Geologic erosion is slight, surface runoff is medium to rapid, and translocation of bases and clay has usually occurred downward through the soil. On the steeper soils, however, surface runoff is very rapid, water infiltration and translocation of clays and bases throughout the soil are reduced, and geologic erosion has removed soil material almost as fast as it forms.

Time

As a factor of soil formation, time generally is related to the degree of development or degree of horizon differentiation within the soil. A soil that has little or no horizon development is considered a young soil, and one that has strongly developed horizons is considered an old or mature soil.

The oldest soils in the survey area are those that formed in residual material weathered from bedrock. In general, these soils are in less sloping, relatively stable positions and formed in easily weatherable materials. These older soils have a strong degree of horizon differentiation. Hayesville soils are an example. On very steep slopes, geologic erosion removed soil material in a relatively short period and the soils generally have not been in place long enough to develop more than a moderate horizon differentiation. Examples are Sylvatus and Unicoi soils. Soils that formed in recent alluvium have been in place only a relatively short time and show little or no development other than an accumulation of organic matter in the surface layer. They commonly are stratified and have an irregular distribution of organic matter. Examples are Comus and Craigsville soils.

Morphology of the Soils

The results of the interaction of the soil-forming factors can be distinguished by the different layers, or horizons in a soil profile. The soil profile extends from the surface down to materials that are little altered by the soil-forming processes.

Most soils have three major horizons—the A, B, and C horizons. Soils under a forest canopy have an O (organic) horizon at the surface. These major horizons may be further subdivided by the use of numbers and letters to indicate changes within one horizon. An example would be a Bt horizon, a B horizon that has an accumulation of clay.

The A horizon is the surface layer. It is the layer that has the maximum accumulation of organic matter and that shows a maximum leaching or eluviation of clay and iron. The E horizon is a subsurface layer that has the maximum amount of leaching of bases and eluviation of clay and iron and is normally the lightest colored horizon in the profile.

The B horizon underlies an A or E horizon and is commonly called the subsoil. It is the horizon of maximum accumulation of clay, iron, aluminum, or other compounds leached from the surface layer. In some soils the B horizon formed by alteration in place rather than by illuviation. The alteration can be caused by oxidation and reduction of iron or by the weathering of clay minerals. The B horizon commonly has blocky or prismatic structure and it generally is firmer textured and lighter in color than the A horizon but darker than the C horizon or E horizon.

The C horizon is below the B horizon, or in some instances, below the A horizon. It consists of materials that are little altered by the soil-forming processes.

Processes of Horizon Differentiation

In this survey area several processes are involved in the formation of soil horizons. Among these are the accumulation of organic matter, the leaching of soluble salts, the reduction and transfer of iron, the formation of soil structure, and the formation and translocation of clay minerals. These processes are continually taking place, generally at the same time throughout the soil profile. Such processes have been going on for thousands of years.

The accumulation and incorporation of organic matter takes place with the decomposition of plant residue. Organic matter darkens the surface layer and helps to form the A horizon. In many places much of the surface layer has been eroded away or has been mixed with materials from underlying layers through cultivation. Once lost, organic matter normally takes a long time to replace. In Floyd County, the organic matter content of the surface layer ranges from low in Unicoi soils, for example, to very high in Clingman soils.

For soils to form distinct subsoil horizons, soluble salts must be leached before the translocation of clay minerals can occur. Among the factors that affect this leaching are the kind of salts originally present and the permeability of the soil profile.

Well drained and moderately well drained soils in the survey area have a red to yellowish brown subsoil. These colors are caused mainly by thin coatings of iron oxides on the soil particles, although in some soils the color is inherited from the materials in which they formed. The structure of the subsoil is, in most soils in the survey area, weak or moderate subangular blocky.

The reduction and transfer of iron, called gleying, is associated mainly with the wetter, more poorly drained soils. Moderately well drained soils, such as Delanco, have yellowish brown to gray mottles which indicate the segregation of iron. In poorly drained soils, such as Hatboro and Kinkora, the subsoil and underlying material are grayish, which indicates reduction and transfer of iron by removal in solution.

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) 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.

Alluvial fan. A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes. It is shaped like an open fan or a segment of a cone. The material was deposited by a stream at the place where it issues from a narrow mountain valley or upland valley or where a tributary stream is near or at its junction with the main stream. The fan is steepest near its apex, which points upstream, and slopes gently and convexly outward (downstream) with a gradual decrease in gradient.

Alluvium. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl. A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction toward which a slope faces. Also called slope aspect.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp. A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

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.

Base slope (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding plane. A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Bottom land. An informal term loosely applied to various portions of a flood plain.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks. A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.

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.

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.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Canyon. A long, deep, narrow valley with high, precipitous walls in an area of high local relief.

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 and under similar climatic conditions but that 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.

Cement rock. Shaly limestone used in the manufacture of cement.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

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. See Redoximorphic features.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A dense, compact subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. The layer restricts the downward movement of water through the soil. A claypan is commonly hard when dry and plastic and sticky when wet.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

Complex 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. See Redoximorphic features.

Conglomerate. A coarse-grained, clastic sedimentary 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.

Coprogenous earth (sedimentary peat). A type of limnic layer composed predominantly of fecal material derived from aquatic animals.

Corrosion (geomorphology). A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

Corrosion (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

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.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Cryoturbate. A mass of soil or other unconsolidated earthy material moved or disturbed by frost action. It is typically coarser than the underlying material.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is fan shaped and nearly flat; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep soils, 20 to 40 inches; shallow soils, 10 to 20 inches; and very shallow soils, less than 10 inches.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

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.

Drainageway. A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Earthy fill. See Mine spoil.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian deposit. Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

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 pavement. A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.

Erosion surface. A land surface shaped by the action of erosion, especially by running water.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) deposited and cooled on the earth's surface.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan remnant. A general term for landforms that are the remaining parts of older fan landforms, such as alluvial fans, that have been either dissected or partially buried.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. 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. An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms. A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain splay. A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.

Flood-plain step. An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.

Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.

Foothills. A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).

Footslope. The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope. A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

L horizon.—A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties include depth to a seasonal high water table, the infiltration rate, and depth to a layer that significantly restricts the downward movement of water. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Iron depletions. See Redoximorphic features.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.
Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.
Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.
Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.
Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.
Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Karst (topography). A kind of topography that formed in limestone, gypsum, or other soluble rocks by dissolution and that is characterized by closed depressions, sinkholes, caves, and underground drainage.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. See Saturated hydraulic conductivity.

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lake plain. A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace. A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Landslide. A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Low strength. The soil is not strong enough to support loads.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.

Mass movement. A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses. See Redoximorphic features.

Meander belt. The zone within which migration of a meandering channel occurs; the flood-plain area included between two imaginary lines drawn tangential to the outer bends of active channel loops.

Meander scar. A crescent-shaped, concave or linear mark on the face of a bluff or valley wall, produced by the lateral erosion of a meandering stream that impinged upon and undercut the bluff.

Meander scroll. One of a series of long, parallel, close-fitting, crescent-shaped ridges and troughs formed along the inner bank of a stream meander as the channel migrated laterally down-valley and toward the outer bank.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Mesa. A broad, nearly flat-topped and commonly isolated landmass bounded by steep slopes or precipitous cliffs and capped by layers of resistant, nearly horizontal rocky material. The summit width is characteristically greater than the height of the bounding escarpments.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth's crust. Nearly all such rocks are crystalline.

Mine spoil. An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.

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. A kind of map unit that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain. A generic term for an elevated area of the land surface, rising more than 1,000 feet (300 meters) above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic activity and/or volcanic action but can also be formed by differential erosion.

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mudstone. A blocky or massive, fine-grained sedimentary rock in which the proportions of clay and silt are approximately equal. Also, a general term for such material as clay, silt, claystone, siltstone, shale, and argillite and that should be used only when the amounts of clay and silt are not known or cannot be precisely identified.

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. See Redoximorphic features.

Nose slope (geomorphology). A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment. A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permafrost. Ground, soil, or rock that remains at or below 0 degrees C for at least 2 years. It is defined on the basis of temperature and is not necessarily frozen.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse-grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings. See Redoximorphic features.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Red beds. Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features. The redoximorphic features are defined as follows:

1. *Redoximorphic concentrations.*—These are zones of apparent accumulation of iron-manganese oxides and include nodules and concretions, masses, and pore linings. *Nodules and concretions* are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure. *Masses* are noncemented concentrations of substances within the soil matrix. *Pore linings* are zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
2. *Redoximorphic depletions.*—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out. They include iron depletions and clay depletions. *Iron depletions* are zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix. *Clay depletions* are zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).
3. *Reduced matrix.*—This is a soil matrix that has low chroma in situ but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.

Regolith. All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief. The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

Rill. A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

Riser. The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Sand. As a soil separate, individual rock or mineral fragments 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.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturated hydraulic conductivity (K_{sat}). The ease with which pores of a saturated soil transmit water. Formally, the proportionality coefficient that expresses the relationship of the rate of water movement to hydraulic gradient in Darcy's Law, a law that describes the rate of water movement through porous media. Commonly abbreviated as "K_{sat}." Terms describing saturated hydraulic conductivity are *very high*, 100 or more micrometers per second (14.17 or more inches per hour); *high*, 10 to 100 micrometers per second (1.417 to 14.17 inches per hour); *moderately high*, 1 to 10 micrometers per second (0.1417 inch to 1.417 inches per hour); *moderately low*, 0.1 to 1 micrometer per second (0.01417 to 0.1417 inch per hour); *low*, 0.01 to 0.1 micrometer per second (0.001417 to 0.01417 inch per hour); and *very low*, less than 0.01 micrometer per second (less than 0.001417 inch per hour). To convert inches per hour to micrometers per second, multiply inches per hour by 7.0572. To convert micrometers per second to inches per hour, multiply micrometers per second by 0.1417.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Sedimentary rock. A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Shrub-coppice dune. A small, streamlined dune that forms around brush and clump vegetation.

Side slope (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio. The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

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. An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides (pedogenic). Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Level	0 to 3 percent
Gently sloping	3 to 8 percent
Strongly sloping	8 to 15 percent
Moderately steep	15 to 25 percent
Steep	25 to 35 percent
Very steep	35 percent and higher

Slope alluvium. Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Slow refill (in tables). The slow filling of ponds, resulting from restricted water transmission in the soil.

Slow water movement (in tables). Restricted downward movement of water through the soil. See Saturated hydraulic conductivity.

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.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^+ to Ca^{++} + Mg^{++}. The degrees of sodicity and their respective ratios are:

Slight	less than 13:1
Moderate	13-30:1
Strong	more than 30:1

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stone line. In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Strath terrace. A type of stream terrace; formed as an erosional surface cut on bedrock and thinly mantled with stream deposits (alluvium).

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus. Rock fragments of any size or shape (commonly coarse and angular) derived from and lying at the base of a cliff or very steep rock slope. The accumulated mass of such loose broken rock formed chiefly by falling, rolling, or sliding.

Terrace (conservation). An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

Terracettes. Small, irregular steplike forms on steep hillslopes, especially in pasture, formed by creep or erosion of surficial materials that may be induced or enhanced by trampling of livestock, such as sheep or cattle.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread. The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Tuff. A generic term for any consolidated or cemented deposit that is 50 percent or more volcanic ash.

Upland. An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Valley fill. The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve. A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded. Refers to soil material consisting of coarse-grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.—Temperature and Precipitation

(Recorded in the period 1971-2000 at Floyd, Virginia)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average daily	2 years in 10 will have-- Maximum temp. higher than--	2 years in 10 will have-- Minimum temp. 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 snow-fall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January--	42.7	21.7	32.2	65	-8	37	3.06	1.39	4.72	5	6.4
February-	47.1	23.5	35.3	70	-1	57	2.94	1.51	4.30	5	6.2
March----	55.3	30.4	42.9	78	7	166	3.85	2.10	5.54	6	2.6
April----	64.8	37.0	50.9	83	15	337	3.74	2.15	5.12	6	1.1
May------	72.1	46.0	59.0	85	26	586	4.09	2.34	5.81	7	0.0
June-----	78.2	53.9	66.1	89	35	778	3.87	1.36	6.23	6	0.0
July-----	81.9	58.4	70.1	92	42	929	3.21	1.70	4.68	6	0.0
August---	80.9	56.5	68.7	91	40	882	3.06	1.35	4.63	5	0.0
September	75.0	50.3	62.6	88	29	676	3.77	1.10	5.88	5	0.0
October--	65.9	38.5	52.2	80	19	380	3.37	1.34	5.07	4	0.0
November-	55.1	30.8	43.0	74	10	156	3.43	1.67	4.96	5	0.7
December-	46.1	24.2	35.2	68	-2	61	2.51	1.05	4.04	4	3.3
Yearly:											
Average	63.7	39.3	51.5	---	---	---	---	---	---	---	---
Extreme	97	-19	---	92	-11	---	---	---	---	---	---
Total--	---	---	---	---	---	5,045	40.92	34.31	46.61	64	20.3

* 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 (40 degrees F).

Table 2.—Freeze Dates in Spring and Fall

(Recorded in the period 1971-2000 at Floyd, Virginia)

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--	Apr. 29	May 14	June 1
2 years in 10 later than--	Apr. 23	May 9	May 26
5 years in 10 later than--	Apr. 12	Apr. 30	May 15
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 6	Sept. 25	Sept. 15
2 years in 10 earlier than--	Oct. 12	Sept. 29	Sept. 20
5 years in 10 earlier than-	Oct. 22	Oct. 7	Sept. 29

Table 3.—Growing Season

(Recorded in the period 1971-2000 at Floyd, Virginia)

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	164	142	116
8 years in 10	173	148	123
5 years in 10	191	160	136
2 years in 10	208	172	150
1 year in 10	217	178	157

Table 4.—Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
1E	Ashe-Edneytown complex, 25 to 35 percent slopes	5,046	2.1
2E	Ashe-Edneyville complex, 35 to 55 percent slopes	11,191	4.6
3E	Ashe-Edneyville complex, 35 to 55 percent slopes, very stony	2,137	0.9
4B	Braddock cobbly loam, 3 to 8 percent slopes	698	0.3
4C	Braddock cobbly loam, 8 to 15 percent slopes	1,605	0.7
4D	Braddock cobbly loam, 15 to 25 percent slopes	127	*
5D	Brownwood fine sandy loam, 8 to 35 percent slopes	198	*
5E	Brownwood fine sandy loam, 35 to 55 percent slopes	622	0.3
6A	Codorus loam, 0 to 3 percent slopes, frequently flooded	2,587	1.1
7A	Comus fine sandy loam, 0 to 5 percent slopes, frequently flooded	419	0.2
8C	Cowee loam, 8 to 15 percent slopes	4,779	2.0
8D	Cowee loam, 15 to 35 percent slopes	6,087	2.5
8E	Cowee loam, 35 to 55 percent slopes	1,743	0.7
9D	Cowee gravelly loam, 8 to 35 percent slopes, stony	12,054	4.9
9E	Cowee gravelly loam, 35 to 55 percent slopes, stony	7,032	2.9
10D	Cowee-Rock outcrop complex, 8 to 35 percent slopes	1,192	0.5
10E	Cowee-Rock outcrop complex, 35 to 55 percent slopes	546	0.2
11C	Cowee-Urban land complex, 0 to 15 percent slopes	71	*
12A	Craigsville cobbly sandy loam, 0 to 3 percent slopes, frequently flooded	11	*
13B	Delanco fine sandy loam, 3 to 8 percent slopes, rarely flooded	2,848	1.2
14C	Delanco fine sandy loam, 8 to 15 percent slopes	1,816	0.7
15B	Delanco-Kinkora complex, 0 to 8 percent slopes, rarely flooded	4,106	1.7
16C	Edneytown-Ashe complex, 8 to 15 percent slopes	5,120	2.1
16D	Edneytown-Ashe complex, 15 to 25 percent slopes	7,679	3.1
17C	Edneytown-Urban land complex, 0 to 15 percent slopes	13	*
18C	Edneyville-Ashe complex, 8 to 15 percent slopes	401	0.2
18D	Edneyville-Ashe complex, 15 to 35 percent slopes	602	0.2
19D	Edneyville-Ashe complex, 8 to 35 percent slopes, very stony	1,553	0.6
20B	Elsinboro fine sandy loam, 3 to 8 percent slopes, rarely flooded	475	0.2
21B	Glenelg and Hayesville loams, 3 to 8 percent slopes	1,629	0.7
22C	Glenelg loam, 8 to 15 percent slopes	25,941	10.6
22D	Glenelg loam, 15 to 25 percent slopes	25,175	10.3
22E	Glenelg loam, 25 to 35 percent slopes	6,557	2.7
22F	Glenelg loam, 35 to 55 percent slopes	72	*
23C	Glenelg loam, 8 to 15 percent slopes, very stony	2,498	1.0
23D	Glenelg loam, 15 to 35 percent slopes, very stony	5,517	2.3
23E	Glenelg loam, 35 to 55 percent slopes, very stony	4,411	1.8
24C	Glenelg-Urban land complex, 0 to 15 percent slopes	304	0.1
25C	Greenlee very cobbly loam, 0 to 15 percent slopes, very stony	493	0.2
25D	Greenlee very cobbly loam, 15 to 35 percent slopes, very stony	866	0.4
26A	Hatboro sandy loam, 0 to 3 percent slopes, frequently flooded	6,581	2.7
27B	Hayesville loam, 3 to 8 percent slopes	589	0.2
27C	Hayesville loam, 8 to 15 percent slopes	626	0.3
27D	Hayesville loam, 15 to 25 percent slopes	43	*
28C	Hayesville-Urban land complex, 0 to 15 percent slopes	39	*
29C	Junaluska channery loam, 8 to 15 percent slopes	3,971	1.6
29D	Junaluska channery loam, 15 to 35 percent slopes	2,170	0.9
29E	Junaluska channery loam, 35 to 55 percent slopes	104	*
30A	Kinkora fine sandy loam, 0 to 3 percent slopes, rarely flooded	242	*
31D	Marbleyard-Unicoi complex, 8 to 35 percent slopes, extremely stony	601	0.2
32B	Myersville loam, 3 to 8 percent slopes	452	0.2
32C	Myersville loam, 8 to 15 percent slopes	3,557	1.5
32D	Myersville loam, 15 to 25 percent slopes	1,043	0.4
32E	Myersville loam, 25 to 35 percent slopes	215	*
33C	Myersville loam, 8 to 15 percent slopes, very stony	636	0.3
33D	Myersville loam, 15 to 35 percent slopes, very stony	1,788	0.7
33E	Myersville loam, 35 to 55 percent slopes, very stony	683	0.3
34C	Myersville-Urban land complex, 0 to 15 percent slopes	220	*
35D	Peaks very gravelly loam, 8 to 35 percent slopes	1,269	0.5
35E	Peaks very gravelly loam, 35 to 55 percent slopes	4,299	1.8
36D	Peaks very gravelly loam, 8 to 35 percent slopes, very stony	2,215	0.9
36E	Peaks very gravelly loam, 35 to 55 percent slopes, very stony	5,964	2.4
36F	Peaks very gravelly loam, 55 to 90 percent slopes, very stony	3,182	1.3

See footnote at end of table.

Table 4.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Acres	Percent
37F	Peaks-Rock outcrop complex, 25 to 90 percent slopes, extremely stony	6,226	2.6
38D	Rock outcrop-Clingman complex, 8 to 35 percent slopes	27	*
38F	Rock outcrop-Clingman complex, 35 to 95 percent slopes	75	*
39C	Sylco-Sylvatus complex, 8 to 15 percent slopes	1,912	0.8
39D	Sylco-Sylvatus complex, 15 to 35 percent slopes	3,450	1.4
39E	Sylco-Sylvatus complex, 35 to 55 percent slopes	13,334	5.5
40D	Sylco-Sylvatus complex, 8 to 35 percent slopes, very stony	243	*
40E	Sylco-Sylvatus complex, 35 to 55 percent slopes, very stony	3,786	1.6
41B	Tate loam, 3 to 8 percent slopes	927	0.4
41C	Tate loam, 8 to 15 percent slopes	4,735	1.9
41D	Tate loam, 15 to 25 percent slopes	356	0.1
42C	Tate loam, 8 to 15 percent slopes, stony	6,089	2.5
42D	Tate loam, 15 to 25 percent slopes, stony	1,147	0.5
43C	Tate-Urban land complex, 0 to 15 percent slopes	96	*
44D	Udorthents, 0 to 25 percent slopes	50	*
45D	Udorthents-Urban land complex, 0 to 25 percent slopes	98	*
46D	Unaka loam, 8 to 35 percent slopes, very stony	367	0.2
47C	Unaka-Porters complex, 8 to 15 percent slopes	187	*
47D	Unaka-Porters complex, 15 to 35 percent slopes	213	*
48D	Unaka-Rock outcrop complex, 8 to 35 percent slopes	80	*
48E	Unaka-Rock outcrop complex, 35 to 55 percent slopes	472	0.2
48F	Unaka-Rock outcrop complex, 55 to 80 percent slopes	25	*
49E	Unicoi-Marbleyard complex, 35 to 55 percent slopes, extremely stony	2,809	1.2
W	Water	586	0.2
	Total	244,000	100.0

* Less than 0.1 percent.

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Grass-legume hay	Pasture
			Tons	Bu	Tons	AUM
1E:						
Ashe	6e	JJ	---	---	---	3.0
Edneytown	6e	L	---	---	---	8.5
2E:						
Ashe	7e	JJ	---	---	---	---
Edneyville	7e	GG	---	---	---	---
3E:						
Ashe	7e	JJ	---	---	---	---
Edneyville	7e	GG	---	---	---	---
4B:						
Braddock	3s	O	4.7	110	3.4	9.0
4C:						
Braddock	4s	O	4.1	97	3.0	9.0
4D:						
Braddock	6s	O	---	---	---	8.0
5D:						
Brownwood	6e	JJ	---	---	---	3.0
5E:						
Brownwood	7e	JJ	---	---	---	---
6A:						
Codorus	6w	A	---	---	---	8.1
7A:						
Comus	2w	A	6.0	160	4.5	10.5
8C:						
Cowee	3e	N	4.8	114	3.5	6.0
8D:						
Cowee	6e	N	---	---	---	5.5
8E:						
Cowee	7e	N	---	---	---	---
9D:						
Cowee	7s	N	---	---	---	---
9E:						
Cowee	7e	N	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Grass-legume hay	Pasture
			Tons	Bu	Tons	AUM
10D:						
Cowee-------------	7s	N	---	---	---	---
Rock outcrop------	8	---	---	---	---	---
10E:						
Cowee-------------	7s	N	---	---	---	---
Rock outcrop------	8	---	---	---	---	---
11C:						
Cowee-------------	7e	N	---	---	---	---
Urban land--------	8	---	---	---	---	---
12A:						
Craigsville-------	2w	CC	---	72	3.0	4.5
13B:						
Delanco-----------	2e	B	5.5	160	4.5	8.5
14C:						
Delanco-----------	3e	B	4.8	140	4.0	8.5
15B:						
Delanco-----------	2e	B	5.5	160	4.5	8.5
Kinkora-----------	4w	OO	---	65	---	3.5
16C:						
Edneytown---------	3e	L	4.8	114	3.5	10.5
Ashe--------------	3e	JJ	---	57	2.6	3.5
16D:						
Edneytown---------	4e	L	4.4	104	3.2	9.5
Ashe--------------	4e	JJ	---	52	2.4	3.2
17C:						
Edneytown---------	7e	L	---	---	---	---
Urban land--------	8	---	---	---	---	---
18C:						
Edneyville--------	3e	GG	---	75	3.1	9.5
Ashe--------------	3e	JJ	---	57	2.6	3.5
18D:						
Edneyville--------	6e	GG	---	---	---	9.5
Ashe--------------	6e	JJ	---	---	---	3.0
19D:						
Edneyville--------	7s	GG	---	---	---	---
Ashe--------------	7s	JJ	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Grass-legume hay	Pasture
			Tons	Bu	Tons	AUM
20B:						
Elsinboro---------	2e	L	5.5	130	4.0	9.5
21B:						
Glenelg-----------	2e	N	5.5	130	4.0	10.5
Hayesville--------	2e	X	4.0	100	3.5	12.0
22C:						
Glenelg-----------	3e	N	4.8	114	3.5	9.5
22D:						
Glenelg-----------	4e	N	4.4	104	3.2	8.5
22E:						
Glenelg-----------	6e	N	---	---	---	7.5
22F:						
Glenelg-----------	7e	N	---	---	---	---
23C:						
Glenelg-----------	6s	N	---	---	---	6.5
23D:						
Glenelg-----------	7s	N	---	---	---	---
23E:						
Glenelg-----------	7e	N	---	---	---	---
24C:						
Glenelg-----------	7e	N	---	---	---	---
Urban land--------	8	---	---	---	---	---
25C:						
Greenlee----------	6s	CC	---	---	---	4.0
25D:						
Greenlee----------	7s	CC	---	---	---	---
26A:						
Hatboro-----------	6w	HH	---	---	---	3.5
27B:						
Hayesville--------	2e	X	4.0	100	3.5	12.0
27C:						
Hayesville--------	3e	X	3.5	88	3.1	8.0
27D:						
Hayesville--------	4e	X	3.2	80	2.8	6.6
28C:						
Hayesville--------	7e	X	---	---	---	---
Urban land--------	8	---	---	---	---	---
29C:						
Junaluska---------	3e	U	3.0	82	2.6	6.0

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Grass-legume hay	Pasture
			Tons	Bu	Tons	AUM
29D:						
Junaluska---------	6e	U	---	---	---	5.5
29E:						
Junaluska---------	7e	U	---	---	---	---
30A:						
Kinkora-----------	4w	OO	---	65	---	3.5
31D:						
Marbleyard--------	7s	FF	---	---	---	---
Unicoi------------	7s	JJ	---	---	---	---
32B:						
Myersville--------	2e	D	6.0	150	4.5	8.0
32C:						
Myersville--------	3e	D	5.3	132	4.0	7.5
32D:						
Myersville--------	4e	D	4.8	120	3.6	7.0
32E:						
Myersville--------	6e	D	---	---	---	6.5
33C:						
Myersville--------	6s	D	---	---	---	6.5
33D:						
Myersville--------	7s	D	---	---	---	---
33E:						
Myersville--------	7e	D	---	---	---	---
34C:						
Myersville--------	7s	D	---	---	---	---
Urban land--------	8	---	---	---	---	---
35D:						
Peaks-------------	7s	JJ	---	---	---	---
35E:						
Peaks-------------	7e	JJ	---	---	---	---
36D:						
Peaks-------------	7s	JJ	---	---	---	---
36E:						
Peaks-------------	7e	JJ	---	---	---	---
36F:						
Peaks-------------	7e	JJ	---	---	---	---
37F:						
Peaks-------------	7s	JJ	---	---	---	---
Rock outcrop------	8	---	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Grass-legume hay	Pasture
			Tons	Bu	Tons	AUM
38D:						
Rock outcrop------	8	---	---	---	---	---
Clingman----------	7s	---	---	---	---	---
38F:						
Rock outcrop------	8	---	---	---	---	---
Clingman----------	7s	---	---	---	---	---
39C:						
Sylco-------------	3e	JJ	---	---	---	2.0
Sylvatus----------	6s	JJ	---	---	---	1.5
39D:						
Sylco-------------	6e	JJ	---	---	---	1.5
Sylvatus----------	6e	JJ	---	---	---	1.0
39E:						
Sylco-------------	7e	JJ	---	---	---	---
Sylvatus----------	7e	JJ	---	---	---	---
40D:						
Sylco-------------	7s	JJ	---	---	---	---
Sylvatus----------	7s	JJ	---	---	---	---
40E:						
Sylco-------------	7e	JJ	---	---	---	---
Sylvatus----------	7e	JJ	---	---	---	---
41B:						
Tate--------------	2e	O	5.5	130	4.0	12.0
41C:						
Tate--------------	3e	O	4.8	114	3.5	11.0
41D:						
Tate--------------	4e	O	4.4	104	3.2	10.0
42C:						
Tate--------------	4s	O	---	---	3.0	9.5
42D:						
Tate--------------	6s	O	---	---	---	8.5
43C:						
Tate--------------	7e	O	---	---	---	---
Urban land--------	8	---	---	---	---	---
44D.						
Udorthents						

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Grass-legume hay	Pasture
			Tons	Bu	Tons	AUM
45D: Udorthents.						
Urban land	8	---	---	---	---	---
46D: Unaka	7s	U	---	---	---	---
47C: Unaka	3e	U	3.5	97	3.1	5.5
Porters	3e	U	3.7	100	3.1	5.7
47D: Unaka	6e	U	---	---	---	5.0
Porters	6e	U	---	---	---	5.2
48D: Unaka	7s	U	---	---	---	---
Rock outcrop	8	---	---	---	---	---
48E: Unaka	7s	U	---	---	---	---
Rock outcrop	8	---	---	---	---	---
48F: Unaka	7s	U	---	---	---	---
Rock outcrop	8	---	---	---	---	---
49E: Unicoi	7e	JJ	---	---	---	---
Marbleyard	7e	FF	---	---	---	---
W. Water						

Table 6.—Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Map symbol	Map unit name
13B	Delanco fine sandy loam, 3 to 8 percent slopes, rarely flooded (if drained)
20B	Elsinboro fine sandy loam, 3 to 8 percent slopes, rarely flooded
21B	Glenelg and Hayesville loams, 3 to 8 percent slopes
27B	Hayesville loam, 3 to 8 percent slopes
32B	Myersville loam, 3 to 8 percent slopes
41B	Tate loam, 3 to 8 percent slopes

Table 7.—Agricultural Waste Management, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1E:					
Ashe	50	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.65	Droughty	1.00
Edneytown	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.37	Too acid	0.96
2E:					
Ashe	40	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.65	Droughty	1.00
Edneyville	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.32	Too acid	0.91
3E:					
Ashe	40	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.65	Droughty	1.00
Edneyville	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.91
		Too acid	0.32		
4B:					
Braddock	90	Somewhat limited		Somewhat limited	
		Cobble content	0.40	Cobble content	0.40
		Too acid	0.02	Too acid	0.07
4C:					
Braddock	90	Somewhat limited		Somewhat limited	
		Cobble content	0.40	Cobble content	0.40
		Slope	0.37	Slope	0.37
		Too acid	0.02	Too acid	0.07
4D:					
Braddock	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Cobble content	0.40	Cobble content	0.40
		Too acid	0.02	Too acid	0.07

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
5D:					
Brownwood	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.57	Slope	1.00
		Too acid	0.50	Too acid	0.99
5E:					
Brownwood	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.57	Slope	1.00
		Too acid	0.50	Too acid	0.99
6A:					
Codorus	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00
		Too acid	0.05	Too acid	0.21
7A:					
Comus	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Too acid	0.32	Too acid	0.91
8C:					
Cowee	85	Somewhat limited		Very limited	
		Droughty	0.55	Low adsorption	1.00
		Too acid	0.37	Too acid	0.96
		Slope	0.37	Droughty	0.55
8D:					
Cowee	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.55	Slope	1.00
		Too acid	0.37	Too acid	0.96
8E:					
Cowee	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.55	Slope	1.00
		Too acid	0.37	Too acid	0.96
9D:					
Cowee	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.95	Slope	1.00
		Too acid	0.37	Too acid	0.96
9E:					
Cowee	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.95	Slope	1.00
		Too acid	0.37	Too acid	0.96

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
10D:					
Cowee	55	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.55	Slope	1.00
		Too acid	0.37	Too acid	0.96
Rock outcrop	30	Not rated		Not rated	
10E:					
Cowee	45	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.55	Slope	1.00
		Too acid	0.37	Too acid	0.96
Rock outcrop	40	Not rated		Not rated	
11C:					
Cowee	55	Somewhat limited		Very limited	
		Droughty	0.55	Low adsorption	1.00
		Too acid	0.37	Too acid	0.96
		Depth to bedrock	0.01	Droughty	0.55
Urban land	30	Not rated		Not rated	
12A:					
Craigsville	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Droughty	0.78	Too acid	0.96
13B:					
Delanco	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.73	Too acid	1.00
		Slow water movement	0.50	Flooding	0.40
14C:					
Delanco	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.73	Too acid	1.00
		Slow water movement	0.50	Slow water movement	0.37
15B:					
Delanco	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.73	Too acid	1.00
		Slow water movement	0.50	Flooding	0.40

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
15B:					
Kinkora	40	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	1.00
16C:					
Edneytown	55	Somewhat limited		Somewhat limited	
		Too acid	0.37	Too acid	0.96
		Slope	0.37	Slope	0.37
Ashe	30	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	0.65	Droughty	1.00
		Too acid	0.62	Too acid	1.00
16D:					
Edneytown	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.37	Too acid	0.96
Ashe	40	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.65	Droughty	1.00
17C:					
Edneytown	55	Somewhat limited		Somewhat limited	
		Too acid	0.37	Too acid	0.96
Urban land	30	Not rated		Not rated	
18C:					
Edneyville	55	Somewhat limited		Somewhat limited	
		Slope	0.37	Too acid	0.91
		Too acid	0.32	Slope	0.37
Ashe	25	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	0.65	Droughty	1.00
		Too acid	0.62	Too acid	1.00
18D:					
Edneyville	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.32	Too acid	0.91
Ashe	35	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.65	Droughty	1.00
19D:					
Edneyville	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.91
		Too acid	0.32		

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
19D:					
Ashe----------------	35	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Slope	1.00	Droughty	1.00
		Depth to bedrock	0.65	Too acid	1.00
20B:					
Elsinboro-----------	85	Somewhat limited		Somewhat limited	
		Too acid	0.37	Too acid	0.96
				Flooding	0.40
21B:					
Glenelg-------------	45	Somewhat limited		Somewhat limited	
		Too acid	0.02	Too acid	0.07
Hayesville----------	40	Somewhat limited		Somewhat limited	
		Low adsorption	0.48	Low adsorption	0.30
		Too acid	0.05	Too acid	0.21
22C:					
Glenelg-------------	90	Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37
		Too acid	0.02	Too acid	0.07
22D:					
Glenelg-------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.02	Too acid	0.07
22E:					
Glenelg-------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.02	Too acid	0.07
22F:					
Glenelg-------------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.02	Too acid	0.07
23C:					
Glenelg-------------	90	Somewhat limited		Somewhat limited	
		Large stones content	0.53	Slope	0.37
		Slope	0.37	Too acid	0.07
		Too acid	0.02		
23D:					
Glenelg-------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.07
		Too acid	0.02		
23E:					
Glenelg-------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.07
		Too acid	0.02		

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
24C:					
Glenelg	55	Somewhat limited		Somewhat limited	
		Too acid	0.02	Too acid	0.07
Urban land	30	Not rated		Not rated	
25C:					
Greenlee	85	Very limited		Very limited	
		Cobble content	1.00	Cobble content	1.00
		Too acid	0.73	Too acid	1.00
		Large stones content	0.53	Droughty	0.02
25D:					
Greenlee	85	Very limited		Very limited	
		Slope	1.00	Cobble content	1.00
		Cobble content	1.00	Slope	1.00
		Too acid	0.73	Too acid	1.00
26A:					
Hatboro	90	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00
27B:					
Hayesville	90	Somewhat limited		Somewhat limited	
		Low adsorption	0.48	Low adsorption	0.30
		Too acid	0.05	Too acid	0.21
27C:					
Hayesville	90	Somewhat limited		Somewhat limited	
		Low adsorption	0.48	Slope	0.37
		Slope	0.37	Low adsorption	0.30
		Too acid	0.05	Too acid	0.21
27D:					
Hayesville	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Low adsorption	0.48	Low adsorption	0.30
		Too acid	0.05	Too acid	0.21
28C:					
Hayesville	55	Somewhat limited		Somewhat limited	
		Low adsorption	0.48	Low adsorption	0.30
		Too acid	0.05	Too acid	0.21
Urban land	30	Not rated		Not rated	
29C:					
Junaluska	85	Somewhat limited		Very limited	
		Droughty	0.97	Low adsorption	1.00
		Depth to bedrock	0.46	Droughty	0.97
		Too acid	0.37	Too acid	0.96

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
29D:					
Junaluska-----------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.97	Slope	1.00
		Depth to bedrock	0.46	Droughty	0.97
29E:					
Junaluska-----------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.97	Slope	1.00
		Depth to bedrock	0.46	Droughty	0.97
30A:					
Kinkora-------------	90	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	1.00
31D:					
Marbleyard----------	45	Very limited		Very limited	
		Large stones content	1.00	Low adsorption	1.00
		Droughty	1.00	Droughty	1.00
		Large stones on the surface	1.00	Too acid	1.00
Unicoi--------------	35	Very limited		Very limited	
		Droughty	1.00	Droughty	1.00
		Large stones content	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
32B:					
Myersville----------	90	Somewhat limited		Very limited	
		Too acid	0.18	Low adsorption	1.00
				Too acid	0.67
32C:					
Myersville----------	90	Somewhat limited		Very limited	
		Slope	0.63	Low adsorption	1.00
		Too acid	0.18	Too acid	0.67
				Slope	0.63
32D:					
Myersville----------	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.18	Slope	1.00
				Too acid	0.67
32E:					
Myersville----------	80	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.18	Slope	1.00
				Too acid	0.67

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
33C:					
Myersville----------	90	Somewhat limited		Very limited	
		Slope	0.63	Low adsorption	1.00
		Large stones content	0.47	Too acid	0.67
		Too acid	0.18	Slope	0.63
33D:					
Myersville----------	80	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	0.47	Slope	1.00
		Too acid	0.18	Too acid	0.67
33E:					
Myersville----------	80	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	0.47	Slope	1.00
		Too acid	0.18	Too acid	0.67
34C:					
Myersville----------	55	Somewhat limited		Very limited	
		Too acid	0.18	Low adsorption	1.00
				Too acid	0.67
Urban land----------	30	Not rated		Not rated	
35D:					
Peaks---------------	80	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Slope	1.00	Droughty	1.00
		Filtering capacity	0.99	Slope	1.00
35E:					
Peaks---------------	80	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
36D:					
Peaks---------------	80	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Slope	1.00	Droughty	1.00
		Filtering capacity	0.99	Slope	1.00
36E:					
Peaks---------------	80	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
36F:					
Peaks	75	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
37F:					
Peaks	50	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
		Droughty	1.00	Droughty	1.00
Rock outcrop	35	Not rated		Not rated	
38D:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Very limited		Very limited	
		Depth to bedrock	1.00	Low adsorption	1.00
		Slope	1.00	Too acid	1.00
		Too acid	0.94	Depth to bedrock	1.00
38F:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Too acid	1.00
		Too acid	0.94	Slope	1.00
39C:					
Sylco	45	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	0.71	Droughty	1.00
		Too acid	0.37	Too acid	0.96
Sylvatus	40	Very limited		Very limited	
		Droughty	1.00	Droughty	1.00
		Depth to bedrock	1.00	Low adsorption	1.00
		Too acid	0.73	Too acid	1.00
39D:					
Sylco	45	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.71	Droughty	1.00
Sylvatus	35	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
39E:					
Sylco	45	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.71	Droughty	1.00

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
39E:					
Sylvatus	30	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
40D:					
Sylco	45	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Slope	1.00	Droughty	1.00
		Depth to bedrock	0.71	Slope	1.00
Sylvatus	40	Very limited		Very limited	
		Droughty	1.00	Droughty	1.00
		Depth to bedrock	1.00	Low adsorption	1.00
		Slope	1.00	Too acid	1.00
40E:					
Sylco	45	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.71	Droughty	1.00
Sylvatus	40	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
41B:					
Tate	85	Somewhat limited		Somewhat limited	
		Too acid	0.11	Too acid	0.42
41C:					
Tate	85	Somewhat limited		Somewhat limited	
		Slope	0.37	Too acid	0.42
		Too acid	0.11	Slope	0.37
41D:					
Tate	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.11	Too acid	0.42
42C:					
Tate	85	Somewhat limited		Somewhat limited	
		Slope	0.37	Too acid	0.42
		Too acid	0.11	Slope	0.37
42D:					
Tate	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.11	Too acid	0.42
43C:					
Tate	55	Somewhat limited		Somewhat limited	
		Too acid	0.11	Too acid	0.42
Urban land	30	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
44D:					
Udorthents----------	85	Not rated		Not rated	
45D:					
Udorthents----------	50	Not rated		Not rated	
Urban land----------	35	Not rated		Not rated	
46D:					
Unaka---------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Depth to bedrock	0.90	Slope	1.00
		Droughty	0.82	Too acid	0.96
47C:					
Unaka---------------	50	Somewhat limited		Very limited	
		Depth to bedrock	0.90	Low adsorption	1.00
		Droughty	0.82	Too acid	0.96
		Slope	0.63	Depth to bedrock	0.90
Porters-------------	35	Somewhat limited		Very limited	
		Slope	0.63	Low adsorption	1.00
		Too acid	0.27	Too acid	0.85
				Slope	0.63
47D:					
Unaka---------------	55	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Depth to bedrock	0.90	Slope	1.00
		Droughty	0.82	Too acid	0.96
Porters-------------	30	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.27	Slope	1.00
				Too acid	0.85
48D:					
Unaka---------------	55	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Depth to bedrock	0.90	Slope	1.00
		Droughty	0.82	Too acid	0.96
Rock outcrop--------	30	Not rated		Not rated	
48E:					
Unaka---------------	50	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Depth to bedrock	0.90	Slope	1.00
		Droughty	0.82	Too acid	0.96
Rock outcrop--------	35	Not rated		Not rated	
48F:					
Unaka---------------	45	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Depth to bedrock	0.90	Slope	1.00
		Droughty	0.82	Too acid	0.96
Rock outcrop--------	40	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
49E:					
Unicoi--------------	50	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
Marbleyard----------	30	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
				Droughty	1.00
		Droughty	1.00		
W:					
Water---------------	100	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
1E:					
Ashe	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
Edneytown	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Too acid	0.96
2E:					
Ashe	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
Edneyville	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
3E:					
Ashe	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
3E:					
Edneyville----------	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
4B:					
Braddock------------	90	Somewhat limited		Very limited	
		Cobble content	0.40	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.07
		Too acid	0.07		
4C:					
Braddock------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Cobble content	0.40	Too acid	0.07
4D:					
Braddock------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Cobble content	0.40	Too acid	0.07
5D:					
Brownwood-----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Too acid	0.99	Too steep for surface application	1.00
5E:					
Brownwood-----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
6A:					
Codorus	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Depth to saturated zone	1.00
		Too acid	0.21	Seepage	1.00
7A:					
Comus	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Too acid	0.91	Seepage	1.00
				Too acid	0.91
8C:					
Cowee	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.96	Depth to bedrock	1.00
		Too steep for sprinkler application	0.60	Too acid	0.96
8D:					
Cowee	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
8E:					
Cowee	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
9D:					
Cowee	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Too acid	0.96	Too steep for surface application	1.00

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
9E:					
Cowee	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
10D:					
Cowee	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Too acid	0.96	Too steep for surface application	1.00
Rock outcrop	30	Not rated		Not rated	
10E:					
Cowee	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
Rock outcrop	40	Not rated		Not rated	
11C:					
Cowee	55	Somewhat limited		Very limited	
		Too acid	0.96	Seepage	1.00
		Too steep for surface application	0.92	Depth to bedrock	1.00
		Droughty	0.55	Too acid	0.96
Urban land	30	Not rated		Not rated	
12A:					
Craigsville	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	0.99	Seepage	1.00
		Too acid	0.96	Cobble content	1.00
13B:					
Delanco	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	1.00	Seepage	1.00
		Slow water movement	0.37	Too acid	1.00

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
14C:					
Delanco	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
15B:					
Delanco	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	1.00	Seepage	1.00
		Slow water movement	0.37	Too acid	1.00
Kinkora	40	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	1.00
16C:					
Edneytown	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.96	Too acid	0.96
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
Ashe	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too acid	1.00
16D:					
Edneytown	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Too acid	0.96
Ashe	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
17C:					
Edneytown	55	Somewhat limited		Very limited	
		Too acid	0.96	Seepage	1.00
		Too steep for surface application	0.92	Too acid	0.96
		Too steep for sprinkler application	0.02	Too steep for surface application	0.06
Urban land	30	Not rated		Not rated	
18C:					
Edneyville	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.91	Too steep for surface application	0.94
		Too steep for sprinkler application	0.60	Too acid	0.91
Ashe	25	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too acid	1.00
18D:					
Edneyville	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
Ashe	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
19D:					
Edneyville	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
19D:					
Ashe----------------	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too steep for surface application	1.00
20B:					
Elsinboro-----------	85	Somewhat limited		Very limited	
		Too acid	0.96	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.96
				Flooding	0.40
21B:					
Glenelg-------------	45	Somewhat limited		Very limited	
		Too steep for surface application	0.32	Seepage	1.00
		Too acid	0.07	Too acid	0.07
Hayesville----------	40	Somewhat limited		Very limited	
		Low adsorption	0.48	Seepage	1.00
		Too steep for surface application	0.32	Low adsorption	0.48
		Too acid	0.21	Too acid	0.21
22C:					
Glenelg-------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Too acid	0.07	Too acid	0.07
22D:					
Glenelg-------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.07	Too acid	0.07
22E:					
Glenelg-------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.07	Too acid	0.07

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
22F:					
Glenelg	80	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.07	Too acid	0.07
23C:					
Glenelg	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Too acid	0.07	Too acid	0.07
23D:					
Glenelg	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.07	Too acid	0.07
23E:					
Glenelg	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.07	Too acid	0.07
24C:					
Glenelg	55	Somewhat limited		Very limited	
		Too steep for surface application	0.92	Seepage	1.00
		Too acid	0.07	Too acid	0.07
		Too steep for sprinkler application	0.02	Too steep for surface application	0.06
Urban land	30	Not rated		Not rated	
25C:					
Greenlee	85	Very limited		Very limited	
		Cobble content	1.00	Seepage	1.00
		Too acid	1.00	Cobble content	1.00
		Too steep for surface application	0.92	Too acid	1.00

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
25D:					
Greenlee------------	85	Very limited		Very limited	
		Cobble content	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Cobble content	1.00
26A:					
Hatboro-------------	90	Very limited		Very limited	
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Flooding	1.00	Depth to saturated zone	1.00
27B:					
Hayesville----------	90	Somewhat limited		Very limited	
		Low adsorption	0.48	Seepage	1.00
		Too steep for surface application	0.32	Low adsorption	0.48
		Too acid	0.21	Too acid	0.21
27C:					
Hayesville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Low adsorption	0.48	Low adsorption	0.48
27D:					
Hayesville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Low adsorption	0.48	Low adsorption	0.48
28C:					
Hayesville----------	55	Somewhat limited		Very limited	
		Too steep for surface application	0.92	Seepage	1.00
		Low adsorption	0.48	Low adsorption	0.48
		Too acid	0.21	Too acid	0.21
Urban land----------	30	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
29C:					
Junaluska-----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Droughty	0.97	Depth to bedrock	1.00
		Too acid	0.96	Too acid	0.96
29D:					
Junaluska-----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	0.97	Depth to bedrock	1.00
29E:					
Junaluska-----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	0.97	Depth to bedrock	1.00
30A:					
Kinkora-------------	90	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	1.00
31D:					
Marbleyard----------	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too acid	1.00
Unicoi--------------	35	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too acid	1.00
32B:					
Myersville----------	90	Somewhat limited		Very limited	
		Too acid	0.67	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.67
				Depth to bedrock	0.01

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
32C:					
Myersville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.67	Too acid	0.67
32D:					
Myersville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.67	Too acid	0.67
32E:					
Myersville----------	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.67		1.00
				Too acid	0.67
33C:					
Myersville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.67	Too acid	0.67
33D:					
Myersville----------	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.67		1.00
				Too acid	0.67
33E:					
Myersville----------	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.67	Too acid	0.67

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
34C:					
Myersville	55	Somewhat limited		Very limited	
		Too steep for surface application	0.92	Seepage	1.00
		Too acid	0.67	Too acid	0.67
		Too steep for sprinkler application	0.02	Too steep for surface application	0.06
Urban land	30	Not rated		Not rated	
35D:					
Peaks	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
35E:					
Peaks	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
36D:					
Peaks	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
36E:					
Peaks	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
36F:					
Peaks	75	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
37F:					
Peaks	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
Rock outcrop	35	Not rated		Not rated	
38D:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too acid	1.00
38F:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
39C:					
Sylco	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	0.96	Too acid	0.96
Sylvatus	40	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
39D:					
Sylco	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
Sylvatus	35	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
39E:					
Sylco	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
Sylvatus	30	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
40D:					
Sylco	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
Sylvatus	40	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
40E:					
Sylco	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
Sylvatus	40	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
41B:					
Tate	85	Somewhat limited		Very limited	
		Too acid	0.42	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.42
41C:					
Tate	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Too acid	0.42	Too acid	0.42
41D:					
Tate	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.42	Too acid	0.42
42C:					
Tate	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Too acid	0.42	Too acid	0.42

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
42D:					
Tate	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.42	Too acid	0.42
43C:					
Tate	55	Somewhat limited		Very limited	
		Too steep for surface application	0.92	Seepage	1.00
		Too acid	0.42	Too acid	0.42
		Too steep for sprinkler application	0.02	Too steep for surface application	0.06
Urban land	30	Not rated		Not rated	
44D:					
Udorthents	85	Not rated		Not rated	
45D:					
Udorthents	50	Not rated		Not rated	
Urban land	35	Not rated		Not rated	
46D:					
Unaka	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Too acid	0.96	Too steep for surface application	1.00
47C:					
Unaka	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.96	Depth to bedrock	1.00
		Depth to bedrock	0.90	Too steep for surface application	1.00
Porters	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.85	Too steep for surface application	1.00
		Too steep for sprinkler application	0.78	Too acid	0.85

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
47D:					
Unaka	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
Porters	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.85	Too acid	0.85
48D:					
Unaka	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Too acid	0.96	Too steep for surface application	1.00
Rock outcrop	30	Not rated		Not rated	
48E:					
Unaka	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
Rock outcrop	35	Not rated		Not rated	
48F:					
Unaka	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
Rock outcrop	40	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
49E:					
Unicoi	50	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
Marbleyard	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
W:					
Water	100	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part III

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
1E:					
Ashe----------------	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
Edneytown-----------	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.14	Too acid	0.96
2E:					
Ashe----------------	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
Edneyville----------	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Too acid	0.91
3E:					
Ashe----------------	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
3E:					
Edneyville	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Too acid	0.91
4B:					
Braddock	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Cobble content	0.40
		Slope	0.12	Too steep for surface application	0.32
				Too acid	0.07
4C:					
Braddock	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	0.94
				Cobble content	0.40
4D:					
Braddock	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Cobble content	0.40
5D:					
Brownwood	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
5E:					
Brownwood	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
6A:					
Codorus	85	Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	1.00
		Slow water movement	1.00	Too acid	0.21
7A:					
Comus	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	1.00	Too acid	0.91
8C:					
Cowee	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too acid	0.96
8D:					
Cowee	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
8E:					
Cowee	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
9D:					
Cowee	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
9E:					
Cowee	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
10D:					
Cowee	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
Rock outcrop	30	Not rated		Not rated	
10E:					
Cowee	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
Rock outcrop	40	Not rated		Not rated	
11C:					
Cowee	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too acid	0.96
		Slope	0.88	Too steep for surface application	0.92
Urban land	30	Not rated		Not rated	
12A:					
Craigsville	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Cobble content	1.00	Filtering capacity	0.99
		Too acid	0.03	Too acid	0.96
13B:					
Delanco	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too acid	1.00
		Too acid	0.14	Too steep for surface application	0.32
14C:					
Delanco	85	Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to saturated zone	1.00	Too acid	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
15B:					
Delanco	45	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too acid	1.00
		Too acid	0.14	Slow water movement	0.26
Kinkora	40	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	0.96
16C:					
Edneytown	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too acid	0.96
		Too acid	0.14	Too steep for sprinkler irrigation	0.94
Ashe	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.32	Too acid	1.00
16D:					
Edneytown	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.14	Too acid	0.96
Ashe	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
17C:					
Edneytown	55	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.96
		Slope	0.88	Too steep for surface application	0.92
		Too acid	0.14	Too steep for sprinkler irrigation	0.06

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
17C:					
Urban land	30	Not rated		Not rated	
18C:					
Edneyville	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	0.94
		Too acid	0.03	Too acid	0.91
Ashe	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.32	Too acid	1.00
18D:					
Edneyville	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Too acid	0.91
Ashe	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
19D:					
Edneyville	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Too acid	0.91
Ashe	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
20B:					
Elsinboro	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.96
		Slope	0.12	Too steep for surface application	0.32
21B:					
Glenelg	45	Very limited		Somewhat limited	
		Slow water movement	1.00	Too steep for surface application	0.32
		Slope	0.12	Too acid	0.07
Hayesville	40	Very limited		Somewhat limited	
		Slow water movement	1.00	Low adsorption	0.48
		Slope	0.12	Too steep for surface application	0.32
				Too acid	0.21
22C:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.07
22D:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.07
22E:					
Glenelg	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.07
22F:					
Glenelg	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.07

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
23C:					
Glenelg-------------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.07
23D:					
Glenelg-------------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.07
23E:					
Glenelg-------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.07
24C:					
Glenelg-------------	55	Very limited		Somewhat limited	
		Slow water movement	1.00	Too steep for surface application	0.92
		Slope	0.88	Too acid	0.07
				Too steep for sprinkler irrigation	0.06
Urban land----------	30	Not rated		Not rated	
25C:					
Greenlee------------	85	Very limited		Very limited	
		Cobble content	1.00	Cobble content	1.00
		Slope	0.88	Too acid	1.00
		Slow water movement	0.32	Too steep for surface application	0.92
25D:					
Greenlee------------	85	Very limited		Very limited	
		Slope	1.00	Cobble content	1.00
		Cobble content	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
26A:					
Hatboro-------------	90	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	1.00
27B:					
Hayesville----------	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Low adsorption	0.48
		Slope	0.12	Too steep for surface application	0.32
				Too acid	0.21
27C:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	0.94
				Low adsorption	0.48
27D:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Low adsorption	0.48
28C:					
Hayesville----------	55	Very limited		Somewhat limited	
		Slow water movement	1.00	Too steep for surface application	0.92
		Slope	0.88	Low adsorption	0.48
				Too acid	0.21
Urban land----------	30	Not rated		Not rated	
29C:					
Junaluska-----------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too acid	0.96

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
29D:					
Junaluska-----------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
29E:					
Junaluska-----------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
30A:					
Kinkora-------------	90	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	0.96
31D:					
Marbleyard----------	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Cobble content	1.00	Too acid	1.00
Unicoi--------------	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Too acid	0.77	Too acid	1.00
32B:					
Myersville----------	90	Very limited		Somewhat limited	
		Depth to bedrock	1.00	Too acid	0.67
		Slow water movement	1.00	Too steep for surface application	0.32
		Slope	0.12	Depth to bedrock	0.01
32C:					
Myersville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	0.67

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
32D:					
Myersville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	0.67
32E:					
Myersville----------	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	0.67
33C:					
Myersville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	0.67
33D:					
Myersville----------	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	0.67
33E:					
Myersville----------	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	0.67
34C:					
Myersville----------	55	Very limited		Somewhat limited	
		Depth to bedrock	1.00	Too steep for surface application	0.92
		Slow water movement	1.00	Too acid	0.67
		Slope	0.88	Too steep for sprinkler irrigation	0.06

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
34C:					
Urban land----------	30	Not rated		Not rated	
35D:					
Peaks---------------	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too acid	0.03	Too steep for sprinkler irrigation	1.00
35E:					
Peaks---------------	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Depth to bedrock	1.00
36D:					
Peaks---------------	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too acid	0.03	Too steep for sprinkler irrigation	1.00
36E:					
Peaks---------------	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Depth to bedrock	1.00
36F:					
Peaks---------------	75	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
37F:					
Peaks	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Depth to bedrock	1.00
Rock outcrop	35	Not rated		Not rated	
38D:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too acid	1.00
		Slow water movement	0.62	Too steep for surface application	1.00
38F:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too acid	1.00
		Slow water movement	0.62	Too steep for surface application	1.00
39C:					
Sylco	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.78	Too acid	0.96
Sylvatus	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too acid	1.00
39D:					
Sylco	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.78	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
39D:					
Sylvatus	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
39E:					
Sylco	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.78	Depth to bedrock	1.00
Sylvatus	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
40D:					
Sylco	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.78	Too steep for sprinkler irrigation	1.00
Sylvatus	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too acid	1.00
40E:					
Sylco	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.78	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
40E:					
Sylvatus	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
41B:					
Tate	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.42
		Slope	0.12	Too steep for surface application	0.32
41C:					
Tate	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.42
41D:					
Tate	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42
42C:					
Tate	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.42
42D:					
Tate	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
43C:					
Tate	55	Very limited		Somewhat limited	
		Slow water movement	1.00	Too steep for surface application	0.92
		Slope	0.88	Too acid	0.42
				Too steep for sprinkler irrigation	0.06
Urban land	30	Not rated		Not rated	
44D:					
Udorthents	85	Not rated		Not rated	
45D:					
Udorthents	50	Not rated		Not rated	
Urban land	35	Not rated		Not rated	
46D:					
Unaka	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
47C:					
Unaka	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
Porters	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Too acid	0.85
47D:					
Unaka	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
47D:					
Porters	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Too acid	0.85
48D:					
Unaka	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
Rock outcrop	30	Not rated		Not rated	
48E:					
Unaka	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
Rock outcrop	35	Not rated		Not rated	
48F:					
Unaka	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
Rock outcrop	40	Not rated		Not rated	
49E:					
Unicoi	50	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Too acid	0.77	Too steep for sprinkler irrigation	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
49E:					
Marbleyard----------	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Cobble content	1.00	Depth to bedrock	1.00
W:					
Water---------------	100	Not rated		Not rated	

Table 8.—Forestland Productivity

(Absence of an entry indicates that data were not available)

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
1E:				
Ashe	chestnut oak	70	52	eastern white pine, white oak, chestnut oak
	eastern white pine	81	146	
	Virginia pine	62	95	
	hickory	---	---	
	pitch pine	---	---	
	scarlet oak	---	---	
Edneytown	eastern white pine	115	220	eastern white pine, yellow-poplar
	hickory	58	37	
	Virginia pine	70	109	
	white oak	60	44	
	yellow-poplar	120	149	
2E:				
Ashe	chestnut oak	70	52	eastern white pine, white oak, chestnut oak
	eastern white pine	81	146	
	Virginia pine	62	95	
	hickory	---	---	
	pitch pine	---	---	
	scarlet oak	---	---	
Edneyville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	75	57	
	Virginia pine	75	115	
	yellow-poplar	105	110	
3E:				
Ashe	chestnut oak	70	52	eastern white pine, white oak, chestnut oak
	eastern white pine	81	146	
	Virginia pine	62	95	
	hickory	---	---	
	pitch pine	---	---	
	scarlet oak	---	---	
Edneyville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	75	57	
	Virginia pine	75	115	
	yellow-poplar	105	110	
4B:				
Braddock	eastern white pine	95	172	eastern white pine, northern red oak, yellow-poplar
	northern red oak	80	57	
	yellow-poplar	90	86	
4C:				
Braddock	eastern white pine	95	172	eastern white pine, northern red oak, yellow-poplar
	northern red oak	80	57	
	yellow-poplar	90	86	
4D:				
Braddock	eastern white pine	95	172	eastern white pine, northern red oak, yellow-poplar
	northern red oak	80	57	
	yellow-poplar	90	86	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
5D:				
Brownwood	yellow-poplar	80	144	eastern white pine, shortleaf pine, Virginia pine
	eastern white pine	80	144	
	Virginia pine	60	91	
	chestnut oak	65	47	
5E:				
Brownwood	yellow-poplar	80	144	eastern white pine, shortleaf pine, Virginia pine
	eastern white pine	80	144	
	Virginia pine	60	91	
	chestnut oak	65	47	
6A:				
Codorus	black walnut	100	78	black walnut, eastern white pine, northern red oak, yellow-poplar
	eastern white pine	100	191	
	northern red oak	90	70	
	sugar maple	90	70	
	white ash	90	70	
	yellow-poplar	100	107	
7A:				
Comus	eastern white pine	105	200	black walnut, eastern white pine, northern red oak, yellow-poplar
	northern red oak	85	66	
	yellow-poplar	110	123	
8C:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
8D:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
8E:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
9D:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
9E:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
10D:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
Rock outcrop.				
10E:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
Rock outcrop.				
11C:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
Urban land.				
12A:				
Craigsville	eastern white pine	90	166	eastern white pine, northern red oak, yellow-poplar
	northern red oak	80	62	
	Virginia pine	80	120	
	yellow-poplar	95	97	
13B:				
Delanco	black oak	80	62	eastern white pine, yellow-poplar
	eastern white pine	95	175	
	yellow-poplar	90	91	
14C:				
Delanco	black oak	80	62	eastern white pine, yellow-poplar
	eastern white pine	95	175	
	yellow-poplar	90	91	
15B:				
Delanco	black oak	80	62	eastern white pine, yellow-poplar
	eastern white pine	95	175	
	yellow-poplar	90	91	
Kinkora	American sycamore	60	40	American sycamore, black willow, green ash, white ash
	red maple	60	40	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
16C:				
Edneytown	eastern white pine	115	220	eastern white pine, yellow-poplar
	hickory	58	37	
	Virginia pine	70	109	
	white oak	60	44	
	yellow-poplar	120	149	
Ashe	chestnut oak	70	52	eastern white pine, white oak, chestnut oak
	eastern white pine	81	146	
	Virginia pine	62	95	
	hickory	---	---	
	pitch pine	---	---	
	scarlet oak	---	---	
16D:				
Edneytown	eastern white pine	115	220	eastern white pine, yellow-poplar
	hickory	58	37	
	Virginia pine	70	109	
	white oak	60	44	
	yellow-poplar	120	149	
Ashe	chestnut oak	70	52	eastern white pine, white oak, chestnut oak
	eastern white pine	81	146	
	Virginia pine	62	95	
	hickory	---	---	
	pitch pine	---	---	
	scarlet oak	---	---	
17C:				
Edneytown	eastern white pine	115	220	eastern white pine, yellow-poplar
	hickory	58	37	
	Virginia pine	70	109	
	white oak	60	44	
	yellow-poplar	120	149	
Urban land.				
18C:				
Edneyville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	75	57	
	Virginia pine	75	115	
	yellow-poplar	105	110	
Ashe	chestnut oak	70	52	eastern white pine, white oak, chestnut oak
	eastern white pine	81	146	
	Virginia pine	62	95	
	hickory	---	---	
	pitch pine	---	---	
	scarlet oak	---	---	
18D:				
Edneyville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	75	57	
	Virginia pine	75	115	
	yellow-poplar	105	110	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
18D:				
Ashe	chestnut oak	70	52	eastern white pine, white oak, chestnut oak
	eastern white pine	81	146	
	Virginia pine	62	95	
	hickory	---	---	
	pitch pine	---	---	
	scarlet oak	---	---	
19D:				
Edneyville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	75	57	
	Virginia pine	75	115	
	yellow-poplar	105	110	
Ashe	chestnut oak	70	52	eastern white pine, white oak, chestnut oak
	eastern white pine	81	146	
	Virginia pine	62	95	
	hickory	---	---	
	pitch pine	---	---	
	scarlet oak	---	---	
20B:				
Elsinboro	black oak	80	62	eastern white pine, northern red oak, yellow-poplar
	eastern white pine	130	248	
	northern red oak	80	62	
	white oak	80	62	
	yellow-poplar	140	161	
21B:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
Hayesville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	81	63	
	yellow-poplar	103	110	
22C:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
22D:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
22E:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
22F:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
23C:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
23D:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
23E:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
24C:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
Urban land.				
25C:				
Greenlee	eastern white pine	95	175	eastern white pine, yellow-poplar
	scarlet oak	55	40	
	Virginia pine	69	107	
	yellow-poplar	100	107	
25D:				
Greenlee	eastern white pine	95	175	eastern white pine, yellow-poplar
	scarlet oak	55	40	
	Virginia pine	69	107	
	yellow-poplar	100	107	
26A:				
Hatboro	American sycamore	60	40	American sycamore, black willow, green ash, white ash
	red maple	60	40	
27B:				
Hayesville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	81	63	
	yellow-poplar	103	110	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
27C:				
Hayesville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	81	63	
	yellow-poplar	103	110	
27D:				
Hayesville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	81	63	
	yellow-poplar	103	110	
28C:				
Hayesville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	81	63	
	yellow-poplar	103	110	
Urban land.				
29C:				
Junaluska	black oak	60	43	black oak, eastern white pine, northern red oak, shortleaf pine, white oak
	chestnut oak	56	39	
	eastern white pine	86	157	
	hickory	---	---	
	northern red oak	60	43	
	pitch pine	66	100	
	scarlet oak	60	43	
	shortleaf pine	68	100	
	Virginia pine	65	100	
	white oak	61	43	
29D:				
Junaluska	black oak	60	43	black oak, eastern white pine, northern red oak, shortleaf pine, white oak
	chestnut oak	56	39	
	eastern white pine	86	157	
	hickory	---	---	
	northern red oak	60	43	
	pitch pine	66	100	
	scarlet oak	60	43	
	shortleaf pine	68	100	
	Virginia pine	65	100	
	white oak	61	43	
29E:				
Junaluska	black oak	60	43	black oak, eastern white pine, northern red oak, shortleaf pine, white oak
	chestnut oak	56	39	
	eastern white pine	86	157	
	hickory	---	---	
	northern red oak	60	43	
	pitch pine	66	100	
	scarlet oak	60	43	
	shortleaf pine	68	100	
	Virginia pine	65	100	
	white oak	61	43	
30A:				
Kinkora	American sycamore	60	40	American sycamore, black willow, green ash, white ash
	red maple	60	40	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
31D:				
Marbleyard	black oak	55	39	black oak, chestnut oak, Virginia pine, white oak
	chestnut oak	55	39	
	pitch pine	55	79	
	scarlet oak	55	39	
	Virginia pine	55	79	
	white oak	55	39	
Unicoi	chestnut oak	50	34	chestnut oak, Virginia pine
	scarlet oak	50	34	
	Virginia pine	50	64	
32B:				
Myersville	yellow-poplar	85	155	northern red oak, eastern white pine, shortleaf pine, yellow-poplar
	northern red oak	82	64	
32C:				
Myersville	yellow-poplar	85	155	northern red oak, eastern white pine, shortleaf pine, yellow-poplar
	northern red oak	82	64	
32D:				
Myersville	yellow-poplar	85	155	northern red oak, eastern white pine, shortleaf pine, yellow-poplar
	northern red oak	82	64	
32E:				
Myersville	yellow-poplar	85	155	northern red oak, eastern white pine, shortleaf pine, yellow-poplar
	northern red oak	82	64	
33C:				
Myersville	yellow-poplar	85	155	northern red oak, eastern white pine, shortleaf pine, yellow-poplar
	northern red oak	82	64	
33D:				
Myersville	yellow-poplar	85	155	northern red oak, eastern white pine, shortleaf pine, yellow-poplar
	northern red oak	82	64	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
33E:				
Myersville	yellow-poplar	85	155	northern red oak, eastern white pine, shortleaf pine, yellow-poplar
	northern red oak	82	64	
34C:				
Myersville	yellow-poplar	85	155	northern red oak, eastern white pine, shortleaf pine, yellow-poplar
	northern red oak	82	64	
Urban land.				
35D:				
Peaks	chestnut oak	55	40	eastern white pine, northern red oak
	eastern white pine	70	120	
	northern red oak	62	46	
	scarlet oak	60	44	
	Virginia pine	57	81	
35E:				
Peaks	chestnut oak	55	40	eastern white pine, northern red oak
	eastern white pine	70	120	
	northern red oak	62	46	
	scarlet oak	60	44	
	Virginia pine	57	81	
36D:				
Peaks	chestnut oak	55	40	eastern white pine, northern red oak
	eastern white pine	70	120	
	northern red oak	62	46	
	scarlet oak	60	44	
	Virginia pine	57	81	
36E:				
Peaks	chestnut oak	55	40	eastern white pine, northern red oak
	eastern white pine	70	120	
	northern red oak	62	46	
	scarlet oak	60	44	
	Virginia pine	57	81	
36F:				
Peaks	chestnut oak	55	40	eastern white pine, northern red oak
	eastern white pine	70	120	
	northern red oak	62	46	
	scarlet oak	60	44	
	Virginia pine	57	81	
37F:				
Peaks	chestnut oak	55	40	eastern white pine, northern red oak
	eastern white pine	70	120	
	northern red oak	62	46	
	scarlet oak	60	44	
	Virginia pine	57	81	
Rock outcrop.				

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
38D:				
Rock outcrop.				
Clingman	northern red oak	---	---	Fraser fir, northern red oak, red spruce, yellow birch
	Fraser fir	---	---	
	red spruce	---	---	
	yellow birch	---	---	
38F:				
Rock outcrop.				
Clingman	northern red oak	---	---	Fraser fir, northern red oak, red spruce, yellow birch
	Fraser fir	---	---	
	red spruce	---	---	
	yellow birch	---	---	
39C:				
Sylco	eastern white pine	75	131	eastern white pine
	Virginia pine	60	91	
Sylvatus	eastern white pine	70	120	eastern white pine
	Virginia pine	55	79	
39D:				
Sylco	eastern white pine	75	131	eastern white pine
	Virginia pine	60	91	
Sylvatus	eastern white pine	70	120	eastern white pine
	Virginia pine	55	79	
39E:				
Sylco	eastern white pine	75	131	eastern white pine
	Virginia pine	60	91	
Sylvatus	eastern white pine	70	120	eastern white pine
	Virginia pine	55	79	
40D:				
Sylco	eastern white pine	75	131	eastern white pine
	Virginia pine	60	91	
Sylvatus	eastern white pine	70	120	eastern white pine
	Virginia pine	55	79	
40E:				
Sylco	eastern white pine	75	131	eastern white pine
	Virginia pine	60	91	
Sylvatus	eastern white pine	70	120	eastern white pine
	Virginia pine	55	79	
41B:				
Tate	eastern white pine	100	191	eastern white pine, yellow-poplar
	yellow-poplar	105	110	
41C:				
Tate	eastern white pine	100	191	eastern white pine, yellow-poplar
	yellow-poplar	105	110	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
41D:				
Tate	eastern white pine	100	191	eastern white pine,
	yellow-poplar	105	110	yellow-poplar
42C:				
Tate	eastern white pine	100	191	eastern white pine,
	yellow-poplar	105	110	yellow-poplar
42D:				
Tate	eastern white pine	100	191	eastern white pine,
	yellow-poplar	105	110	yellow-poplar
43C:				
Tate	eastern white pine	100	191	eastern white pine,
	yellow-poplar	105	110	yellow-poplar
Urban land.				
44D.				
Udorthents				
45D.				
Udorthents-Urban land				
46D:				
Unaka	northern red oak	75	57	eastern white pine,
	yellow-poplar	90	90	yellow-poplar,
	eastern white pine	80	144	northern red oak
47C:				
Unaka	northern red oak	75	57	eastern white pine,
	yellow-poplar	90	90	yellow-poplar,
	eastern white pine	80	144	northern red oak
Porters	northern red oak	82	64	eastern white pine,
	yellow-poplar	97	102	yellow-poplar,
	eastern white pine	88	162	northern red oak,
	black cherry	---	---	black cherry
	white ash	---	---	
47D:				
Unaka	northern red oak	75	57	eastern white pine,
	yellow-poplar	90	90	yellow-poplar,
	eastern white pine	80	144	northern red oak
Porters	northern red oak	82	64	yellow-poplar,
	yellow-poplar	97	102	northern red oak,
	eastern white pine	88	162	black cherry,
	black cherry	---	---	white ash
	white ash	---	---	
48D:				
Unaka	northern red oak	75	57	eastern white pine,
	yellow-poplar	90	90	yellow-poplar,
	eastern white pine	80	144	northern red oak
Rock outcrop.				

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
48E:				
Unaka-------------------	northern red oak----	75	57	eastern white pine, yellow-poplar, northern red oak
	yellow-poplar-------	90	90	
	eastern white pine--	80	144	
Rock outcrop.				
48F:				
Unaka-------------------	northern red oak----	75	57	eastern white pine, yellow-poplar, northern red oak
	yellow-poplar-------	90	90	
	eastern white pine--	80	144	
Rock outcrop.				
49E:				
Unicoi------------------	chestnut oak--------	50	34	chestnut oak, Virginia pine
	scarlet oak---------	50	34	
	Virginia pine-------	50	64	
Marbleyard--------------	black oak-----------	55	39	black oak, chestnut oak, Virginia pine, white oak
	chestnut oak--------	55	39	
	pitch pine----------	55	79	
	scarlet oak---------	55	39	
	Virginia pine-------	55	79	
	white oak-----------	55	39	
W.				
Water				

Table 9.—Forestland Management, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1E:							
Ashe----------------	50	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
Edneytown-----------	35	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
2E:							
Ashe----------------	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Edneyville----------	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
3E:							
Ashe----------------	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Edneyville----------	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
4B:							
Braddock------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
4C:							
Braddock------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
4D:							
Braddock------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
5D:							
Brownwood-----------	85	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Restrictive layer	0.50				
5E:							
Brownwood-----------	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
6A:							
Codorus-------------	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
		Wetness	0.50				
7A:							
Comus---------------	85	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Low strength	0.50
8C:							
Cowee---------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
8D:							
Cowee---------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
8E:							
Cowee---------------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
9D:							
Cowee---------------	85	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
9E:							
Cowee---------------	85	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
10D:							
Cowee---------------	55	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
10E:							
Cowee---------------	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Rock outcrop--------	40	Not rated		Not rated		Not rated	
11C:							
Cowee---------------	55	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Urban land----------	30	Not rated		Not rated		Not rated	
12A:							
Craigsville---------	90	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Low strength	0.50

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
13B:							
Delanco-------------	85	Slight		Well suited		Moderate	
						Low strength	0.50
14C:							
Delanco-------------	85	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
15B:							
Delanco-------------	45	Slight		Well suited		Moderate	
						Low strength	0.50
Kinkora-------------	40	Severe		Poorly suited		Moderate	
		Wetness	1.00	Ponding	1.00	Low strength	0.50
				Wetness	0.50		
16C:							
Edneytown-----------	55	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
Ashe----------------	30	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
16D:							
Edneytown-----------	45	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Ashe----------------	40	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
17C:							
Edneytown-----------	55	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
Urban land----------	30	Not rated		Not rated		Not rated	
18C:							
Edneyville----------	55	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Ashe----------------	25	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
18D:							
Edneyville----------	45	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Ashe----------------	35	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
19D:							
Edneyville----------	45	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Ashe----------------	35	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
20B:							
Elsinboro-----------	85	Slight		Well suited		Moderate	
						Low strength	0.50
21B:							
Glenelg-------------	45	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
Hayesville----------	40	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
22C:							
Glenelg-------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
22D:							
Glenelg-------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
22E:							
Glenelg-------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
22F:							
Glenelg-------------	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
23C:							
Glenelg-------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
23D:							
Glenelg-------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
23E:							
Glenelg-------------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24C:							
Glenelg-------------	55	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Urban land----------	30	Not rated		Not rated		Not rated	
25C:							
Greenlee------------	85	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10
25D:							
Greenlee------------	85	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
26A:							
Hatboro-------------	90	Severe		Poorly suited		Moderate	
		Flooding	1.00	Ponding	1.00	Low strength	0.50
		Wetness	1.00	Flooding	1.00		
				Wetness	0.50		
27B:							
Hayesville----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
27C:							
Hayesville----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
27D:							
Hayesville----------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
28C:							
Hayesville----------	55	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Urban land----------	30	Not rated		Not rated		Not rated	
29C:							
Junaluska-----------	85	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Slope	0.50	Low strength	0.50
29D:							
Junaluska-----------	85	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Restrictive layer	0.50				
29E:							
Junaluska-----------	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Low strength	0.50				
30A:							
Kinkora-------------	90	Severe		Poorly suited		Moderate	
		Wetness	1.00	Ponding	1.00	Low strength	0.50
				Wetness	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
31D:							
Marbleyard----------	45	Moderate		Poorly suited		Slight	
		Stoniness	0.50	Slope	1.00	Strength	0.10
		Slope	0.50	Rock fragments	0.50		
		Restrictive layer	0.50	Sandiness	0.50		
Unicoi--------------	35	Severe		Poorly suited		Slight	
		Restrictive layer	1.00	Slope	1.00	Strength	0.10
		Slope	0.50	Rock fragments	0.50		
		Stoniness	0.50				
32B:							
Myersville----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
32C:							
Myersville----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
32D:							
Myersville----------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
32E:							
Myersville----------	80	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
33C:							
Myersville----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
33D:							
Myersville----------	80	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
33E:							
Myersville----------	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
34C:							
Myersville----------	55	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Urban land----------	30	Not rated		Not rated		Not rated	
35D:							
Peaks---------------	80	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
		Restrictive layer	0.50	Sandiness	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
35E:							
Peaks	80	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Sandiness	0.50		
36D:							
Peaks	80	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
		Restrictive layer	0.50	Sandiness	0.50		
36E:							
Peaks	80	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Sandiness	0.50		
36F:							
Peaks	75	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Sandiness	0.50		
37F:							
Peaks	50	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Stoniness	0.50	Rock fragments	0.50		
				Sandiness	0.50		
Rock outcrop	35	Not rated		Not rated		Not rated	
38D:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Severe		Poorly suited		Severe	
		Landslides	1.00	Low strength	1.00	Low strength	1.00
		Restrictive layer	1.00	Landslides	1.00		
		Slope	0.50	Slope	1.00		
38F:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	1.00	Low strength	1.00		
				Landslides	1.00		
39C:							
Sylco	45	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Sylvatus	40	Severe		Moderately suited		Severe	
		Restrictive layer	1.00	Slope	0.50	Low strength	1.00
39D:							
Sylco	45	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
39D:							
Sylvatus------------	35	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50				
39E:							
Sylco---------------	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Sylvatus------------	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
40D:							
Sylco---------------	45	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
Sylvatus------------	40	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50				
40E:							
Sylco---------------	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Sylvatus------------	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
41B:							
Tate----------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
41C:							
Tate----------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
41D:							
Tate----------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
42C:							
Tate----------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
42D:							
Tate----------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
43C:							
Tate----------------	55	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Urban land----------	30	Not rated		Not rated		Not rated	

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
44D:							
Udorthents----------	85	Not rated		Not rated		Not rated	
45D:							
Udorthents----------	50	Not rated		Not rated		Not rated	
Urban land----------	35	Not rated		Not rated		Not rated	
46D:							
Unaka---------------	85	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
47C:							
Unaka---------------	50	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Porters-------------	35	Severe		Poorly suited		Severe	
		Low strength	1.00	Low strength	1.00	Low strength	1.00
				Slope	0.50		
47D:							
Unaka---------------	55	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
Porters-------------	30	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50	Low strength	1.00		
48D:							
Unaka---------------	55	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
48E:							
Unaka---------------	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Rock outcrop--------	35	Not rated		Not rated		Not rated	
48F:							
Unaka---------------	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Rock outcrop--------	40	Not rated		Not rated		Not rated	
49E:							
Unicoi--------------	50	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Stoniness	0.50	Rock fragments	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
49E:							
Marbleyard----------	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Stoniness	0.50	Rock fragments	0.50		
				Sandiness	0.50		
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 9.—Forestland Management, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1E:							
Ashe	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Edneytown	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
2E:							
Ashe	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Edneyville	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
3E:							
Ashe	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Edneyville	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
4B:							
Braddock	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
4C:							
Braddock	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
4D:							
Braddock	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
5D:							
Brownwood	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
5E:							
Brownwood	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
6A:							
Codorus	85	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
7A:							
Comus	85	Slight		Slight		Poorly suited	
						Flooding	1.00
8C:							
Cowee	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
8D:							
Cowee	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
8E:							
Cowee	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
9D:							
Cowee	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
9E:							
Cowee	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
10D:							
Cowee	55	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
10E:							
Cowee	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rock outcrop	40	Not rated		Not rated		Not rated	
11C:							
Cowee	55	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
Urban land	30	Not rated		Not rated		Not rated	
12A:							
Craigsville	90	Slight		Slight		Poorly suited	
						Flooding	1.00
13B:							
Delanco	85	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
14C:							
Delanco	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
15B:							
Delanco	45	Slight		Slight		Well suited	
Kinkora	40	Slight		Slight		Poorly suited	
						Ponding	1.00
						Wetness	0.50
16C:							
Edneytown	55	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
Ashe	30	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
16D:							
Edneytown	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Ashe	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
17C:							
Edneytown	55	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
Urban land	30	Not rated		Not rated		Not rated	
18C:							
Edneyville	55	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
Ashe	25	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
18D:							
Edneyville	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Ashe	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
19D:							
Edneyville	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Ashe	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
20B:							
Elsinboro	85	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
21B:							
Glenelg	45	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
Hayesville	40	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
22C:							
Glenelg	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
22D:							
Glenelg	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
22E:							
Glenelg	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
22F:							
Glenelg	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
23C:							
Glenelg	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
23D:							
Glenelg	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
23E:							
Glenelg	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
24C:							
Glenelg	55	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
Urban land	30	Not rated		Not rated		Not rated	
25C:							
Greenlee	85	Slight		Slight		Moderately suited	
						Slope	0.50
25D:							
Greenlee	85	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
26A:							
Hatboro-------------	90	Slight		Slight		Poorly suited	
						Ponding	1.00
						Flooding	1.00
						Wetness	0.50
27B:							
Hayesville----------	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
27C:							
Hayesville----------	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
27D:							
Hayesville----------	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
28C:							
Hayesville----------	55	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
Urban land----------	30	Not rated		Not rated		Not rated	
29C:							
Junaluska-----------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
29D:							
Junaluska-----------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
29E:							
Junaluska-----------	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
30A:							
Kinkora-------------	90	Slight		Slight		Poorly suited	
						Ponding	1.00
						Wetness	0.50
31D:							
Marbleyard----------	45	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Rock fragments	0.50
						Sandiness	0.50
Unicoi--------------	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
32B:							
Myersville----------	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
32C:							
Myersville----------	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
32D:							
Myersville----------	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
32E:							
Myersville----------	80	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
33C:							
Myersville----------	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
33D:							
Myersville----------	80	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
33E:							
Myersville----------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
34C:							
Myersville----------	55	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
Urban land----------	30	Not rated		Not rated		Not rated	
35D:							
Peaks---------------	80	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
35E:							
Peaks---------------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
36D:							
Peaks---------------	80	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
36E:							
Peaks---------------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
36F:							
Peaks---------------	75	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
37F:							
Peaks	50	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Sandiness	0.50
Rock outcrop	35	Not rated		Not rated		Not rated	
38D:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Very severe		Very severe		Poorly suited	
		Organic matter content high	1.00	Organic matter content high	1.00	Low strength	1.00
						Landslides	1.00
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slopes	1.00
38F:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Very severe		Very severe		Poorly suited	
		Organic matter content high	1.00	Organic matter content high	1.00	Slope	1.00
						Low strength	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Landslides	1.00
39C:							
Sylco	45	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
Sylvatus	40	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
39D:							
Sylco	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Sylvatus	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
39E:							
Sylco	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Sylvatus	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
40D:							
Sylco	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Sylvatus	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
40E:							
Sylco	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
40E:							
Sylvatus------------	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
41B:							
Tate----------------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
41C:							
Tate----------------	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
41D:							
Tate----------------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
42C:							
Tate----------------	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
42D:							
Tate----------------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
43C:							
Tate----------------	55	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
Urban land----------	30	Not rated		Not rated		Not rated	
44D:							
Udorthents----------	85	Not rated		Not rated		Not rated	
45D:							
Udorthents----------	50	Not rated		Not rated		Not rated	
Urban land----------	35	Not rated		Not rated		Not rated	
46D:							
Unaka---------------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
47C:							
Unaka---------------	50	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
Porters-------------	35	Slight		Severe		Poorly suited	
				Slope/erodibility	0.95	Low strength	1.00
						Slope	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
47D:							
Unaka	55	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Porters	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	1.00
48D:							
Unaka	55	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
48E:							
Unaka	50	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rock outcrop	35	Not rated		Not rated		Not rated	
48F:							
Unaka	45	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rock outcrop	40	Not rated		Not rated		Not rated	
49E:							
Unicoi	50	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
Marbleyard	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Sandiness	0.50
W:							
Water	100	Not rated		Not rated		Not rated	

Table 9.—Forestland Management, Part III

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
1E:							
Ashe----------------	50	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
Edneytown-----------	35	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
						Slope	0.50
2E:							
Ashe----------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Edneyville----------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
3E:							
Ashe----------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Edneyville----------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
4B:							
Braddock------------	90	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Rock fragments	0.50	Low strength	0.50
		Rock fragments	0.50	Stickiness; high plasticity index	0.50		
				Slope	0.50		
4C:							
Braddock------------	90	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Rock fragments	0.50	Low strength	0.50
		Rock fragments	0.50	Stickiness; high plasticity index	0.50		
				Slope	0.50		
4D:							
Braddock------------	90	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
		Rock fragments	0.50	Rock fragments	0.50	Slope	0.50
				Stickiness; high plasticity index	0.50		
5D:							
Brownwood-----------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
5E:							
Brownwood	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
6A:							
Codorus	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
						Wetness	0.50
7A:							
Comus	85	Well suited		Well suited		Well suited	
8C:							
Cowee	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
8D:							
Cowee	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
8E:							
Cowee	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
9D:							
Cowee	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
9E:							
Cowee	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
10D:							
Cowee	55	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
10E:							
Cowee	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Rock outcrop	40	Not rated		Not rated		Not rated	
11C:							
Cowee	55	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Urban land	30	Not rated		Not rated		Not rated	
12A:							
Craigsville	90	Moderately suited		Unsuited		Well suited	
		Rock fragments	0.50	Rock fragments	1.00		

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
13B:							
Delanco	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
14C:							
Delanco	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
15B:							
Delanco	45	Well suited		Well suited		Well suited	
Kinkora	40	Poorly suited		Poorly suited		Poorly suited	
		Wetness	0.75	Wetness	0.75	Wetness	1.00
16C:							
Edneytown	55	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Ashe	30	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
16D:							
Edneytown	45	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
Ashe	40	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
17C:							
Edneytown	55	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Urban land	30	Not rated		Not rated		Not rated	
18C:							
Edneyville	55	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Ashe	25	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
18D:							
Edneyville	45	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
Ashe	35	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
19D:							
Edneyville	45	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
19D:							
Ashe	35	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
20B:							
Elsinboro	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
21B:							
Glenelg	45	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Hayesville	40	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
22C:							
Glenelg	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
22D:							
Glenelg	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
22E:							
Glenelg	85	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
						Slope	0.50
22F:							
Glenelg	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
23C:							
Glenelg	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
23D:							
Glenelg	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
23E:							
Glenelg	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
24C:							
Glenelg	55	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Urban land	30	Not rated		Not rated		Not rated	
25C:							
Greenlee	85	Moderately suited		Unsuited		Well suited	
		Rock fragments	0.50	Rock fragments	1.00		
				Slope	0.50		

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
25D:							
Greenlee------------	85	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Slope	0.50
				Slope	0.75		
26A:							
Hatboro-------------	90	Poorly suited		Poorly suited		Poorly suited	
		Wetness	0.75	Wetness	0.75	Wetness	1.00
27B:							
Hayesville----------	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
27C:							
Hayesville----------	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
27D:							
Hayesville----------	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
28C:							
Hayesville----------	55	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Urban land----------	30	Not rated		Not rated		Not rated	
29C:							
Junaluska-----------	85	Moderately suited		Moderately suited		Well suited	
		Stickiness; high plasticity index	0.50	Slope	0.50		
				Rock fragments	0.50		
				Stickiness; high plasticity index	0.50		
29D:							
Junaluska-----------	85	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.50		
				Stickiness; high plasticity index	0.50		
29E:							
Junaluska-----------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness; high plasticity index	0.50	Rock fragments	0.50		
				Stickiness; high plasticity index	0.50		
30A:							
Kinkora-------------	90	Poorly suited		Poorly suited		Poorly suited	
		Wetness	0.75	Wetness	0.75	Wetness	1.00
31D:							
Marbleyard----------	45	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
				Slope	0.75	Sandiness	0.50
						Slope	0.50

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
31D:							
Unicoi----------------	35	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	0.50
				Rock fragments	0.75	Slope	0.50
32B:							
Myersville----------	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
32C:							
Myersville----------	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
32D:							
Myersville----------	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
32E:							
Myersville----------	80	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
33C:							
Myersville----------	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
33D:							
Myersville----------	80	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
33E:							
Myersville----------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
34C:							
Myersville----------	55	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
Urban land----------	30	Not rated		Not rated		Not rated	
35D:							
Peaks---------------	80	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Sandiness	0.50
				Rock fragments	0.75	Slope	0.50
35E:							
Peaks---------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Sandiness	0.50
36D:							
Peaks---------------	80	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Sandiness	0.50
				Rock fragments	0.75	Slope	0.50

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
36E:							
Peaks	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Sandiness	0.50
36F:							
Peaks	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Sandiness	0.50
37F:							
Peaks	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	0.50
						Sandiness	0.50
Rock outcrop	35	Not rated		Not rated		Not rated	
38D:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Well suited		Poorly suited		Poorly suited	
				Slope	0.75	Low strength	1.00
						Slope	0.50
38F:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Low strength	1.00
						Slope	1.00
39C:							
Sylco	45	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
Sylvatus	40	Moderately suited		Unsuited		Well suited	
		Rock fragments	0.50	Rock fragments	1.00		
				Slope	0.50		
39D:							
Sylco	45	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Low strength	0.50
				Rock fragments	0.75	Slope	0.50
Sylvatus	35	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Slope	0.50
				Slope	0.75		
39E:							
Sylco	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
Sylvatus	30	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	1.00		

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
40D:							
Sylco	45	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Low strength	0.50
				Rock fragments	0.75	Slope	0.50
Sylvatus	40	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Slope	0.50
				Slope	0.75		
40E:							
Sylco	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
Sylvatus	40	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	1.00		
41B:							
Tate	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
41C:							
Tate	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
41D:							
Tate	85	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
42C:							
Tate	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
42D:							
Tate	85	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
43C:							
Tate	55	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
Urban land	30	Not rated		Not rated		Not rated	
44D:							
Udorthents	85	Not rated		Not rated		Not rated	

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
45D:							
Udorthents----------	50	Not rated		Not rated		Not rated	
Urban land----------	35	Not rated		Not rated		Not rated	
46D:							
Unaka---------------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
47C:							
Unaka---------------	50	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Porters-------------	35	Well suited		Moderately suited		Poorly suited	
				Slope	0.50	Low strength	1.00
47D:							
Unaka---------------	55	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
Porters-------------	30	Well suited		Poorly suited		Poorly suited	
				Slope	0.75	Low strength	1.00
						Slope	0.50
48D:							
Unaka---------------	55	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
Rock outcrop--------	30	Not rated		Not rated		Not rated	
48E:							
Unaka---------------	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Rock outcrop--------	35	Not rated		Not rated		Not rated	
48F:							
Unaka---------------	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Rock outcrop--------	40	Not rated		Not rated		Not rated	
49E:							
Unicoi--------------	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	0.50
Marbleyard----------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
						Sandiness	0.50
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 9.—Forestland Management, Part IV

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
1E:					
Ashe	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
Edneytown	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
2E:					
Ashe	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Edneyville	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
3E:					
Ashe	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Edneyville	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
4B:					
Braddock	90	Poorly suited		Well suited	
		Rock fragments	0.50		
4C:					
Braddock	90	Poorly suited		Well suited	
		Rock fragments	0.50		
4D:					
Braddock	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
5D:					
Brownwood	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
5E:					
Brownwood	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
6A:					
Codorus	85	Well suited		Unsuited	
				Wetness	1.00
7A:					
Comus	85	Well suited		Well suited	

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
8C:					
Cowee	85	Well suited		Well suited	
8D:					
Cowee	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
8E:					
Cowee	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
9D:					
Cowee	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
9E:					
Cowee	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
10D:					
Cowee	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Rock outcrop	30	Not rated		Not rated	
10E:					
Cowee	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	40	Not rated		Not rated	
11C:					
Cowee	55	Well suited		Well suited	
Urban land	30	Not rated		Not rated	
12A:					
Craigsville	90	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
13B:					
Delanco	85	Well suited		Well suited	
14C:					
Delanco	85	Well suited		Well suited	
15B:					
Delanco	45	Well suited		Well suited	
Kinkora	40	Unsuited		Unsuited	
		Wetness	0.75	Wetness	1.00
16C:					
Edneytown	55	Well suited		Well suited	
Ashe	30	Well suited		Poorly suited	
				Restrictive layer	0.50

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
16D:					
Edneytown-----------	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Ashe----------------	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
17C:					
Edneytown-----------	55	Well suited		Well suited	
Urban land----------	30	Not rated		Not rated	
18C:					
Edneyville----------	55	Well suited		Well suited	
Ashe----------------	25	Well suited		Poorly suited	
				Restrictive layer	0.50
18D:					
Edneyville----------	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Ashe----------------	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
19D:					
Edneyville----------	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Ashe----------------	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
20B:					
Elsinboro-----------	85	Well suited		Well suited	
21B:					
Glenelg-------------	45	Well suited		Well suited	
Hayesville----------	40	Well suited		Well suited	
22C:					
Glenelg-------------	90	Well suited		Well suited	
22D:					
Glenelg-------------	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
22E:					
Glenelg-------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
22F:					
Glenelg-------------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
23C:					
Glenelg-------------	90	Well suited		Well suited	

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
23D:					
Glenelg	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
23E:					
Glenelg	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
24C:					
Glenelg	55	Well suited		Well suited	
Urban land	30	Not rated		Not rated	
25C:					
Greenlee	85	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
25D:					
Greenlee	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
26A:					
Hatboro	90	Unsuited		Unsuited	
		Wetness	0.75	Wetness	1.00
27B:					
Hayesville	90	Well suited		Well suited	
27C:					
Hayesville	90	Well suited		Well suited	
27D:					
Hayesville	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
28C:					
Hayesville	55	Well suited		Well suited	
Urban land	30	Not rated		Not rated	
29C:					
Junaluska	85	Well suited		Well suited	
29D:					
Junaluska	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
29E:					
Junaluska	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
30A:					
Kinkora	90	Unsuited		Unsuited	
		Wetness	0.75	Wetness	1.00
31D:					
Marbleyard	45	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
		Slope	0.50	Slope	0.50

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
31D:					
Unicoi	35	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
		Slope	0.50	Rock fragments	0.50
				Slope	0.50
32B:					
Myersville	90	Well suited		Well suited	
32C:					
Myersville	90	Well suited		Well suited	
32D:					
Myersville	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
32E:					
Myersville	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
33C:					
Myersville	90	Well suited		Well suited	
33D:					
Myersville	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
33E:					
Myersville	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
34C:					
Myersville	55	Well suited		Well suited	
Urban land	30	Not rated		Not rated	
35D:					
Peaks	80	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50	Restrictive layer	0.50
35E:					
Peaks	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
36D:					
Peaks	80	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50	Restrictive layer	0.50
36E:					
Peaks	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
36F:					
Peaks	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
37F:					
Peaks	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
				Restrictive layer	0.50
Rock outcrop	35	Not rated		Not rated	
38D:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
				Slope	0.50
38F:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
39C:					
Sylco	45	Poorly suited		Poorly suited	
		Rock fragments	0.50	Restrictive layer	0.50
Sylvatus	40	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
39D:					
Sylco	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Restrictive layer	0.50
Sylvatus	35	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50
39E:					
Sylco	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
Sylvatus	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
40D:					
Sylco	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Restrictive layer	0.50
Sylvatus	40	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
		Slope	0.50	Slope	0.50
40E:					
Sylco	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
40E:					
Sylvatus	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
41B:					
Tate	85	Well suited		Well suited	
41C:					
Tate	85	Well suited		Well suited	
41D:					
Tate	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
42C:					
Tate	85	Well suited		Well suited	
42D:					
Tate	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
43C:					
Tate	55	Well suited		Well suited	
Urban land	30	Not rated		Not rated	
44D:					
Udorthents	85	Not rated		Not rated	
45D:					
Udorthents	50	Not rated		Not rated	
Urban land	35	Not rated		Not rated	
46D:					
Unaka	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
47C:					
Unaka	50	Well suited		Poorly suited	
				Restrictive layer	0.50
Porters	35	Well suited		Well suited	
47D:					
Unaka	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
Porters	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
48D:					
Unaka	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
Rock outcrop	30	Not rated		Not rated	

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
48E:					
Unaka----------------	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Rock outcrop--------	35	Not rated		Not rated	
48F:					
Unaka----------------	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Rock outcrop--------	40	Not rated		Not rated	
49E:					
Unicoi---------------	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
				Rock fragments	0.50
Marbleyard----------	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
W:					
Water----------------	100	Not rated		Not rated	

Table 9.—Forestland Management, Part V

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Potential for damage to soil by fire: Value	Potential for seedling mortality: Rating class and limiting features	Potential for seedling mortality: Value
1E:					
Ashe----------------	50	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
Edneytown-----------	35	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
2E:					
Ashe----------------	40	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
Edneyville----------	35	Low		Low	
		Texture/slope/ rock fragments	0.10		
3E:					
Ashe----------------	40	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
Edneyville----------	35	Low		Low	
		Texture/slope/ rock fragments	0.10		
4B:					
Braddock------------	90	Moderate		Low	
		Texture/rock fragments	0.50		
4C:					
Braddock------------	90	Moderate		Low	
		Texture/rock fragments	0.50		
4D:					
Braddock------------	90	Moderate		Low	
		Texture/rock fragments	0.50		
5D:					
Brownwood-----------	85	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
5E:					
Brownwood	85	Low		Low	
		Texture/slope/ rock fragments	0.10		
6A:					
Codorus	85	Low		Moderate	
		Texture/rock fragments	0.10	Wetness	0.50
7A:					
Comus	85	Low		Low	
		Texture/rock fragments	0.10		
8C:					
Cowee	85	Low		Low	
		Texture/rock fragments	0.10		
8D:					
Cowee	85	Low		Low	
		Texture/rock fragments	0.10		
8E:					
Cowee	85	Low		Low	
		Texture/slope/ rock fragments	0.10		
9D:					
Cowee	85	Low		Low	
		Texture/rock fragments	0.10		
9E:					
Cowee	85	Low		Low	
		Texture/slope/ rock fragments	0.10		
10D:					
Cowee	55	Low		Low	
		Texture/rock fragments	0.10		
Rock outcrop	30	Not rated		Not rated	
10E:					
Cowee	45	Low		Low	
		Texture/slope/ rock fragments	0.10		
Rock outcrop	40	Not rated		Not rated	
11C:					
Cowee	55	Low		Low	
		Texture/rock fragments	0.10		
Urban land	30	Not rated		Not rated	

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
12A:					
Craigsville	90	Low		Low	
		Texture/rock fragments	0.10		
13B:					
Delanco	85	Low		Low	
		Texture/rock fragments	0.10		
14C:					
Delanco	85	Low		Low	
		Texture/rock fragments	0.10		
15B:					
Delanco	45	Low		Low	
		Texture/rock fragments	0.10		
Kinkora	40	Low		High	
		Texture/rock fragments	0.10	Wetness	1.00
16C:					
Edneytown	55	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Ashe	30	Low		Low	
		Texture/surface depth/rock fragments	0.10		
16D:					
Edneytown	45	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Ashe	40	Low		Low	
		Texture/surface depth/rock fragments	0.10		
17C:					
Edneytown	55	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Urban land	30	Not rated		Not rated	
18C:					
Edneyville	55	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
18C:					
Ashe	25	Low		Low	
		Texture/surface depth/rock fragments	0.10		
18D:					
Edneyville	45	Low		Low	
		Texture/rock fragments	0.10		
Ashe	35	Low		Low	
		Texture/surface depth/rock fragments	0.10		
19D:					
Edneyville	45	Low		Low	
		Texture/rock fragments	0.10		
Ashe	35	Low		Low	
		Texture/surface depth/rock fragments	0.10		
20B:					
Elsinboro	85	Low		Low	
		Texture/rock fragments	0.10		
21B:					
Glenelg	45	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Hayesville	40	Moderate		Low	
		Texture/rock fragments	0.50		
22C:					
Glenelg	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
22D:					
Glenelg	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
22E:					
Glenelg	85	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
22F:					
Glenelg	80	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
23C:					
Glenelg	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
23D:					
Glenelg	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
23E:					
Glenelg	85	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
24C:					
Glenelg	55	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Urban land	30	Not rated		Not rated	
25C:					
Greenlee	85	Low		Low	
		Texture/rock fragments	0.10		
25D:					
Greenlee	85	Low		Low	
		Texture/rock fragments	0.10		
26A:					
Hatboro	90	Low		High	
		Texture/rock fragments	0.10	Wetness	1.00
27B:					
Hayesville	90	Moderate		Low	
		Texture/rock fragments	0.50		
27C:					
Hayesville	90	Moderate		Low	
		Texture/rock fragments	0.50		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
27D:					
Hayesville----------	90	Moderate		Low	
		Texture/rock fragments	0.50		
28C:					
Hayesville----------	55	Moderate		Low	
		Texture/rock fragments	0.50		
Urban land----------	30	Not rated		Not rated	
29C:					
Junaluska-----------	85	Low		Low	
		Texture/rock fragments	0.10		
29D:					
Junaluska-----------	85	Low		Low	
		Texture/rock fragments	0.10		
29E:					
Junaluska-----------	85	Low		Low	
		Texture/slope/ rock fragments	0.10		
30A:					
Kinkora-------------	90	Low		High	
		Texture/rock fragments	0.10	Wetness	1.00
31D:					
Marbleyard----------	45	High		Moderate	
		Texture/surface depth/rock fragments	1.00	Soil reaction	0.50
Unicoi--------------	35	Moderate		Moderate	
		Texture/rock fragments	0.50	Soil reaction	0.50
32B:					
Myersville----------	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
32C:					
Myersville----------	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
32D:					
Myersville----------	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
32E:					
Myersville----------	80	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
33C:					
Myersville----------	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
33D:					
Myersville----------	80	Low		Low	
		Texture/surface depth/rock fragments	0.10		
33E:					
Myersville----------	80	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
34C:					
Myersville----------	55	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Urban land----------	30	Not rated		Not rated	
35D:					
Peaks---------------	80	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
35E:					
Peaks---------------	80	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
36D:					
Peaks---------------	80	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
36E:					
Peaks---------------	80	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
36F:					
Peaks---------------	75	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
37F:					
Peaks	50	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
Rock outcrop	35	Not rated		Not rated	
38D:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Low		Moderate	
				Soil reaction	0.50
38F:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Low		Moderate	
				Soil reaction	0.50
39C:					
Sylco	45	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Sylvatus	40	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
39D:					
Sylco	45	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Sylvatus	35	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
39E:					
Sylco	45	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Sylvatus	30	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
40D:					
Sylco	45	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
40D:					
Sylvatus	40	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
40E:					
Sylco	45	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Sylvatus	40	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
41B:					
Tate	85	Low		Low	
		Texture/rock fragments	0.10		
41C:					
Tate	85	Low		Low	
		Texture/rock fragments	0.10		
41D:					
Tate	85	Low		Low	
		Texture/rock fragments	0.10		
42C:					
Tate	85	Low		Low	
		Texture/rock fragments	0.10		
42D:					
Tate	85	Low		Low	
		Texture/rock fragments	0.10		
43C:					
Tate	55	Low		Low	
		Texture/rock fragments	0.10		
Urban land	30	Not rated		Not rated	
44D:					
Udorthents	85	Not rated		Not rated	
45D:					
Udorthents	50	Not rated		Not rated	
Urban land	35	Not rated		Not rated	
46D:					
Unaka	85	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
47C:					
Unaka---------------	50	Low		Low	
		Texture/rock fragments	0.10		
Porters-------------	35	Low		Low	
		Texture/rock fragments	0.10		
47D:					
Unaka---------------	55	Low		Low	
		Texture/rock fragments	0.10		
Porters-------------	30	Low		Low	
		Texture/rock fragments	0.10		
48D:					
Unaka---------------	55	Low		Low	
		Texture/rock fragments	0.10		
Rock outcrop--------	30	Not rated		Not rated	
48E:					
Unaka---------------	50	Low		Low	
		Texture/rock fragments	0.10		
Rock outcrop--------	35	Not rated		Not rated	
48F:					
Unaka---------------	45	Low		Low	
		Texture/rock fragments	0.10		
Rock outcrop--------	40	Not rated		Not rated	
49E:					
Unicoi--------------	50	High		Moderate	
		Texture/slope/ rock fragments	1.00	Soil reaction	0.50
Marbleyard----------	30	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
W:					
Water---------------	100	Not rated		Not rated	

Table 10.—Recreational Development, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
1E:							
Ashe	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.65
Edneytown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
2E:							
Ashe	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.65
Edneyville	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
3E:							
Ashe	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Depth to bedrock	0.65
						Large stones content	0.53
Edneyville	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53
4B:							
Braddock	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
4C:							
Braddock	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
4D:							
Braddock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
5D:							
Brownwood	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.10
5E:							
Brownwood	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.10
6A:							
Codorus	85	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Depth to saturated zone	0.78	Flooding	1.00
		Depth to saturated zone	0.99	Flooding	0.40	Depth to saturated zone	0.99

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
7A:							
Comus	85	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Too sandy	0.01	Too sandy	0.01	Too sandy	0.01
8C:							
Cowee	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.01
8D:							
Cowee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.01
8E:							
Cowee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.01
9D:							
Cowee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.61	Gravel content	0.61	Gravel content	1.00
						Depth to bedrock	0.01
9E:							
Cowee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.61	Gravel content	0.61	Gravel content	1.00
						Depth to bedrock	0.01
10D:							
Cowee	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.01
Rock outcrop	30	Not rated		Not rated		Not rated	
10E:							
Cowee	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.01
Rock outcrop	40	Not rated		Not rated		Not rated	
11C:							
Cowee	55	Not limited		Not limited		Very limited	
						Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.01
Urban land	30	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
12A:							
Craigsville---------	90	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
						Gravel content	0.97
13B:							
Delanco-------------	85	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.48	Slope	0.88
		Depth to saturated zone	0.81	Slow water movement	0.26	Depth to saturated zone	0.81
		Slow water movement	0.26			Slow water movement	0.26
14C:							
Delanco-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.81	Depth to saturated zone	0.48	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to saturated zone	0.81
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26
15B:							
Delanco-------------	45	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.48	Depth to saturated zone	0.81
		Depth to saturated zone	0.81	Slow water movement	0.26	Slope	0.50
		Slow water movement	0.26			Slow water movement	0.26
Kinkora-------------	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Slow water movement	0.96	Slow water movement	0.96
16C:							
Edneytown-----------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
Ashe----------------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
						Depth to bedrock	0.65
16D:							
Edneytown-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Ashe----------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.65
17C:							
Edneytown-----------	55	Not limited		Not limited		Very limited	
						Slope	1.00
Urban land----------	30	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
18C:							
Edneyville----------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
Ashe----------------	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
						Depth to bedrock	0.65
18D:							
Edneyville----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Ashe----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.65
19D:							
Edneyville----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53
Ashe----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Depth to bedrock	0.65
						Large stones content	0.53
20B:							
Elsinboro-----------	85	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.01	Slope	0.88
		Too sandy	0.01			Too sandy	0.01
21B:							
Glenelg-------------	45	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Hayesville----------	40	Not limited		Not limited		Somewhat limited	
						Slope	0.88
22C:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
22D:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
22E:							
Glenelg-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
22F:							
Glenelg-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
23C:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.53	Large stones content	0.53	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.53

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
23D:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53
23E:							
Glenelg	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53
24C:							
Glenelg	55	Not limited		Not limited		Very limited	
						Slope	1.00
Urban land	30	Not rated		Not rated		Not rated	
25C:							
Greenlee	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.53	Large stones content	0.53	Slope	1.00
						Gravel content	0.73
						Large stones content	0.53
25D:							
Greenlee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Gravel content	0.73
						Large stones content	0.53
26A:							
Hatboro	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Flooding	0.40	Ponding	1.00
27B:							
Hayesville	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
27C:							
Hayesville	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
27D:							
Hayesville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
28C:							
Hayesville	55	Not limited		Not limited		Very limited	
						Slope	1.00
Urban land	30	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
29C:							
Junaluska-----------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
						Gravel content	0.64
						Depth to bedrock	0.46
29D:							
Junaluska-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.64
						Depth to bedrock	0.46
29E:							
Junaluska-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.64
						Depth to bedrock	0.46
30A:							
Kinkora-------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Slow water movement	0.96	Slow water movement	0.96
31D:							
Marbleyard----------	45	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.45
Unicoi--------------	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
32B:							
Myersville----------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
32C:							
Myersville----------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
32D:							
Myersville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
32E:							
Myersville----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
33C:							
Myersville----------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
33D:							
Myersville----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
33E:							
Myersville----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
34C:							
Myersville----------	55	Not limited		Not limited		Very limited	
						Slope	1.00
Urban land----------	30	Not rated		Not rated		Not rated	
35D:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.29
35E:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
						Depth to bedrock	0.29
36D:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
36E:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
36F:							
Peaks---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
37F:							
Peaks---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
Rock outcrop--------	35	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
38D:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Not rated		Not rated		Not rated	
38F:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Not rated		Not rated		Not rated	
39C:							
Sylco	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.71
Sylvatus	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to bedrock	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
39D:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.71
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
39E:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.71
Sylvatus	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
40D:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	1.00
						Depth to bedrock	0.71
		Gravel content	0.01	Gravel content	0.01		
Sylvatus	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	1.00

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
40E:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	1.00
						Depth to bedrock	0.71
		Gravel content	0.01	Gravel content	0.01		
Sylvatus	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	1.00
41B:							
Tate	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
41C:							
Tate	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
41D:							
Tate	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
42C:							
Tate	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
42D:							
Tate	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
43C:							
Tate	55	Not limited		Not limited		Very limited	
						Slope	1.00
Urban land	30	Not rated		Not rated		Not rated	
44D:							
Udorthents	85	Not rated		Not rated		Not rated	
45D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
46D:							
Unaka	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.90
						Large stones content	0.47
47C:							
Unaka	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Depth to bedrock	0.90
Porters	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
47D:							
Unaka---------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
Porters-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
48D:							
Unaka---------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
Rock outcrop--------	30	Not rated		Not rated		Not rated	
48E:							
Unaka---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
Rock outcrop--------	35	Not rated		Not rated		Not rated	
48F:							
Unaka---------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
Rock outcrop--------	40	Not rated		Not rated		Not rated	
49E:							
Unicoi--------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
Marbleyard----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.45
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
1E:							
Ashe	50	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.22	Slope	1.00
						Droughty	0.72
						Depth to bedrock	0.65
Edneytown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	0.22		
2E:							
Ashe	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.72
						Depth to bedrock	0.65
Edneyville	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
3E:							
Ashe	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Droughty	0.72
						Depth to bedrock	0.65
Edneyville	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53		
4B:							
Braddock	90	Not limited		Not limited		Somewhat limited	
						Large stones content	0.88
4C:							
Braddock	90	Not limited		Not limited		Somewhat limited	
						Large stones content	0.88
						Slope	0.37
4D:							
Braddock	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Large stones content	0.88
5D:							
Brownwood	85	Somewhat limited		Not limited		Very limited	
		Slope	0.68			Slope	1.00
						Large stones content	0.11
						Depth to bedrock	0.10

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
5E:							
Brownwood	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Large stones content	0.11
						Depth to bedrock	0.10
6A:							
Codorus	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.78
7A:							
Comus	85	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
		Too sandy	0.01	Too sandy	0.01		
8C:							
Cowee	85	Not limited		Not limited		Somewhat limited	
						Slope	0.37
						Depth to bedrock	0.01
8D:							
Cowee	85	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.01
8E:							
Cowee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.01
9D:							
Cowee	85	Somewhat limited		Not limited		Very limited	
		Slope	0.68			Slope	1.00
						Gravel content	0.61
						Droughty	0.16
9E:							
Cowee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.61
						Droughty	0.16
10D:							
Cowee	55	Somewhat limited		Not limited		Very limited	
		Slope	0.68			Slope	1.00
						Depth to bedrock	0.01
Rock outcrop	30	Not rated		Not rated		Not rated	
10E:							
Cowee	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.01
Rock outcrop	40	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
11C:							
Cowee	55	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.01
Urban land	30	Not rated		Not rated		Not rated	
12A:							
Craigsville	90	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
						Large stones content	0.84
						Droughty	0.44
13B:							
Delanco	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
14C:							
Delanco	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
						Slope	0.37
15B:							
Delanco	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
Kinkora	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
16C:							
Edneytown	55	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.37
Ashe	30	Not limited		Not limited		Somewhat limited	
						Droughty	0.72
						Depth to bedrock	0.65
						Slope	0.37
16D:							
Edneytown	45	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.50				
Ashe	40	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Droughty	0.72
						Depth to bedrock	0.65
17C:							
Edneytown	55	Not limited		Not limited		Not limited	
Urban land	30	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
18C:							
Edneyville----------	55	Not limited		Not limited		Somewhat limited	
						Slope	0.37
Ashe----------------	25	Not limited		Not limited		Somewhat limited	
						Droughty	0.72
						Depth to bedrock	0.65
						Slope	0.37
18D:							
Edneyville----------	45	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
Ashe----------------	35	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Droughty	0.72
						Depth to bedrock	0.65
19D:							
Edneyville----------	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.53	Slope	1.00
		Large stones content	0.53				
Ashe----------------	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.53	Slope	1.00
		Large stones content	0.53			Droughty	0.72
						Depth to bedrock	0.65
20B:							
Elsinboro-----------	85	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.01	Too sandy	0.01		
21B:							
Glenelg-------------	45	Not limited		Not limited		Not limited	
Hayesville----------	40	Not limited		Not limited		Not limited	
22C:							
Glenelg-------------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
22D:							
Glenelg-------------	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
22E:							
Glenelg-------------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.22	Slope	1.00
22F:							
Glenelg-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
23C:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.53	Large stones content	0.53	Slope	0.37

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
23D:							
Glenelg	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.53	Slope	1.00
		Large stones content	0.53				
23E:							
Glenelg	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53		
24C:							
Glenelg	55	Not limited		Not limited		Not limited	
Urban land	30	Not rated		Not rated		Not rated	
25C:							
Greenlee	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.53	Large stones content	0.53	Large stones content	1.00
						Droughty	0.02
25D:							
Greenlee	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.53	Slope	1.00
		Large stones content	0.53			Large stones content	1.00
						Droughty	0.02
26A:							
Hatboro	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
						Flooding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40		
27B:							
Hayesville	90	Not limited		Not limited		Not limited	
27C:							
Hayesville	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
27D:							
Hayesville	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
28C:							
Hayesville	55	Not limited		Not limited		Not limited	
Urban land	30	Not rated		Not rated		Not rated	
29C:							
Junaluska	85	Not limited		Not limited		Somewhat limited	
						Large stones content	0.61
						Depth to bedrock	0.46
						Slope	0.37

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
29D:							
Junaluska-----------	85	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Large stones content	0.61
						Depth to bedrock	0.46
29E:							
Junaluska-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Large stones content	0.61
						Depth to bedrock	0.46
30A:							
Kinkora-------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
31D:							
Marbleyard----------	45	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Slope	0.68			Slope	1.00
						Droughty	0.99
Unicoi--------------	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Droughty	1.00
						Depth to bedrock	1.00
		Slope	0.68			Gravel content	1.00
32B:							
Myersville----------	90	Not limited		Not limited		Somewhat limited	
						Large stones content	0.03
32C:							
Myersville----------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.63
						Large stones content	0.03
32D:							
Myersville----------	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Large stones content	0.03
32E:							
Myersville----------	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.22	Slope	1.00
						Large stones content	0.03
33C:							
Myersville----------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.47	Large stones content	0.47	Slope	0.63
						Large stones content	0.03

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
33D:							
Myersville----------	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Large stones content	0.03
33E:							
Myersville----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.03
34C:							
Myersville----------	55	Not limited		Not limited		Somewhat limited	
						Large stones content	0.03
Urban land----------	30	Not rated		Not rated		Not rated	
35D:							
Peaks---------------	80	Very limited		Not limited		Very limited	
		Slope	1.00			Gravel content	1.00
						Droughty	1.00
						Slope	1.00
35E:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
						Droughty	1.00
36D:							
Peaks---------------	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Gravel content	1.00
		Large stones content	0.47			Droughty	1.00
						Slope	1.00
36E:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	1.00
						Droughty	1.00
36F:							
Peaks---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	1.00
						Droughty	1.00
37F:							
Peaks---------------	50	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
Rock outcrop--------	35	Not rated		Not rated		Not rated	
38D:							
Rock outcrop--------	55	Not rated		Not rated		Not rated	
Clingman------------	30	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
38F:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Not rated		Not rated		Not rated	
39C:							
Sylco	45	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.71
						Droughty	0.58
						Slope	0.37
Sylvatus	40	Not limited		Not limited		Very limited	
						Depth to bedrock	1.00
						Droughty	1.00
						Slope	0.37
39D:							
Sylco	45	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.71
						Droughty	0.58
Sylvatus	35	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Depth to bedrock	1.00
						Droughty	1.00
39E:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.71
						Droughty	0.58
Sylvatus	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	1.00
						Droughty	1.00
40D:							
Sylco	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Depth to bedrock	0.71
						Droughty	0.58
Sylvatus	40	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Depth to bedrock	1.00
		Large stones content	0.47			Droughty	1.00
						Slope	1.00
40E:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.71
						Droughty	0.58
Sylvatus	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	1.00
						Droughty	1.00

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
41B:							
Tate	85	Not limited		Not limited		Not limited	
41C:							
Tate	85	Not limited		Not limited		Somewhat limited	
						Slope	0.37
41D:							
Tate	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
42C:							
Tate	85	Not limited		Not limited		Somewhat limited	
						Slope	0.37
42D:							
Tate	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
43C:							
Tate	55	Not limited		Not limited		Not limited	
Urban land	30	Not rated		Not rated		Not rated	
44D:							
Udorthents	85	Not rated		Not rated		Not rated	
45D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
46D:							
Unaka	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.68	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Depth to bedrock	0.90
						Droughty	0.01
47C:							
Unaka	50	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.90
						Slope	0.63
						Droughty	0.01
Porters	35	Not limited		Not limited		Somewhat limited	
						Slope	0.63
47D:							
Unaka	55	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.90
						Droughty	0.01
Porters	30	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
48D:							
Unaka---------------	55	Somewhat limited		Not limited		Very limited	
		Slope	0.68			Slope	1.00
						Depth to bedrock	0.90
						Droughty	0.01
Rock outcrop--------	30	Not rated		Not rated		Not rated	
48E:							
Unaka---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Droughty	0.01
Rock outcrop--------	35	Not rated		Not rated		Not rated	
48F:							
Unaka---------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Droughty	0.01
Rock outcrop--------	40	Not rated		Not rated		Not rated	
49E:							
Unicoi--------------	50	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Droughty	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
Marbleyard----------	30	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Large stones content	1.00
		Slope	1.00	Slope	1.00		
						Droughty	0.99
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 11.—Building Site Development, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1E:							
Ashe	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.64	Depth to hard bedrock	1.00	Depth to hard bedrock	0.64
Edneytown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
2E:							
Ashe	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.64	Depth to hard bedrock	1.00	Depth to hard bedrock	0.64
Edneyville	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
3E:							
Ashe	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.64	Depth to hard bedrock	1.00	Depth to hard bedrock	0.64
Edneyville	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
4B:							
Braddock	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
4C:							
Braddock	90	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
4D:							
Braddock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
5D:							
Brownwood	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.84		
				Depth to soft bedrock	0.10		

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
5E:							
Brownwood	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.84		
				Depth to soft bedrock	0.10		
6A:							
Codorus	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
7A:							
Comus	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
8C:							
Cowee	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
				Depth to soft bedrock	0.01		
8D:							
Cowee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
8E:							
Cowee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
9D:							
Cowee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
9E:							
Cowee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
10D:							
Cowee	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
Rock outcrop	30	Not rated		Not rated		Not rated	

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
10E:							
Cowee	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
Rock outcrop	40	Not rated		Not rated		Not rated	
11C:							
Cowee	55	Not limited		Somewhat limited		Somewhat limited	
				Depth to soft bedrock	0.01	Slope	0.88
Urban land	30	Not rated		Not rated		Not rated	
12A:							
Craigsville	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Large stones content	0.41	Large stones content	0.41	Large stones content	0.41
13B:							
Delanco	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
14C:							
Delanco	85	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Depth to saturated zone	0.81
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
15B:							
Delanco	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Kinkora	40	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
16C:							
Edneytown	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
Ashe	30	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.64	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to hard bedrock	0.64

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
16D:							
Edneytown-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Ashe----------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.64	Depth to hard bedrock	1.00	Depth to hard bedrock	0.64
17C:							
Edneytown-----------	55	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Urban land----------	30	Not rated		Not rated		Not rated	
18C:							
Edneyville----------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
Ashe----------------	25	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.64	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to hard bedrock	0.64
18D:							
Edneyville----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Ashe----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.64	Depth to hard bedrock	1.00	Depth to hard bedrock	0.64
19D:							
Edneyville----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Ashe----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.64	Slope	1.00	Depth to hard bedrock	0.64
20B:							
Elsinboro-----------	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
						Slope	0.12
21B:							
Glenelg-------------	45	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Hayesville----------	40	Not limited		Not limited		Somewhat limited	
						Slope	0.12
22C:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
22D:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
22E:							
Glenelg-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
22F:							
Glenelg-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
23C:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
23D:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
23E:							
Glenelg-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
24C:							
Glenelg-------------	55	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Urban land----------	30	Not rated		Not rated		Not rated	
25C:							
Greenlee------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.99	Large stones content	0.99	Large stones content	0.99
						Slope	0.88
25D:							
Greenlee------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.99	Large stones content	0.99	Large stones content	0.99
26A:							
Hatboro-------------	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
27B:							
Hayesville----------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
27C:							
Hayesville----------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
27D:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
28C:							
Hayesville----------	55	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Urban land----------	30	Not rated		Not rated		Not rated	
29C:							
Junaluska-----------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Depth to hard bedrock	0.84	Slope	1.00
				Depth to soft bedrock	0.46		
				Slope	0.37		
29D:							
Junaluska-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.84		
				Depth to soft bedrock	0.46		
29E:							
Junaluska-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.84		
				Depth to soft bedrock	0.46		
30A:							
Kinkora-------------	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
31D:							
Marbleyard----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Large stones content	0.95	Slope	1.00	Large stones content	0.95
		Depth to hard bedrock	0.06	Large stones content	0.95	Depth to hard bedrock	0.06
Unicoi--------------	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to hard bedrock	1.00
32B:							
Myersville----------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
32C:							
Myersville----------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
32D:							
Myersville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
32E:							
Myersville----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
33C:							
Myersville----------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
33D:							
Myersville----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
33E:							
Myersville----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
34C:							
Myersville----------	55	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Urban land----------	30	Not rated		Not rated		Not rated	
35D:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Slope	1.00	Depth to hard bedrock	0.29
35E:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
36D:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Slope	1.00	Depth to hard bedrock	0.29
36E:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
36F:							
Peaks---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
37F:							
Peaks	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
Rock outcrop	35	Not rated		Not rated		Not rated	
38D:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to hard bedrock	1.00
38F:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
39C:							
Sylco	45	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to hard bedrock	0.71
Sylvatus	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to hard bedrock	1.00
39D:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Depth to hard bedrock	0.71
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
39E:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Depth to hard bedrock	0.71
Sylvatus	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
40D:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71	Slope	1.00	Depth to hard bedrock	0.71
Sylvatus	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to hard bedrock	1.00
40E:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Depth to hard bedrock	0.71
Sylvatus	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
41B:							
Tate	85	Not limited		Not limited		Somewhat limited	
						Slope	0.12
41C:							
Tate	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
41D:							
Tate	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
42C:							
Tate	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
42D:							
Tate	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
43C:							
Tate	55	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Urban land	30	Not rated		Not rated		Not rated	
44D:							
Udorthents	85	Not rated		Not rated		Not rated	
45D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
46D:							
Unaka	85	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Depth to hard bedrock	0.90

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
47C:							
Unaka	50	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.63	Slope	0.63	Depth to hard bedrock	0.90
Porters	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
				Depth to hard bedrock	0.08		
47D:							
Unaka	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Depth to hard bedrock	0.90
Porters	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.08		
48D:							
Unaka	55	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Depth to hard bedrock	0.90
Rock outcrop	30	Not rated		Not rated		Not rated	
48E:							
Unaka	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Depth to hard bedrock	0.90
Rock outcrop	35	Not rated		Not rated		Not rated	
48F:							
Unaka	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Depth to hard bedrock	0.90
Rock outcrop	40	Not rated		Not rated		Not rated	
49E:							
Unicoi	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Marbleyard	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.95	Depth to hard bedrock	1.00	Large stones content	0.95
		Depth to hard bedrock	0.06	Large stones content	0.95	Depth to hard bedrock	0.06
W:							
Water	100	Not rated		Not rated		Not rated	

Table 11.—Building Site Development, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1E:							
Ashe	50	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.64	Slope	1.00	Droughty	0.72
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.55
Edneytown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
2E:							
Ashe	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.64	Slope	1.00	Droughty	0.72
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.65
Edneyville	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
3E:							
Ashe	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.64	Slope	1.00	Droughty	0.72
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.65
Edneyville	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
4B:							
Braddock	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Too clayey	0.12	Large stones content	0.88
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
4C:							
Braddock	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Large stones content	0.88
		Shrink-swell	0.50	Too clayey	0.12		
		Frost action	0.50	Cutbanks cave	0.10	Slope	0.37
4D:							
Braddock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	0.12	Large stones content	0.88
		Shrink-swell	0.50	Cutbanks cave	0.10		

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
5D:							
Brownwood-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.84	Large stones content	0.11
				Cutbanks cave	0.10	Depth to bedrock	0.10
5E:							
Brownwood-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.84	Large stones content	0.11
				Cutbanks cave	0.10	Depth to bedrock	0.10
6A:							
Codorus-------------	85	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00			Depth to saturated zone	0.78
		Low strength	0.78	Cutbanks cave	1.00		
				Flooding	0.80		
7A:							
Comus---------------	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
		Frost action	0.50	Flooding	0.80		
8C:							
Cowee---------------	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.37
		Slope	0.37	Slope	0.37	Depth to bedrock	0.01
				Depth to soft bedrock	0.01		
8D:							
Cowee---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.01
				Depth to soft bedrock	0.01		
8E:							
Cowee---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.01
				Depth to soft bedrock	0.01		
9D:							
Cowee---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.61
				Depth to soft bedrock	0.01	Droughty	0.16
9E:							
Cowee---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.61
				Depth to soft bedrock	0.01	Droughty	0.16

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
10D:							
Cowee	55	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.01
				Depth to soft bedrock	0.01		
Rock outcrop	30	Not rated		Not rated		Not rated	
10E:							
Cowee	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.01
				Depth to soft bedrock	0.01		
Rock outcrop	40	Not rated		Not rated		Not rated	
11C:							
Cowee	55	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.01
				Depth to soft bedrock	0.01		
Urban land	30	Not rated		Not rated		Not rated	
12A:							
Craigsville	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
		Frost action	0.50	Flooding	0.80	Large stones content	0.84
		Large stones content	0.41	Large stones content	0.41	Droughty	0.44
13B:							
Delanco	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Depth to saturated zone	0.48				
14C:							
Delanco	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
		Shrink-swell	0.50	Slope	0.37	Slope	0.37
		Depth to saturated zone	0.48	Cutbanks cave	0.10		
15B:							
Delanco	45	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Depth to saturated zone	0.48				
Kinkora	40	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	1.00		

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
16C:							
Edneytown	55	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.37
		Slope	0.37	Slope	0.37		
Ashe	30	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.64	Depth to hard bedrock	1.00	Droughty	0.72
						Depth to bedrock	0.65
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.37
		Slope	0.37	Slope	0.37		
16D:							
Edneytown	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
Ashe	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.64			Droughty	0.72
				Slope	1.00	Depth to bedrock	0.65
		Frost action	0.50	Cutbanks cave	1.00		
17C:							
Edneytown	55	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Urban land	30	Not rated		Not rated		Not rated	
18C:							
Edneyville	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		
Ashe	25	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.64	Depth to hard bedrock	1.00	Droughty	0.72
						Depth to bedrock	0.65
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.37
		Slope	0.37	Slope	0.37		
18D:							
Edneyville	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Ashe	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.64			Droughty	0.72
				Slope	1.00	Depth to bedrock	0.65
		Frost action	0.50	Cutbanks cave	1.00		
19D:							
Edneyville	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Ashe	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.64			Droughty	0.72
				Cutbanks cave	1.00	Depth to bedrock	0.65
		Frost action	0.50	Slope	1.00		

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
20B:							
Elsinboro-----------	85	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
		Flooding	0.40				
21B:							
Glenelg-------------	45	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
Hayesville----------	40	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Too clayey	0.12		
		Low strength	0.10	Cutbanks cave	0.10		
22C:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		
22D:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
22E:							
Glenelg-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
22F:							
Glenelg-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
23C:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		
23D:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
23E:							
Glenelg-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
24C:							
Glenelg-------------	55	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
Urban land----------	30	Not rated		Not rated		Not rated	
25C:							
Greenlee------------	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.99	Large stones content	0.99	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.02

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
25D:							
Greenlee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.99	Large stones content	0.99	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.02
26A:							
Hatboro	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
27B:							
Hayesville	90	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Too clayey	0.12		
		Low strength	0.10	Cutbanks cave	0.10		
27C:							
Hayesville	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Too clayey	0.12		
		Low strength	0.10	Cutbanks cave	0.10		
27D:							
Hayesville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Too clayey	0.12		
		Low strength	0.10	Cutbanks cave	0.10		
28C:							
Hayesville	55	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Too clayey	0.12		
		Low strength	0.10	Cutbanks cave	0.10		
Urban land	30	Not rated		Not rated		Not rated	
29C:							
Junaluska	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Depth to hard bedrock	0.84	Large stones content	0.61
		Frost action	0.50	Depth to soft bedrock	0.46	Depth to bedrock	0.46
		Slope	0.37	Slope	0.37	Slope	0.37
29D:							
Junaluska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to hard bedrock	0.84	Large stones content	0.61
		Frost action	0.50	Depth to soft bedrock	0.46	Depth to bedrock	0.46
29E:							
Junaluska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to hard bedrock	0.84	Large stones content	0.61
		Frost action	0.50	Depth to soft bedrock	0.46	Depth to bedrock	0.46

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
30A:							
Kinkora-------------	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	1.00		
31D:							
Marbleyard----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Large stones content	1.00
		Large stones content	0.95	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Droughty	0.99
Unicoi--------------	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
						Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Frost action	0.50	Cutbanks cave	0.10		
32B:							
Myersville----------	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	0.10	Large stones content	0.03
		Frost action	0.50				
32C:							
Myersville----------	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Slope	0.63	Cutbanks cave	0.10	Large stones content	0.03
		Frost action	0.50				
32D:							
Myersville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10	Large stones content	0.03
		Frost action	0.50				
32E:							
Myersville----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10	Large stones content	0.03
		Frost action	0.50				
33C:							
Myersville----------	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Slope	0.63	Cutbanks cave	0.10	Large stones content	0.03
		Frost action	0.50				
33D:							
Myersville----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10	Large stones content	0.03
		Frost action	0.50				
33E:							
Myersville----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10	Large stones content	0.03
		Frost action	0.50				

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
34C:							
Myersville----------	55	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	0.10	Large stones content	0.03
		Frost action	0.50				
Urban land----------	30	Not rated		Not rated		Not rated	
35D:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Gravel content	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	1.00
		Depth to hard bedrock	0.29	Slope	1.00	Slope	1.00
35E:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	1.00
		Depth to hard bedrock	0.29	Cutbanks cave	1.00	Droughty	1.00
36D:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Gravel content	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	1.00
		Depth to hard bedrock	0.29	Slope	1.00	Slope	1.00
36E:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	1.00
		Depth to hard bedrock	0.29	Cutbanks cave	1.00	Droughty	1.00
36F:							
Peaks---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	1.00
		Depth to hard bedrock	0.29	Cutbanks cave	1.00	Droughty	1.00
37F:							
Peaks---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	1.00
		Depth to hard bedrock	0.29	Cutbanks cave	1.00	Droughty	1.00
Rock outcrop--------	35	Not rated		Not rated		Not rated	
38D:							
Rock outcrop--------	55	Not rated		Not rated		Not rated	
Clingman------------	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Organic matter content	1.00
		Frost action	1.00	Slope	1.00	Depth to bedrock	1.00
		Slope	1.00			Slope	1.00

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
38F:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
						Organic matter content	1.00
		Slope	1.00	Slope	1.00		
		Frost action	1.00			Depth to bedrock	1.00
39C:							
Sylco	45	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Depth to bedrock	0.71
						Droughty	0.58
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		
Sylvatus	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		0.37
39D:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71			Depth to bedrock	0.71
				Slope	1.00	Droughty	0.58
		Frost action	0.50	Cutbanks cave	0.10		
Sylvatus	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
						Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10		
39E:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71			Depth to bedrock	0.71
				Slope	1.00	Droughty	0.58
		Frost action	0.50	Cutbanks cave	0.10		
Sylvatus	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
						Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10		
40D:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71			Depth to bedrock	0.71
				Slope	1.00	Droughty	0.58
		Frost action	0.50	Cutbanks cave	0.10		
Sylvatus	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
40E:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71	Slope	1.00	Depth to bedrock	0.71
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.58
Sylvatus	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
41B:							
Tate	85	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
41C:							
Tate	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Frost action	0.50	Cutbanks cave	0.10		
		Slope	0.37				
41D:							
Tate	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
42C:							
Tate	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Frost action	0.50	Cutbanks cave	0.10		
		Slope	0.37				
42D:							
Tate	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
43C:							
Tate	55	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
Urban land	30	Not rated		Not rated		Not rated	
44D:							
Udorthents	85	Not rated		Not rated		Not rated	
45D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
46D:							
Unaka	85	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Depth to bedrock	0.90
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.01
47C:							
Unaka	50	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Depth to bedrock	0.90
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.01
Porters	35	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Cutbanks cave	1.00	Slope	0.63
		Frost action	0.50	Slope	0.63		
				Depth to hard bedrock	0.08		
47D:							
Unaka	55	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Depth to bedrock	0.90
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.01
Porters	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
				Depth to hard bedrock	0.08		
48D:							
Unaka	55	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Depth to bedrock	0.90
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.01
Rock outcrop	30	Not rated		Not rated		Not rated	
48E:							
Unaka	50	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Depth to bedrock	0.90
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.01
Rock outcrop	35	Not rated		Not rated		Not rated	
48F:							
Unaka	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Depth to bedrock	0.90
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.01
Rock outcrop	40	Not rated		Not rated		Not rated	

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
49E:							
Unicoi	50	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
						Droughty	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Marbleyard	30	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Large stones content	0.95			Large stones content	1.00
				Slope	1.00		
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.99
W:							
Water	100	Not rated		Not rated		Not rated	

Table 12.—Sanitary Facilities, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
1E:					
Ashe	50	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Edneytown	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
2E:					
Ashe	40	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Edneyville	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
3E:					
Ashe	40	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Edneyville	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
4B:					
Braddock	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.68	Slope	0.68
				Seepage	0.68
				Large stones content	0.01
4C:					
Braddock	90	Somewhat limited		Very limited	
		Slow water movement	0.68	Slope	1.00
				Seepage	0.68
		Slope	0.37	Large stones content	0.01

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
4D:					
Braddock------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.68	Seepage	0.68
				Large stones content	0.01
5D:					
Brownwood-----------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
5E:					
Brownwood-----------	85	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
6A:					
Codorus-------------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
7A:					
Comus---------------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
8C:					
Cowee---------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.50	Slope	1.00
		Slope	0.37	Seepage	0.50
8D:					
Cowee---------------	85	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
8E:					
Cowee---------------	85	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
9D:					
Cowee	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
9E:					
Cowee	85	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
10D:					
Cowee	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Rock outcrop	30	Not rated		Not rated	
10E:					
Cowee	45	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Rock outcrop	40	Not rated		Not rated	
11C:					
Cowee	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
Urban land	30	Not rated		Not rated	
12A:					
Craigsville	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones content	0.41	Large stones content	0.98
13B:					
Delanco	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	0.68
		Flooding	0.40	Seepage	0.50

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
14C:					
Delanco	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Slope	0.37	Seepage	0.50
15B:					
Delanco	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.50
		Flooding	0.40	Flooding	0.40
Kinkora	40	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	1.00
16C:					
Edneytown	55	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	1.00
		Slope	0.37		
Ashe	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.37	Seepage	1.00
16D:					
Edneytown	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
Ashe	40	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
17C:					
Edneytown	55	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	1.00
Urban land	30	Not rated		Not rated	

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
18C:					
Edneyville----------	55	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
		Slope	0.37		
Ashe----------------	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00		
				Slope	1.00
		Slope	0.37	Seepage	1.00
18D:					
Edneyville----------	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Ashe----------------	35	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00		
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
19D:					
Edneyville----------	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Ashe----------------	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
20B:					
Elsinboro-----------	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
		Slow water movement	0.50	Flooding	0.40
		Flooding	0.40		
21B:					
Glenelg-------------	45	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.68
				Seepage	0.50
Hayesville----------	40	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
		Slow water movement	0.50		
22C:					
Glenelg-------------	90	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
		Slope	0.37		

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
22D:					
Glenelg-------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
22E:					
Glenelg-------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
22F:					
Glenelg-------------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
23C:					
Glenelg-------------	90	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
		Slope	0.37		
23D:					
Glenelg-------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
23E:					
Glenelg-------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
24C:					
Glenelg-------------	55	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
Urban land----------	30	Not rated		Not rated	
25C:					
Greenlee------------	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Large stones content	1.00
		Large stones content	0.99	Seepage	1.00
				Slope	1.00
25D:					
Greenlee------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Large stones content	1.00
		Large stones content	0.99	Seepage	1.00

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
26A:					
Hatboro	90	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
27B:					
Hayesville	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	0.68
27C:					
Hayesville	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	1.00
		Slope	0.37		
27D:					
Hayesville	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
28C:					
Hayesville	55	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	1.00
Urban land	30	Not rated		Not rated	
29C:					
Junaluska	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.50	Slope	1.00
		Slope	0.37	Depth to hard bedrock	0.84
29D:					
Junaluska	85	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Depth to hard bedrock	0.84

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
29E:					
Junaluska-----------	85	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Depth to hard bedrock	0.84
30A:					
Kinkora-------------	90	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	1.00
31D:					
Marbleyard----------	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Unicoi--------------	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
32B:					
Myersville----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	0.68
		Depth to bedrock	0.36	Depth to soft bedrock	0.01
32C:					
Myersville----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.01
32D:					
Myersville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.01
32E:					
Myersville----------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.01

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
33C:					
Myersville----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.01
33D:					
Myersville----------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.01
33E:					
Myersville----------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.01
34C:					
Myersville----------	55	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	1.00
		Depth to bedrock	0.36	Depth to soft bedrock	0.01
Urban land----------	30	Not rated		Not rated	
35D:					
Peaks---------------	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
35E:					
Peaks---------------	80	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
36D:					
Peaks---------------	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
36E:					
Peaks	80	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
36F:					
Peaks	75	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
37F:					
Peaks	50	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
Rock outcrop	35	Not rated		Not rated	
38D:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
38F:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
39C:					
Sylco	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.37	Seepage	1.00
Sylvatus	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.37	Slope	1.00
				Seepage	0.50
39D:					
Sylco	45	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
39D:					
Sylvatus------------	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50
39E:					
Sylco---------------	45	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Sylvatus------------	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50
40D:					
Sylco---------------	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Sylvatus------------	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50
40E:					
Sylco---------------	45	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Sylvatus------------	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50
41B:					
Tate----------------	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	0.68
41C:					
Tate----------------	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	1.00
		Slope	0.37		

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
41D:					
Tate----------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
42C:					
Tate----------------	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	1.00
		Slope	0.37		
42D:					
Tate----------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
43C:					
Tate----------------	55	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	1.00
Urban land----------	30	Not rated		Not rated	
44D:					
Udorthents----------	85	Not rated		Not rated	
45D:					
Udorthents----------	50	Not rated		Not rated	
Urban land----------	35	Not rated		Not rated	
46D:					
Unaka---------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
47C:					
Unaka---------------	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
Porters-------------	35	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	0.91	Seepage	1.00
		Slope	0.63	Organic matter content	1.00

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
47D:					
Unaka	55	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Porters	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Depth to bedrock	0.91	Organic matter content	1.00
48D:					
Unaka	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Rock outcrop	30	Not rated		Not rated	
48E:					
Unaka	50	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Rock outcrop	35	Not rated		Not rated	
48F:					
Unaka	45	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Rock outcrop	40	Not rated		Not rated	
49E:					
Unicoi	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Marbleyard	30	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
W:					
Water	100	Not rated		Not rated	

Table 12.—Sanitary Facilities, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
1E:							
Ashe	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Edneytown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Too sandy	0.50			Too sandy	0.50
2E:							
Ashe	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Edneyville	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
3E:							
Ashe	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Edneyville	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
4B:							
Braddock	90	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
4C:							
Braddock	90	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.37	Too clayey	1.00
		Slope	0.37			Hard to compact	1.00
						Slope	0.37
4D:							
Braddock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
5D:							
Brownwood-----------	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
5E:							
Brownwood-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
6A:							
Codorus-------------	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Seepage, bottom layer	1.00	Seepage	1.00		
7A:							
Comus---------------	85	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
		Seepage, bottom layer	1.00				
8C:							
Cowee---------------	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50	Slope	0.37	Too clayey	0.50
		Slope	0.37			Slope	0.37
8D:							
Cowee---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
8E:							
Cowee---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
9D:							
Cowee---------------	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Gravel content	0.61
9E:							
Cowee---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Gravel content	0.61

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
10D:							
Cowee	55	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
10E:							
Cowee	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
Rock outcrop	40	Not rated		Not rated		Not rated	
11C:							
Cowee	55	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
Urban land	30	Not rated		Not rated		Not rated	
12A:							
Craigsville	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.54
		Large stones content	0.54			Too sandy	0.50
13B:							
Delanco	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
		Flooding	0.40	Flooding	0.40		
14C:							
Delanco	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
		Slope	0.37	Slope	0.37	Slope	0.37
15B:							
Delanco	45	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
		Flooding	0.40	Flooding	0.40		
Kinkora	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Flooding	0.40	Too clayey	0.50

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
16C:							
Edneytown-----------	55	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Too sandy	0.50	Slope	0.37	Too sandy	0.50
		Slope	0.37			Slope	0.37
Ashe----------------	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Slope	0.37	Slope	0.37	Slope	0.37
16D:							
Edneytown-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Too sandy	0.50			Too sandy	0.50
Ashe----------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
17C:							
Edneytown-----------	55	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Too sandy	0.50			Too sandy	0.50
Urban land----------	30	Not rated		Not rated		Not rated	
18C:							
Edneyville----------	55	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Slope	0.37	Slope	0.37	Slope	0.37
Ashe----------------	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Slope	0.37	Slope	0.37	Slope	0.37
18D:							
Edneyville----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Ashe----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
19D:							
Edneyville	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Ashe	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
20B:							
Elsinboro	85	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Flooding	0.40	Too clayey	0.50
		Too clayey	0.50				
		Flooding	0.40				
21B:							
Glenelg	45	Not limited		Not limited		Not limited	
Hayesville	40	Very limited		Not limited		Somewhat limited	
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
22C:							
Glenelg	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
22D:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
22E:							
Glenelg	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
22F:							
Glenelg	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
23C:							
Glenelg	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
23D:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
23E:							
Glenelg	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
24C:							
Glenelg	55	Not limited		Not limited		Not limited	
Urban land	30	Not rated		Not rated		Not rated	

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
25C:							
Greenlee	85	Very limited		Very limited		Very limited	
		Large stones	1.00	Seepage	1.00	Large stones	1.00
		Seepage, bottom layer	1.00			Seepage	0.50
25D:							
Greenlee	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	1.00	Seepage	1.00	Large stones	1.00
		Seepage, bottom layer	1.00			Seepage	0.50
26A:							
Hatboro	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00		
27B:							
Hayesville	90	Very limited		Not limited		Somewhat limited	
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
27C:							
Hayesville	90	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Too clayey	0.50
		Too clayey	0.50			Slope	0.37
		Slope	0.37				
27D:							
Hayesville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
28C:							
Hayesville	55	Very limited		Not limited		Somewhat limited	
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
Urban land	30	Not rated		Not rated		Not rated	
29C:							
Junaluska	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50	Slope	0.37	Too clayey	0.50
		Slope	0.37			Slope	0.37
29D:							
Junaluska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
29E:							
Junaluska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
30A:							
Kinkora	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Flooding	0.40	Too clayey	0.50
31D:							
Marbleyard	45	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.95
Unicoi	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Seepage, bottom layer	1.00			Slope	1.00
32B:							
Myersville	90	Very limited		Very limited		Somewhat limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	0.50
		Seepage, bottom layer	1.00	Depth to bedrock	0.01	Depth to bedrock	0.01
32C:							
Myersville	90	Very limited		Very limited		Somewhat limited	
		Depth to bedrock	1.00	Seepage	1.00	Slope	0.63
		Seepage, bottom layer	1.00	Slope	0.63	Seepage	0.50
		Slope	0.63	Depth to bedrock	0.01	Depth to bedrock	0.01
32D:							
Myersville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	0.50
		Seepage, bottom layer	1.00	Depth to bedrock	0.01	Depth to bedrock	0.01
32E:							
Myersville	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	0.50
		Seepage, bottom layer	1.00	Depth to bedrock	0.01	Depth to bedrock	0.01
33C:							
Myersville	90	Very limited		Very limited		Somewhat limited	
		Depth to bedrock	1.00	Seepage	1.00	Slope	0.63
		Seepage, bottom layer	1.00	Slope	0.63	Seepage	0.50
		Slope	0.63	Depth to bedrock	0.01	Depth to bedrock	0.01

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
33D:							
Myersville----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	0.50
		Seepage, bottom layer	1.00	Depth to bedrock	0.01	Depth to bedrock	0.01
33E:							
Myersville----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	0.50
		Seepage, bottom layer	1.00	Depth to bedrock	0.01	Depth to bedrock	0.01
34C:							
Myersville----------	55	Very limited		Very limited		Somewhat limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	0.50
		Seepage, bottom layer	1.00	Depth to bedrock	0.01	Depth to bedrock	0.01
Urban land----------	30	Not rated		Not rated		Not rated	
35D:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
				Slope	1.00	Depth to bedrock	1.00
		Slope	1.00				
35E:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
36D:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
				Slope	1.00	Depth to bedrock	1.00
		Slope	1.00				
36E:							
Peaks---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
36F:							
Peaks---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
37F:							
Peaks	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
Rock outcrop	35	Not rated		Not rated		Not rated	
38D:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Seepage	0.21
38F:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Seepage	0.21
39C:							
Sylco	45	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.78
				Slope	0.37	Slope	0.37
		Slope	0.37				
Sylvatus	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.37	Slope	0.37	Gravel content	0.93
						Slope	0.37
39D:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.78
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.93
39E:							
Sylco	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.78

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
39E:							
Sylvatus------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.93
40D:							
Sylco----------------	45	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.78
Sylvatus------------	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.93
40E:							
Sylco----------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.78
Sylvatus------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.93
41B:							
Tate-----------------	85	Very limited		Not limited		Not limited	
		Seepage, bottom layer	1.00				
41C:							
Tate-----------------	85	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Slope	0.37
		Slope	0.37				
41D:							
Tate-----------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00				
42C:							
Tate-----------------	85	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Slope	0.37
		Slope	0.37				
42D:							
Tate-----------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00				

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
43C:							
Tate	55	Very limited		Not limited		Not limited	
		Seepage, bottom layer	1.00				
Urban land	30	Not rated		Not rated		Not rated	
44D:							
Udorthents	85	Not rated		Not rated		Not rated	
45D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
46D:							
Unaka	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
47C:							
Unaka	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Slope	0.63
				Slope	0.63	Seepage	0.50
		Slope	0.63				
Porters	35	Very limited		Very limited		Somewhat limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.77
		Seepage, bottom layer	1.00	Depth to bedrock	0.77	Slope	0.63
				Slope	0.63	Seepage	0.50
		Slope	0.63				
47D:							
Unaka	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Porters	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.77
		Seepage, bottom layer	1.00	Depth to bedrock	0.77	Seepage	0.50
48D:							
Unaka	55	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
48E:							
Unaka	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Rock outcrop	35	Not rated		Not rated		Not rated	
48F:							
Unaka	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Rock outcrop	40	Not rated		Not rated		Not rated	
49E:							
Unicoi	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Gravel content	1.00
Marbleyard	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.95
W:							
Water	100	Not rated		Not rated		Not rated	

Table 13.—Construction Materials, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
1E:					
Ashe	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.04
Edneytown	35	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.11
2E:					
Ashe	40	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.04
Edneyville	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
3E:					
Ashe	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.04
Edneyville	35	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
4B:					
Braddock	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
4C:					
Braddock	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
4D:					
Braddock	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
5D:					
Brownwood	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
5E:					
Brownwood	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
6A:					
Codorus-------------	85	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.22	Bottom layer	0.04
7A:					
Comus---------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.02
		Thickest layer	0.00	Bottom layer	0.07
8C:					
Cowee---------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
8D:					
Cowee---------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
8E:					
Cowee---------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
9D:					
Cowee---------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
9E:					
Cowee---------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
10D:					
Cowee---------------	55	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
Rock outcrop--------	30	Not rated		Not rated	
10E:					
Cowee---------------	45	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
Rock outcrop--------	40	Not rated		Not rated	
11C:					
Cowee---------------	55	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
Urban land----------	30	Not rated		Not rated	
12A:					
Craigsville---------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
13B:					
Delanco	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
14C:					
Delanco	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
15B:					
Delanco	45	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
Kinkora	40	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.11
16C:					
Edneytown	55	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.11
Ashe	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.04
16D:					
Edneytown	45	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.11
Ashe	40	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.04
17C:					
Edneytown	55	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.11
Urban land	30	Not rated		Not rated	
18C:					
Edneyville	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
Ashe	25	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.04
18D:					
Edneyville	45	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
18D:					
Ashe----------------	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.04
19D:					
Edneyville----------	45	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
Ashe----------------	35	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.04
20B:					
Elsinboro-----------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
21B:					
Glenelg-------------	45	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.02
Hayesville----------	40	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
22C:					
Glenelg-------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.02
22D:					
Glenelg-------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.02
22E:					
Glenelg-------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.02
22F:					
Glenelg-------------	80	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.02
23C:					
Glenelg-------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.02
23D:					
Glenelg-------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.02

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
23E:					
Glenelg	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.02
24C:					
Glenelg	55	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.02
Urban land	30	Not rated		Not rated	
25C:					
Greenlee	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
25D:					
Greenlee	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
26A:					
Hatboro	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
27B:					
Hayesville	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
27C:					
Hayesville	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
27D:					
Hayesville	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
28C:					
Hayesville	55	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
Urban land	30	Not rated		Not rated	
29C:					
Junaluska	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
29D:					
Junaluska	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
29E:					
Junaluska-----------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
30A:					
Kinkora-------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.11
31D:					
Marbleyard----------	45	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.06	Bottom layer	0.03
Unicoi--------------	35	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.38	Bottom layer	0.03
32B:					
Myersville----------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
32C:					
Myersville----------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
32D:					
Myersville----------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
32E:					
Myersville----------	80	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
33C:					
Myersville----------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
33D:					
Myersville----------	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
33E:					
Myersville----------	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
34C:					
Myersville----------	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Urban land----------	30	Not rated		Not rated	

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
35D:					
Peaks	80	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
35E:					
Peaks	80	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
36D:					
Peaks	80	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
36E:					
Peaks	80	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
36F:					
Peaks	75	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
37F:					
Peaks	50	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
Rock outcrop	35	Not rated		Not rated	
38D:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Not rated		Poor	
				Thickest layer	0.00
				Bottom layer	0.00
38F:					
Rock outcrop	55	Not rated		Not rated	
Clingman	30	Not rated		Poor	
				Thickest layer	0.00
				Bottom layer	0.00
39C:					
Sylco	45	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
Sylvatus	40	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
39D:					
Sylco	45	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
39D:					
Sylvatus------------	35	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
39E:					
Sylco---------------	45	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
Sylvatus------------	30	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
40D:					
Sylco---------------	45	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
Sylvatus------------	40	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
40E:					
Sylco---------------	45	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
Sylvatus------------	40	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
41B:					
Tate----------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
41C:					
Tate----------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
41D:					
Tate----------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
42C:					
Tate----------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
42D:					
Tate----------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
43C:					
Tate----------------	55	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
Urban land----------	30	Not rated		Not rated	
44D:					
Udorthents----------	85	Not rated		Not rated	
45D:					
Udorthents----------	50	Not rated		Not rated	
Urban land----------	35	Not rated		Not rated	
46D:					
Unaka---------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
47C:					
Unaka---------------	50	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Porters-------------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
47D:					
Unaka---------------	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Porters-------------	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
48D:					
Unaka---------------	55	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Rock outcrop--------	30	Not rated		Not rated	
48E:					
Unaka---------------	50	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Rock outcrop--------	35	Not rated		Not rated	
48F:					
Unaka---------------	45	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Rock outcrop--------	40	Not rated		Not rated	

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
49E:					
Unicoi--------------	50	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.38	Bottom layer	0.03
Marbleyard----------	30	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.06	Bottom layer	0.03
W:					
Water---------------	100	Not rated		Not rated	

Table 13.—Construction Materials, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1E:							
Ashe----------------	50	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.35	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.35
Edneytown-----------	35	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Too acid	0.95
		Too acid	0.50				
		Water erosion	0.68				
2E:							
Ashe----------------	40	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.35	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.35
Edneyville----------	35	Fair		Poor		Poor	
		Organic matter content low	0.02	Slope	0.00	Slope	0.00
						Too acid	0.98
		Too acid	0.50				
		Water erosion	0.99				
3E:							
Ashe----------------	40	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.35	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.35
Edneyville----------	35	Fair		Poor		Poor	
		Organic matter content low	0.02	Slope	0.00	Slope	0.00
						Too acid	0.98
		Too acid	0.50				
		Water erosion	0.99				
4B:							
Braddock------------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.92	Rock fragments	0.59
						Too acid	0.95
		Too acid	0.46				
4C:							
Braddock------------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.92	Rock fragments	0.59
						Slope	0.63
		Too acid	0.46				

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
4D:							
Braddock	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.50	Too clayey	0.00
				Shrink-swell	0.92	Rock fragments	0.59
		Too acid	0.46				
5D:							
Brownwood	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.32	Rock fragments	0.25
		Droughty	0.43	Cobble content	0.99	Too acid	0.88
		Too acid	0.50				
5E:							
Brownwood	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.00	Rock fragments	0.25
		Droughty	0.43	Cobble content	0.99	Too acid	0.88
		Too acid	0.50				
6A:							
Codorus	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Wetness depth	0.12	Hard to reclaim (rock fragments)	0.00
				Low strength	0.22		
		Too acid	0.46			Wetness depth	0.12
		Water erosion	0.99			Too acid	0.95
7A:							
Comus	85	Fair		Good		Fair	
		Organic matter content low	0.50			Too acid	0.98
						Too sandy	0.98
		Too acid	0.54				
		Too sandy	0.98				
8C:							
Cowee	85	Fair		Poor		Fair	
		Droughty	0.45	Depth to bedrock	0.00	Slope	0.63
		Too acid	0.50			Rock fragments	0.76
		Organic matter content low	0.88			Too acid	0.95
8D:							
Cowee	85	Fair		Poor		Poor	
		Droughty	0.45	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.00	Rock fragments	0.76
		Organic matter content low	0.88			Too acid	0.95
8E:							
Cowee	85	Fair		Poor		Poor	
		Droughty	0.45	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Rock fragments	0.76
		Organic matter content low	0.88			Too acid	0.95

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
9D:							
Cowee	85	Fair		Poor		Poor	
		Droughty	0.05	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.32	Rock fragments	0.00
		Organic matter content low	0.88			Too acid	0.95
9E:							
Cowee	85	Fair		Poor		Poor	
		Droughty	0.05	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.88			Too acid	0.95
10D:							
Cowee	55	Fair		Poor		Poor	
		Droughty	0.45	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.32	Rock fragments	0.76
		Organic matter content low	0.88			Too acid	0.95
Rock outcrop	30	Not rated		Not rated		Not rated	
10E:							
Cowee	45	Fair		Poor		Poor	
		Droughty	0.45	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Rock fragments	0.76
		Organic matter content low	0.88			Too acid	0.95
Rock outcrop	40	Not rated		Not rated		Not rated	
11C:							
Cowee	55	Fair		Poor		Fair	
		Droughty	0.45	Depth to bedrock	0.00	Rock fragments	0.76
		Too acid	0.50			Too acid	0.95
		Organic matter content low	0.88			Depth to bedrock	0.99
Urban land	30	Not rated		Not rated		Not rated	
12A:							
Craigsville	90	Fair		Poor		Poor	
		Droughty	0.22	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.46			Rock fragments	0.00
		Too acid	0.50			Too acid	0.76
13B:							
Delanco	85	Fair		Fair		Fair	
		Too acid	0.12	Wetness depth	0.29	Wetness depth	0.29
		Organic matter content low	0.12	Shrink-swell	0.99	Too acid	0.59
						Rock fragments	0.76
14C:							
Delanco	85	Fair		Fair		Fair	
		Too acid	0.12	Wetness depth	0.29	Wetness depth	0.29
		Organic matter content low	0.12	Shrink-swell	0.99	Too acid	0.59
						Slope	0.63

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
15B:							
Delanco	45	Fair		Fair		Fair	
		Too acid	0.12	Wetness depth	0.29	Wetness depth	0.29
		Organic matter content low	0.12	Shrink-swell	0.99	Too acid	0.59
						Rock fragments	0.76
Kinkora	40	Fair		Poor		Poor	
		Too clayey	0.08	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.05
		Too acid	0.46	Shrink-swell	0.92	Hard to reclaim (rock fragments)	0.05
16C:							
Edneytown	55	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.50			Too acid	0.95
		Water erosion	0.68				
Ashe	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.35			Depth to bedrock	0.35
		Too acid	0.50			Slope	0.63
16D:							
Edneytown	45	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
		Too acid	0.50			Too acid	0.95
		Water erosion	0.68				
Ashe	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.35	Slope	0.50	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.35
17C:							
Edneytown	55	Fair		Good		Fair	
		Organic matter content low	0.12			Too acid	0.95
		Too acid	0.50				
		Water erosion	0.68				
Urban land	30	Not rated		Not rated		Not rated	
18C:							
Edneyville	55	Fair		Good		Fair	
		Organic matter content low	0.02			Slope	0.63
		Too acid	0.50			Too acid	0.98
		Water erosion	0.99				
Ashe	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.35			Depth to bedrock	0.35
		Too acid	0.50			Slope	0.63

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
18D:							
Edneyville----------	45	Fair		Poor		Poor	
		Organic matter content low	0.02	Slope	0.00	Slope	0.00
		Too acid	0.50			Too acid	0.98
		Water erosion	0.99				
Ashe----------------	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.35	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.35
19D:							
Edneyville----------	45	Fair		Poor		Poor	
		Organic matter content low	0.02	Slope	0.00	Slope	0.00
		Too acid	0.50			Too acid	0.98
		Water erosion	0.99				
Ashe----------------	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.35	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.35
20B:							
Elsinboro-----------	85	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Hard to reclaim (rock fragments)	0.02
		Too acid	0.46			Too acid	0.95
21B:							
Glenelg-------------	45	Fair		Good		Good	
		Organic matter content low	0.12				
		Too acid	0.50				
Hayesville----------	40	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.95
		Too acid	0.46				
22C:							
Glenelg-------------	90	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.50				
22D:							
Glenelg-------------	90	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
		Too acid	0.50				
22E:							
Glenelg-------------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50				

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
22F:							
Glenelg	80	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50				
23C:							
Glenelg	90	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.50				
23D:							
Glenelg	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50				
23E:							
Glenelg	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50				
24C:							
Glenelg	55	Fair		Good		Good	
		Organic matter content low	0.12				
		Too acid	0.50				
Urban land	30	Not rated		Not rated		Not rated	
25C:							
Greenlee	85	Poor		Poor		Poor	
		Cobble content	0.00	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Too acid	0.12			Rock fragments	0.00
		Droughty	0.98			Too acid	0.76
25D:							
Greenlee	85	Poor		Poor		Poor	
		Cobble content	0.00	Cobble content	0.00	Slope	0.00
		Too acid	0.12	Slope	0.00	Hard to reclaim (rock fragments)	0.00
		Droughty	0.98			Rock fragments	0.00
26A:							
Hatboro	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
		Too acid	0.88				
27B:							
Hayesville	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.95
		Too acid	0.46				

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
27C:							
Hayesville----------	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.46			Too acid	0.95
27D:							
Hayesville----------	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Slope	0.00
		Organic matter content low	0.12	Slope	0.50	Too clayey	0.00
		Too acid	0.46			Too acid	0.95
28C:							
Hayesville----------	55	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.95
		Too acid	0.46				
Urban land----------	30	Not rated		Not rated		Not rated	
29C:							
Junaluska-----------	85	Fair		Poor		Fair	
		Droughty	0.03	Depth to bedrock	0.00	Rock fragments	0.36
		Too acid	0.50	Low strength	0.00	Depth to bedrock	0.54
		Depth to bedrock	0.54			Slope	0.63
29D:							
Junaluska-----------	85	Fair		Poor		Poor	
		Droughty	0.03	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.00	Rock fragments	0.36
		Depth to bedrock	0.54	Low strength	0.00	Depth to bedrock	0.54
29E:							
Junaluska-----------	85	Fair		Poor		Poor	
		Droughty	0.03	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Rock fragments	0.36
		Depth to bedrock	0.54	Low strength	0.00	Depth to bedrock	0.54
30A:							
Kinkora-------------	90	Fair		Poor		Poor	
		Too clayey	0.08	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.05
		Too acid	0.46	Shrink-swell	0.92	Hard to reclaim (rock fragments)	0.05
31D:							
Marbleyard----------	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12	Cobble content	0.01	Slope	0.00
		Too acid	0.50	Slope	0.32	Too acid	0.12
Unicoi--------------	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.32	Depth to bedrock	0.00
		Organic matter content low	0.12			Slope	0.00

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
32B:							
Myersville----------	90	Fair		Fair		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.99	Rock fragments	0.79
		Too acid	0.74				
32C:							
Myersville----------	90	Fair		Fair		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.99	Slope	0.37
						Rock fragments	0.79
		Too acid	0.74				
32D:							
Myersville----------	90	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
				Depth to bedrock	0.99	Rock fragments	0.79
		Too acid	0.74				
32E:							
Myersville----------	80	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.99	Rock fragments	0.79
		Too acid	0.74				
33C:							
Myersville----------	90	Fair		Fair		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.99	Slope	0.37
						Rock fragments	0.79
		Too acid	0.74				
33D:							
Myersville----------	80	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.99	Rock fragments	0.79
		Too acid	0.74				
33E:							
Myersville----------	80	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.99	Rock fragments	0.79
		Too acid	0.74				
34C:							
Myersville----------	55	Fair		Fair		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.99	Rock fragments	0.79
		Too acid	0.74				
Urban land----------	30	Not rated		Not rated		Not rated	
35D:							
Peaks---------------	80	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Depth to bedrock	0.71
		Too acid	0.50				

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
35E:							
Peaks	80	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Depth to bedrock	0.71
		Too acid	0.50				
36D:							
Peaks	80	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Depth to bedrock	0.71
		Too acid	0.50				
36E:							
Peaks	80	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Depth to bedrock	0.71
		Too acid	0.50				
36F:							
Peaks	75	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Depth to bedrock	0.71
		Too acid	0.50				
37F:							
Peaks	50	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Depth to bedrock	0.71
		Too acid	0.50				
Rock outcrop	35	Not rated		Not rated		Not rated	
38D:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Poor		Poor		Not rated	
		Depth to bedrock	0.00	Depth to bedrock	0.00		
		Too acid	0.50	Slope	0.32		
38F:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Poor		Poor		Not rated	
		Depth to bedrock	0.00	Depth to bedrock	0.00		
		Too acid	0.50	Slope	0.00		
39C:							
Sylco	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.29			Depth to bedrock	0.29
		Too acid	0.50			Slope	0.63
Sylvatus	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00			Rock fragments	0.00
		Too acid	0.50			Too acid	0.59

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
39D:							
Sylco	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.29	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.29
Sylvatus	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.50			Rock fragments	0.00
39E:							
Sylco	45	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.29	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.29
Sylvatus	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.50			Rock fragments	0.00
40D:							
Sylco	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.29	Slope	0.00	Slope	0.00
		Too acid	0.50			Depth to bedrock	0.29
Sylvatus	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Slope	0.00
40E:							
Sylco	45	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.29	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.29
Sylvatus	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.50			Rock fragments	0.00
41B:							
Tate	85	Fair		Good		Fair	
		Organic matter content low	0.12			Too acid	0.95
		Too acid	0.46				
41C:							
Tate	85	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
						Too acid	0.95
		Too acid	0.46				
41D:							
Tate	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
						Too acid	0.95
		Too acid	0.46				

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
42C:							
Tate	85	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.46			Too acid	0.95
42D:							
Tate	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
		Too acid	0.46			Too acid	0.95
43C:							
Tate	55	Fair		Good		Fair	
		Organic matter content low	0.12			Too acid	0.95
		Too acid	0.46				
Urban land	30	Not rated		Not rated		Not rated	
44D:							
Udorthents	85	Not rated		Not rated		Not rated	
45D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
46D:							
Unaka	85	Fair		Poor		Poor	
		Depth to bedrock	0.10	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.18	Slope	0.32	Depth to bedrock	0.10
		Too acid	0.50			Rock fragments	0.76
47C:							
Unaka	50	Fair		Poor		Fair	
		Depth to bedrock	0.10	Depth to bedrock	0.00	Depth to bedrock	0.10
		Droughty	0.18			Slope	0.37
		Too acid	0.50			Rock fragments	0.76
Porters	35	Fair		Fair		Fair	
		Organic matter content low	0.50	Depth to bedrock	0.23	Slope	0.37
		Too acid	0.50			Hard to reclaim (rock fragments)	0.95
47D:							
Unaka	55	Fair		Poor		Poor	
		Depth to bedrock	0.10	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.18	Slope	0.00	Depth to bedrock	0.10
		Too acid	0.50			Rock fragments	0.76
Porters	30	Fair		Poor		Poor	
		Organic matter content low	0.50	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.23	Hard to reclaim (rock fragments)	0.95

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
48D:							
Unaka	55	Fair		Poor		Poor	
		Depth to bedrock	0.10	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.18	Slope	0.32	Depth to bedrock	0.10
		Too acid	0.50			Rock fragments	0.76
Rock outcrop	30	Not rated		Not rated		Not rated	
48E:							
Unaka	50	Fair		Poor		Poor	
		Depth to bedrock	0.10	Slope	0.00	Slope	0.00
		Droughty	0.18	Depth to bedrock	0.00	Depth to bedrock	0.10
		Too acid	0.50			Rock fragments	0.76
Rock outcrop	35	Not rated		Not rated		Not rated	
48F:							
Unaka	45	Fair		Poor		Poor	
		Depth to bedrock	0.10	Slope	0.00	Slope	0.00
		Droughty	0.18	Depth to bedrock	0.00	Depth to bedrock	0.10
		Too acid	0.50			Rock fragments	0.76
Rock outcrop	40	Not rated		Not rated		Not rated	
49E:							
Unicoi	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.00
Marbleyard	30	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
				Cobble content	0.01	Too acid	0.12
		Too acid	0.50				
W:							
Water	100	Not rated		Not rated		Not rated	

Table 14.—Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1E:							
Ashe----------------	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.91	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
		Depth to bedrock	0.91				
Edneytown-----------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.11	Depth to water	1.00
		Slope	1.00				
2E:							
Ashe----------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.91	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
		Depth to bedrock	0.91				
Edneyville----------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	1.00				
3E:							
Ashe----------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.91	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
		Depth to bedrock	0.91				
Edneyville----------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	1.00				
4B:							
Braddock------------	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.81	Hard to pack	0.24	Depth to water	1.00
		Slope	0.32				
4C:							
Braddock------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.24	Depth to water	1.00
		Seepage	0.81				
4D:							
Braddock------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.24	Depth to water	1.00
		Seepage	0.81				
5D:							
Brownwood-----------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.01		
		Depth to bedrock	0.26				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
5E:							
Brownwood	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.01		
		Depth to bedrock	0.26				
6A:							
Codorus	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.22		
7A:							
Comus	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.07	Depth to water	1.00
8C:							
Cowee	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
8D:							
Cowee	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
8E:							
Cowee	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
9D:							
Cowee	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
9E:							
Cowee	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
10D:							
Cowee	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
Rock outcrop	30	Not rated		Not rated		Not rated	
10E:							
Cowee	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
Rock outcrop	40	Not rated		Not rated		Not rated	

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
11C:							
Cowee	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.92	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
Urban land	30	Not rated		Not rated		Not rated	
12A:							
Craigsville	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.41	Depth to water	1.00
				Seepage	0.22		
13B:							
Delanco	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
		Slope	0.32			Cutbanks cave	0.10
				Seepage	0.03		
14C:							
Delanco	85	Very limited		Very limited		Somewhat limited	
		Slope	1.00	Depth to saturated zone	1.00	Slow refill	0.30
		Seepage	0.70			Cutbanks cave	0.10
				Seepage	0.03		
15B:							
Delanco	45	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
		Slope	0.08			Cutbanks cave	0.10
				Seepage	0.03		
Kinkora	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Ponding	1.00	Cutbanks cave	1.00
		Slope	0.08	Depth to saturated zone	1.00		
				Seepage	0.11		
16C:							
Edneytown	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.11	Depth to water	1.00
		Slope	1.00				
Ashe	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.91	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
		Depth to bedrock	0.91				
16D:							
Edneytown	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.11	Depth to water	1.00
		Slope	1.00				
Ashe	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.91	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
		Depth to bedrock	0.91				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
17C:							
Edneytown-----------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.11	Depth to water	1.00
		Slope	0.92				
Urban land----------	30	Not rated		Not rated		Not rated	
18C:							
Edneyville----------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	1.00				
Ashe----------------	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.91	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
		Depth to bedrock	0.91				
18D:							
Edneyville----------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	1.00				
Ashe----------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.91	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
		Depth to bedrock	0.91				
19D:							
Edneyville----------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	1.00				
Ashe----------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.91	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
		Depth to bedrock	0.91				
20B:							
Elsinboro-----------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.45	Depth to water	1.00
		Slope	0.32	Seepage	0.04		
21B:							
Glenelg-------------	45	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.02	Depth to water	1.00
		Slope	0.32				
Hayesville----------	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	0.32	Seepage	0.03		
22C:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
22D:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
22E:							
Glenelg-------------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
22F:							
Glenelg-------------	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
23C:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
23D:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
23E:							
Glenelg-------------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
24C:							
Glenelg-------------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.92	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
Urban land----------	30	Not rated		Not rated		Not rated	
25C:							
Greenlee------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Large stones content	0.99	Depth to water	1.00
		Slope	0.92	Seepage	0.03		
25D:							
Greenlee------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Large stones content	0.99	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
26A:							
Hatboro-------------	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Ponding	1.00	Cutbanks cave	0.50
				Depth to saturated zone	1.00	Slow refill	0.30
				Piping	0.44		
27B:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	0.32	Seepage	0.03		
27C:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.03		

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
27D:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
28C:							
Hayesville----------	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	0.92	Seepage	0.03		
Urban land----------	30	Not rated		Not rated		Not rated	
29C:							
Junaluska-----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.86	Depth to water	1.00
		Seepage	0.70	Piping	0.04		
		Depth to bedrock	0.26				
29D:							
Junaluska-----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.86	Depth to water	1.00
		Seepage	0.70	Piping	0.04		
		Depth to bedrock	0.26				
29E:							
Junaluska-----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.86	Depth to water	1.00
		Seepage	0.70	Piping	0.04		
		Depth to bedrock	0.26				
30A:							
Kinkora-------------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Ponding	1.00	Cutbanks cave	1.00
				Depth to saturated zone	1.00		
				Seepage	0.11		
31D:							
Marbleyard----------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.95	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.66	Thin layer	0.66		
				Seepage	0.47		
Unicoi--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.38		
32B:							
Myersville----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.96	Depth to water	1.00
		Slope	0.32	Thin layer	0.01		
		Depth to bedrock	0.01				
32C:							
Myersville----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.96	Depth to water	1.00
		Slope	1.00	Thin layer	0.01		
		Depth to bedrock	0.01				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
32D:							
Myersville----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.96	Depth to water	1.00
		Slope	1.00	Thin layer	0.01		
		Depth to bedrock	0.01				
32E:							
Myersville----------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.96	Depth to water	1.00
		Slope	1.00	Thin layer	0.01		
		Depth to bedrock	0.01				
33C:							
Myersville----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.96	Depth to water	1.00
		Slope	1.00	Thin layer	0.01		
		Depth to bedrock	0.01				
33D:							
Myersville----------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.96	Depth to water	1.00
		Slope	1.00	Thin layer	0.01		
		Depth to bedrock	0.01				
33E:							
Myersville----------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.96	Depth to water	1.00
		Slope	1.00	Thin layer	0.01		
		Depth to bedrock	0.01				
34C:							
Myersville----------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.96	Depth to water	1.00
		Slope	0.92	Thin layer	0.01		
		Depth to bedrock	0.01				
Urban land----------	30	Not rated		Not rated		Not rated	
35D:							
Peaks---------------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
35E:							
Peaks---------------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
36D:							
Peaks---------------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
36E:							
Peaks---------------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
36F:							
Peaks	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
37F:							
Peaks	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
Rock outcrop	35	Not rated		Not rated		Not rated	
38D:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Very limited		Not rated		Very limited	
		Slope	1.00			Depth to water	1.00
		Depth to bedrock	1.00				
38F:							
Rock outcrop	55	Not rated		Not rated		Not rated	
Clingman	30	Very limited		Not rated		Very limited	
		Slope	1.00			Depth to water	1.00
		Depth to bedrock	1.00				
39C:							
Sylco	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	1.00	Seepage	0.57		
		Depth to bedrock	0.93				
Sylvatus	40	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.57		
39D:							
Sylco	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	1.00	Seepage	0.57		
		Depth to bedrock	0.93				
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.57		
39E:							
Sylco	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	1.00	Seepage	0.57		
		Depth to bedrock	0.93				
Sylvatus	30	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.57		

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
40D:							
Sylco	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	1.00	Seepage	0.57		
		Depth to bedrock	0.93				
Sylvatus	40	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.57		
40E:							
Sylco	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	1.00	Seepage	0.57		
		Depth to bedrock	0.93				
Sylvatus	40	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.57		
41B:							
Tate	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	0.32	Seepage	0.03		
41C:							
Tate	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
41D:							
Tate	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
42C:							
Tate	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
42D:							
Tate	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
43C:							
Tate	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	0.92	Seepage	0.03		
Urban land	30	Not rated		Not rated		Not rated	
44D:							
Udorthents	85	Not rated		Not rated		Not rated	
45D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
46D:							
Unaka	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.98		
		Depth to bedrock	0.98				
47C:							
Unaka	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.98		
		Depth to bedrock	0.98				
Porters	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.22		
		Depth to bedrock	0.02				
47D:							
Unaka	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.98		
		Depth to bedrock	0.98				
Porters	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.22		
		Depth to bedrock	0.02				
48D:							
Unaka	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.98		
		Depth to bedrock	0.98				
Rock outcrop	30	Not rated		Not rated		Not rated	
48E:							
Unaka	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.98		
		Depth to bedrock	0.98				
Rock outcrop	35	Not rated		Not rated		Not rated	
48F:							
Unaka	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.98		
		Depth to bedrock	0.98				
Rock outcrop	40	Not rated		Not rated		Not rated	
49E:							
Unicoi	50	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.38		

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
49E:							
Marbleyard----------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.95	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.66	Thin layer	0.66		
				Seepage	0.47		
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 15.—Engineering Properties

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
1E:												
Ashe	0-4	Loam	CL-ML, ML, SM	A-4	0-2	0-5	80-100	80-100	65-95	45-70	13-25	NP-7
	4-18	Gravelly sandy loam, fine sandy loam, loam	SM, SC-SM, GM	A-4, A-2, A-1	0-1	0-15	55-90	55-90	40-80	20-45	12-20	NP-4
	18-28	Gravelly sandy loam, cobbly sandy loam, loamy fine sand, fine sandy loam, loamy sand, loam	GC-GM, GM, SC-SM	A-1, A-4	0-1	0-2	55-95	50-90	35-75	20-40	13-25	NP-7
	28-38	Unweathered bedrock			---	---	---	---	---	---	---	---
Edneytown	0-4	Loam	ML, CL-ML	A-4	0	0	80-100	80-100	65-95	45-75	12-21	1-6
	4-7	Loam, fine sandy loam, sandy loam	ML, CL-ML, SM, SC-SM	A-4, A-2-4	0	0	80-100	80-100	45-95	25-75	12-21	1-6
	7-20	Sandy clay loam, clay loam	SC, CL	A-6, A-2-4	0	0	80-100	75-100	60-100	25-80	25-39	8-16
	20-27	Sandy loam, sandy clay loam	SC, SM, SC-SM	A-2-4, A-4	0	0	80-100	75-100	45-90	25-55	16-30	3-11
	27-62	Loamy sand, fine sandy loam, loam	SC-SM, SM	A-2-4, A-1, A-4	0	0	80-100	75-100	35-85	10-55	11-21	NP-6
2E:												
Ashe	0-4	Loam	CL-ML, ML, SM	A-4	0-2	0-5	80-100	80-100	65-95	45-70	13-25	NP-7
	4-18	Gravelly sandy loam, fine sandy loam, loam	SM, SC-SM, GM	A-4, A-2, A-1	0-1	0-15	55-90	55-90	40-80	20-45	12-20	NP-4
	18-28	Gravelly sandy loam, cobbly sandy loam, loamy fine sand, fine sandy loam, loamy sand, loam	GC-GM, GM, SC-SM	A-1, A-4	0-1	0-2	55-95	50-90	35-75	20-40	13-25	NP-7
	28-38	Unweathered bedrock			---	---	---	---	---	---	---	---
Edneyville	0-5	Loam	ML, SM	A-4, A-7	0	0-10	80-100	80-100	65-95	45-70	20-43	3-13
	5-11	Loam, fine sandy loam, gravelly sandy loam	CL, CL-ML, GM	A-2, A-4, A-6	0-5	0-5	60-100	55-100	45-95	30-70	17-35	2-13
	11-34	Sandy loam, fine sandy loam, gravelly loam	GM, SC, SC-SM	A-1, A-4, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-31	2-12
	34-62	Sandy loam, fine sandy loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-29	2-12

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
3E:												
Ashe------------	0-4	Loam	CL-ML, ML, SM	A-4	0-2	0-5	80-100	80-100	65-95	45-70	13-25	NP-7
	4-18	Gravelly sandy loam, fine sandy loam, loam	SM, SC-SM, GM	A-4, A-2, A-1	0-1	0-15	55-90	55-90	40-80	20-45	12-20	NP-4
	18-28	Gravelly sandy loam, cobbly sandy loam, loamy fine sand, fine sandy loam, loamy sand, loam	GC-GM, GM, SC-SM	A-1, A-4	0-1	0-2	55-95	50-90	35-75	20-40	13-25	NP-7
	28-38	Unweathered bedrock			---	---	---	---	---	---	---	---
Edneyville------	0-5	Loam	ML, SM	A-4, A-7	0	0-10	80-100	80-100	65-95	45-70	20-43	3-13
	5-11	Loam, fine sandy loam, gravelly sandy loam	CL, CL-ML, GM	A-2, A-4, A-6	0-5	0-5	60-100	55-100	45-95	30-70	17-35	2-13
	11-34	Sandy loam, fine sandy loam, gravelly loam	GM, SC, SC-SM	A-1, A-4, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-31	2-12
	34-62	Sandy loam, fine sandy loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-29	2-12
4B:												
Braddock--------	0-8	Cobbly loam	CL	A-6, A-4	0	20-30	90-100	90-100	70-95	50-75	22-39	6-17
	8-15	Cobbly clay loam, cobbly clay, cobbly sandy clay loam	CL	A-6	0	20-30	90-100	90-100	80-100	60-95	36-58	18-36
	15-51	Clay, cobbly sandy clay, cobbly clay loam, silty clay loam	CH, CL	A-7	0	0-30	80-100	80-100	65-100	55-90	43-63	25-40
	51-62	Clay loam, very cobbly clay, cobbly silty clay loam, gravelly sandy clay	CL, CH	A-7	0-10	0-30	65-100	65-100	60-100	50-90	43-59	25-36
4C:												
Braddock--------	0-8	Cobbly loam	CL	A-6, A-4	0	20-30	90-100	90-100	70-95	50-75	22-39	6-17
	8-15	Cobbly clay loam, cobbly clay, cobbly sandy clay loam	CL	A-6	0	20-30	90-100	90-100	80-100	60-95	36-58	18-36
	15-51	Clay, cobbly sandy clay, cobbly clay loam, silty clay loam	CH, CL	A-7	0	0-30	80-100	80-100	65-100	55-90	43-63	25-40
	51-62	Clay loam, very cobbly clay, cobbly silty clay loam, gravelly sandy clay	CL, CH	A-7	0-10	0-30	65-100	65-100	60-100	50-90	43-59	25-36

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
4D:												
Braddock--------	0-8	Cobbly loam	CL	A-6, A-4	0	20-30	90-100	90-100	70-95	50-75	22-39	6-17
	8-15	Cobbly clay loam, cobbly clay, cobbly sandy clay loam	CL	A-6	0	20-30	90-100	90-100	80-100	60-95	36-58	18-36
	15-51	Clay, cobbly sandy clay, cobbly clay loam, silty clay loam	CH, CL	A-7	0	0-30	80-100	80-100	65-100	55-90	43-63	25-40
	51-62	Clay loam, very cobbly clay, cobbly silty clay loam, gravelly sandy clay	CL, CH	A-7	0-10	0-30	65-100	65-100	60-100	50-90	43-59	25-36
5D:												
Brownwood-------	0-6	Fine sandy loam, loam	SC, SC-SM, SM	A-4, A-2	0-6	0-15	88-100	88-100	75-100	30-49	12-25	1-8
	6-35	Fine sandy loam, sandy loam, channery loam, cobbly fine sandy loam	SC-SM, SM	A-2, A-4	0	0-46	82-100	82-100	70-99	28-48	12-23	1-7
	35-45	Bedrock			---	---	---	---	---	---	---	---
	45-55	Bedrock			---	---	---	---	---	---	---	---
5E:												
Brownwood-------	0-6	Loam, fine sandy loam	SC, SC-SM, SM	A-4, A-2	0-6	0-15	88-100	88-100	75-100	30-49	12-25	1-8
	6-35	Cobbly fine sandy loam, fine sandy loam, sandy loam, channery loam	SC-SM, SM	A-2, A-4	0	0-46	82-100	82-100	70-99	28-48	12-23	1-7
	35-45	Bedrock			---	---	---	---	---	---	---	---
	45-55	Bedrock			---	---	---	---	---	---	---	---
6A:												
Codorus---------	0-7	Loam	CL, SC	A-6, A-7, A-4	0	0	75-100	70-100	60-95	45-70	29-43	9-17
	7-19	Loam, silt loam, silty clay loam, clay loam	CL, SC	A-6, A-7	0	0	75-100	70-100	60-100	45-80	27-44	12-25
	19-37	Loam, silt loam, silty clay loam, clay loam	CL, SC	A-6, A-7	0	0	75-100	70-100	60-100	45-80	27-44	12-25
	37-49	Gravelly sandy loam, loam, silt loam, silty clay loam, clay loam	SC, CL, SC-SM	A-2, A-7, A-1	0	0	60-100	60-100	40-95	15-60	20-44	6-25
	49-62	Very gravelly sandy loam, gravelly loam, silt loam, silty clay loam, clay loam	GP-GC, GC, CL	A-2, A-7, A-1	0	0	20-100	15-100	10-95	5-60	20-44	6-25

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
7A:												
Comus	0-9	Fine sandy loam	SC-SM, SM	A-2, A-4, A-6	0	0-5	80-100	75-100	65-95	25-45	18-37	2-12
	9-31	Fine sandy loam, loam, silt loam	SC-SM, SC, SM	A-2, A-4, A-6	0	0-5	80-100	75-100	65-95	25-45	16-30	2-12
	31-53	Fine sandy loam, silt loam, gravelly loam, very gravelly sandy loam	SC-SM, GM, SC	A-1, A-4, A-6	0	0-15	55-100	50-100	45-95	15-45	16-30	2-12
	53-62	Gravelly loamy sand, silt loam, very gravelly loam, cobbly sandy loam, very gravelly loamy fine sand	GM, SC, SM	A-1, A-2, A-6	0	0-15	55-100	50-100	40-90	15-45	0-30	NP-12
8C:												
Cowee	0-6	Loam	CL-ML, SM	A-4	0	0-10	80-100	80-100	65-90	45-65	14-25	1-7
	6-27	Clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	CL, GC-GM	A-6, A-2	0-10	0-10	60-100	60-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
8D:												
Cowee	0-6	Loam	CL-ML, SM	A-4	0	0-10	80-100	80-100	65-90	45-65	14-25	1-7
	6-27	Clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	CL, GC-GM	A-6, A-2	0-10	0-10	60-100	60-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
8E:												
Cowee	0-6	Loam	CL-ML, SM	A-4	0	0-10	80-100	80-100	65-90	45-65	14-25	1-7
	6-27	Clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	CL, GC-GM	A-6, A-2	0-10	0-10	60-100	60-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
9D:												
Cowee-----------	0-6	Gravelly loam	GC-GM, GM, CL-ML	A-2, A-4	0-10	0-10	60-100	55-100	45-90	30-65	14-25	1-7
	6-27	Gravelly clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	GC, GC-GM, CL	A-6, A-2	0-10	0-10	60-100	55-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
9E:												
Cowee-----------	0-6	Gravelly loam	GC-GM, GM, CL-ML	A-2, A-4	0-10	0-10	60-100	55-100	45-90	30-65	14-25	1-7
	6-27	Gravelly clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	GC, GC-GM, CL	A-6, A-2	0-10	0-10	60-100	55-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
10D:												
Cowee-----------	0-6	Loam	CL-ML, SM	A-4	0	0-10	80-100	80-100	65-90	45-65	14-25	1-7
	6-27	Clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	CL, GC-GM	A-6, A-2	0-10	0-10	60-100	60-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
10E:												
Cowee-----------	0-6	Loam	CL-ML, SM	A-4	0	0-10	80-100	80-100	65-90	45-65	14-25	1-7
	6-27	Clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	CL, GC-GM	A-6, A-2	0-10	0-10	60-100	60-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
11C:												
Cowee-----------	0-6	Loam	CL-ML, SM	A-4	0	0-10	80-100	80-100	65-90	45-65	14-25	1-7
	6-27	Clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	CL, GC-GM	A-6, A-2	0-10	0-10	60-100	60-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
Urban land.												
12A:												
Craigsville-----	0-6	Cobbly sandy loam	SC-SM, SM	A-2, A-4, A-1	0	15-30	65-90	65-90	50-75	25-40	18-35	2-10
	6-32	Very cobbly sandy loam, very gravelly loam, extremely cobbly loam	GC-GM, GP-GM, SC	A-1, A-2	0	25-45	35-75	35-70	25-60	10-30	16-28	2-10
	32-62	Extremely cobbly loamy sand, very gravelly sandy loam, very cobbly sandy loam	SC-SM, GP-GC, GP-GM	A-1, A-2	0	25-45	35-75	35-70	25-60	5-20	16-24	2-6
13B:												
Delanco---------	0-10	Fine sandy loam	SC-SM, SM	A-2, A-4, A-6	0	0	70-100	70-100	60-95	25-50	20-37	2-12
	10-16	Fine sandy loam, gravelly loam	SC-SM, SM	A-2, A-4, A-6	0	0	65-100	60-100	55-95	25-50	16-30	2-12
	16-41	Sandy clay loam, gravelly clay loam	CL, SC	A-2, A-6, A-7	0	0	70-100	65-100	55-90	30-55	29-42	12-21
	41-47	Loam, silt loam, gravelly sandy loam	CL, GC	A-4, A-6	0	0	70-100	65-100	55-95	40-70	26-39	10-19
	47-62	Sandy loam, silt loam, gravelly loam	SM, SC, SC-SM	A-1, A-4, A-6	0	0	65-95	60-95	45-85	20-50	16-36	2-17

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
14C:												
Delanco---------	0-10	Fine sandy loam	SC-SM, SM	A-2, A-4, A-6	0	0	70-100	70-100	60-95	25-50	20-37	2-12
	10-16	Fine sandy loam, gravelly loam	SC-SM, SM	A-2, A-4, A-6	0	0	65-100	60-100	55-95	25-50	16-30	2-12
	16-41	Sandy clay loam, gravelly clay loam	CL, SC	A-2, A-6, A-7	0	0	70-100	65-100	55-90	30-55	29-42	12-21
	41-47	Loam, silt loam, gravelly sandy loam	CL, GC	A-4, A-6	0	0	70-100	65-100	55-95	40-70	26-39	10-19
	47-62	Sandy loam, silt loam, gravelly loam	SM, SC, SC-SM	A-1, A-4, A-6	0	0	65-95	60-95	45-85	20-50	16-36	2-17
15B:												
Delanco---------	0-10	Fine sandy loam	SC-SM, SM	A-2, A-4, A-6	0	0	70-100	70-100	60-95	25-50	20-37	2-12
	10-16	Fine sandy loam, gravelly loam	SC-SM, SM	A-2, A-4, A-6	0	0	65-100	60-100	55-95	25-50	16-30	2-12
	16-41	Sandy clay loam, gravelly clay loam	CL, SC	A-2, A-6, A-7	0	0	70-100	65-100	55-90	30-55	29-42	12-21
	41-47	Loam, silt loam, gravelly sandy loam	CL, GC	A-4, A-6	0	0	70-100	65-100	55-95	40-70	26-39	10-19
	47-62	Sandy loam, silt loam, gravelly loam	SM, SC, SC-SM	A-1, A-4, A-6	0	0	65-95	60-95	45-85	20-50	16-36	2-17
Kinkora---------	0-7	Fine sandy loam	SC, SC-SM, SM	A-2, A-6, A-7	0	0	75-100	75-100	65-95	25-45	22-41	6-13
	7-16	Fine sandy loam, silt loam	SC, SC-SM	A-2, A-6	0	0	75-100	75-100	65-95	25-45	21-37	6-13
	16-38	Clay loam, silty clay loam, silty clay, clay	CH, CL	A-7	0	0	75-100	75-100	65-100	50-90	45-65	25-40
	38-48	Gravelly loam, silt loam, very gravelly loam	CL, GC	A-2, A-6	0	0	35-100	35-100	25-95	20-75	24-38	9-19
	48-62	Gravelly loamy sand, sandy loam, very gravelly loamy sand	GP-GC, SC	A-1, A-2	0	0-10	40-100	35-100	30-90	5-30	20-32	6-13
16C:												
Edneytown-------	0-4	Loam	ML, CL-ML	A-4	0	0	80-100	80-100	65-95	45-75	12-21	1-6
	4-7	Loam, fine sandy loam, sandy loam	ML, CL-ML, SM, SC-SM	A-4, A-2-4	0	0	80-100	80-100	45-95	25-75	12-21	1-6
	7-20	Sandy clay loam, clay loam	SC, CL	A-6, A-2-4	0	0	80-100	75-100	60-100	25-80	25-39	8-16
	20-27	Sandy loam, sandy clay loam	SC, SM, SC-SM	A-2-4, A-4	0	0	80-100	75-100	45-90	25-55	16-30	3-11
	27-62	Loamy sand, fine sandy loam, loam	SC-SM, SM	A-2-4, A-1, A-4	0	0	80-100	75-100	35-85	10-55	11-21	NP-6

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
16C:												
Ashe------------	0-4	Loam	CL-ML, ML, SM	A-4	0-2	0-5	80-100	80-100	65-95	45-70	13-25	NP-7
	4-18	Gravelly sandy loam, fine sandy loam, loam	SM, SC-SM, GM	A-4, A-2, A-1	0-1	0-15	55-90	55-90	40-80	20-45	12-20	NP-4
	18-28	Gravelly sandy loam, cobbly sandy loam, loamy fine sand, fine sandy loam, loamy sand, loam	GC-GM, GM, SC-SM	A-1, A-4	0-1	0-2	55-95	50-90	35-75	20-40	13-25	NP-7
	28-38	Unweathered bedrock			---	---	---	---	---	---	---	---
16D:												
Edneytown-------	0-4	Loam	ML, CL-ML	A-4	0	0	80-100	80-100	65-95	45-75	12-21	1-6
	4-7	Loam, fine sandy loam, sandy loam	ML, CL-ML, SM, SC-SM	A-4, A-2-4	0	0	80-100	80-100	45-95	25-75	12-21	1-6
	7-20	Sandy clay loam, clay loam	SC, CL	A-6, A-2-4	0	0	80-100	75-100	60-100	25-80	25-39	8-16
	20-27	Sandy loam, sandy clay loam	SC, SM, SC-SM	A-2-4, A-4	0	0	80-100	75-100	45-90	25-55	16-30	3-11
	27-62	Loamy sand, fine sandy loam, loam	SC-SM, SM	A-2-4, A-1, A-4	0	0	80-100	75-100	35-85	10-55	11-21	NP-6
Ashe------------	0-4	Loam	CL-ML, ML, SM	A-4	0-2	0-5	80-100	80-100	65-95	45-70	13-25	NP-7
	4-18	Gravelly sandy loam, fine sandy loam, loam	SM, SC-SM, GM	A-4, A-2, A-1	0-1	0-15	55-90	55-90	40-80	20-45	12-20	NP-4
	18-28	Gravelly sandy loam, cobbly sandy loam, loamy fine sand, fine sandy loam, loamy sand, loam	GC-GM, GM, SC-SM	A-1, A-4	0-1	0-2	55-95	50-90	35-75	20-40	13-25	NP-7
	28-38	Unweathered bedrock			---	---	---	---	---	---	---	---
17C:												
Edneytown-------	0-4	Loam	ML, CL-ML	A-4	0	0	80-100	80-100	65-95	45-75	12-21	1-6
	4-7	Loam, fine sandy loam, sandy loam	ML, CL-ML, SM, SC-SM	A-4, A-2-4	0	0	80-100	80-100	45-95	25-75	12-21	1-6
	7-20	Sandy clay loam, clay loam	SC, CL	A-6, A-2-4	0	0	80-100	75-100	60-100	25-80	25-39	8-16
	20-27	Sandy loam, sandy clay loam	SC, SM, SC-SM	A-2-4, A-4	0	0	80-100	75-100	45-90	25-55	16-30	3-11
	27-62	Loamy sand, fine sandy loam, loam	SC-SM, SM	A-2-4, A-1, A-4	0	0	80-100	75-100	35-85	10-55	11-21	NP-6
Urban land.												

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
18C:												
Edneyville------	0-5	Loam	ML, SM	A-4, A-7	0	0-10	80-100	80-100	65-95	45-70	20-43	3-13
	5-11	Loam, fine sandy loam, gravelly sandy loam	CL, CL-ML, GM	A-2, A-4, A-6	0-5	0-5	60-100	55-100	45-95	30-70	17-35	2-13
	11-34	Sandy loam, fine sandy loam, gravelly loam	GM, SC, SC-SM	A-1, A-4, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-31	2-12
	34-62	Sandy loam, fine sandy loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-29	2-12
Ashe------------	0-4	Loam	CL-ML, ML, SM	A-4	0-2	0-5	80-100	80-100	65-95	45-70	13-25	NP-7
	4-18	Gravelly sandy loam, fine sandy loam, loam	SM, SC-SM, GM	A-4, A-2, A-1	0-1	0-15	55-90	55-90	40-80	20-45	12-20	NP-4
	18-28	Gravelly sandy loam, cobbly sandy loam, loamy fine sand, fine sandy loam, loamy sand, loam	GC-GM, GM, SC-SM	A-1, A-4	0-1	0-2	55-95	50-90	35-75	20-40	13-25	NP-7
	28-38	Unweathered bedrock			---	---	---	---	---	---	---	---
18D:												
Edneyville------	0-5	Loam	ML, SM	A-4, A-7	0	0-10	80-100	80-100	65-95	45-70	20-43	3-13
	5-11	Loam, fine sandy loam, gravelly sandy loam	CL, CL-ML, GM	A-2, A-4, A-6	0-5	0-5	60-100	55-100	45-95	30-70	17-35	2-13
	11-34	Sandy loam, fine sandy loam, gravelly loam	GM, SC, SC-SM	A-1, A-4, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-31	2-12
	34-62	Sandy loam, fine sandy loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-29	2-12
Ashe------------	0-4	Loam	CL-ML, ML, SM	A-4	0-2	0-5	80-100	80-100	65-95	45-70	13-25	NP-7
	4-18	Gravelly sandy loam, fine sandy loam, loam	SM, SC-SM, GM	A-1, A-4, A-2	0-1	0-15	55-90	55-90	40-80	20-45	12-20	NP-4
	18-28	Gravelly sandy loam, cobbly sandy loam, loamy fine sand, fine sandy loam, loamy sand, loam	GC-GM, GM, SC-SM	A-1, A-4	0-1	0-2	55-95	50-90	35-75	20-40	13-25	NP-7
	28-38	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
19D:												
Edneyville------	0-5	Loam	ML, SM	A-4, A-7	0	0-10	80-100	80-100	65-95	45-70	20-43	3-13
	5-11	Loam, fine sandy loam, gravelly sandy loam	CL, CL-ML, GM	A-2, A-4, A-6	0-5	0-5	60-100	55-100	45-95	30-70	17-35	2-13
	11-34	Sandy loam, fine sandy loam, gravelly loam	GM, SC, SC-SM	A-1, A-4, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-31	2-12
	34-62	Sandy loam, fine sandy loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-29	2-12
Ashe------------	0-4	Loam	CL-ML, ML, SM	A-4	0-2	0-5	80-100	80-100	65-95	45-70	13-25	NP-7
	4-18	Gravelly sandy loam, fine sandy loam, loam	SM, SC-SM, GM	A-4, A-2, A-1	0-1	0-15	55-90	55-90	40-80	20-45	12-20	NP-4
	18-28	Gravelly sandy loam, cobbly sandy loam, loamy fine sand, fine sandy loam, loamy sand, loam	GC-GM, GM, SC-SM	A-1, A-4	0-1	0-2	55-95	50-90	35-75	20-40	13-25	NP-7
	28-38	Unweathered bedrock			---	---	---	---	---	---	---	---
20B:												
Elsinboro-------	0-10	Fine sandy loam	SC, SC-SM	A-2, A-4, A-6	0	0-10	80-100	80-100	70-95	25-45	21-35	4-12
	10-18	Fine sandy loam, loam, silt loam, gravelly sandy loam	SC, SC-SM	A-2, A-4, A-6	0	0-15	70-100	70-100	60-95	25-45	19-30	4-12
	18-45	Clay loam, sandy clay loam, silty clay loam, gravelly silt loam, cobbly loam	CL, GC	A-6, A-7	0	0-15	70-100	70-100	55-95	45-75	27-43	12-24
	45-62	Cobbly sandy loam, fine sandy loam, sandy clay loam, gravelly silt loam, cobbly loam	CL, SC, SC-SM	A-2, A-7	0	0-23	80-100	80-100	55-95	25-60	18-43	4-24
21B:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
21B:												
Hayesville------	0-6	Loam	SM, ML	A-4	0	0-8	80-100	80-100	65-95	45-70	11-20	NP-2
	6-11	Loam, gravelly fine sandy loam	ML, GM	A-4, A-2	0	0-23	60-100	60-100	45-95	30-70	9-20	NP-2
	11-43	Clay loam, clay	ML	A-4, A-7	0	0-9	80-100	80-100	65-100	55-85	31-42	7-12
	43-49	Clay loam, sandy clay loam, loam	ML	A-4	0	0-9	80-100	80-100	65-100	50-85	20-34	2-8
	49-62	Sandy loam, loam, sandy clay loam, fine sandy loam	SM, CL-ML	A-4, A-2	0	0-8	80-100	80-100	60-90	30-55	13-24	NP-4
22C:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
22D:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
22E:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
22F:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
23C:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
23D:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
23E:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
24C:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
Urban land.												
25C:												
Greenlee--------	0-7	Very cobbly loam	SM, SC, SC-SM, ML, CL, CL-ML	A-4	0	37-48	65-75	55-75	45-75	30-60	15-30	2-11
	7-53	Very cobbly sandy loam, very cobbly loam, very cobbly sandy clay loam	SM, SC, SC-SM, ML, CL, CL-ML	A-1, A-2-4, A-4	0	36-51	65-85	55-80	35-75	20-60	10-30	NP-11
	53-62	Extremely cobbly sandy loam, very cobbly loam, extremely cobbly sand	SM, SC-SM, SP, SP-SM, ML, CL-ML	A-1, A-2-4, A-4	0	36-65	55-85	40-80	20-75	2-60	8-23	NP-7

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
25D:												
Greenlee--------	0-7	Very cobbly loam	SM, SC, SC-SM, ML, CL, CL-ML	A-4	0	37-48	65-75	55-75	45-75	30-60	15-30	2-11
	7-53	Very cobbly sandy loam, very cobbly loam, very cobbly sandy clay loam	SM, SC, SC-SM, ML, CL, CL-ML	A-1, A-2-4, A-4	0	36-51	65-85	55-80	35-75	20-60	10-30	NP-11
	53-62	Extremely cobbly sandy loam, very cobbly loam, extremely cobbly sand	SM, SC-SM, SP, SP-SM, ML, CL-ML	A-1, A-2-4, A-4	0	36-65	55-85	40-80	20-75	2-60	8-23	NP-7
26A:												
Hatboro---------	0-8	Sandy loam	SM	A-2, A-4, A-7	0	0	80-100	80-100	55-85	25-45	22-42	3-12
	8-45	Sandy clay loam, clay loam, silt loam, silty clay loam	CL, SC	A-2, A-6, A-7	0	0	80-100	80-100	60-95	30-60	24-44	9-25
	45-62	Silt loam, silty clay loam, gravelly clay loam, extremely gravelly sandy clay loam	CH, CL, GP-GM	A-1, A-6, A-7	0	0	15-100	10-100	10-100	5-100	16-53	2-32
27B:												
Hayesville------	0-6	Loam	SM, ML	A-4	0	0-8	80-100	80-100	65-95	45-70	11-20	NP-2
	6-11	Loam, gravelly fine sandy loam	ML, GM	A-4, A-2	0	0-23	60-100	60-100	45-95	30-70	9-20	NP-2
	11-43	Clay loam, clay	ML	A-4, A-7	0	0-9	80-100	80-100	65-100	55-85	31-42	7-12
	43-49	Clay loam, sandy clay loam, loam	ML	A-4	0	0-9	80-100	80-100	65-100	50-85	20-34	2-8
	49-62	Sandy loam, loam, sandy clay loam, fine sandy loam	SM, CL-ML	A-4, A-2	0	0-8	80-100	80-100	60-90	30-55	13-24	NP-4
27C:												
Hayesville------	0-6	Loam	SM, ML	A-4	0	0-8	80-100	80-100	65-95	45-70	11-20	NP-2
	6-11	Loam, gravelly fine sandy loam	ML, GM	A-4, A-2	0	0-23	60-100	60-100	45-95	30-70	9-20	NP-2
	11-43	Clay loam, clay	ML	A-4, A-7	0	0-9	80-100	80-100	65-100	55-85	31-42	7-12
	43-49	Clay loam, sandy clay loam, loam	ML	A-4	0	0-9	80-100	80-100	65-100	50-85	20-34	2-8
	49-62	Sandy loam, loam, sandy clay loam, fine sandy loam	SM, CL-ML	A-4, A-2	0	0-8	80-100	80-100	60-90	30-55	13-24	NP-4

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
27D:												
Hayesville------	0-6	Loam	SM, ML	A-4	0	0-8	80-100	80-100	65-95	45-70	11-20	NP-2
	6-11	Loam, gravelly fine sandy loam	ML, GM	A-4, A-2	0	0-23	60-100	60-100	45-95	30-70	9-20	NP-2
	11-43	Clay loam, clay	ML	A-4, A-7	0	0-9	80-100	80-100	65-100	55-85	31-42	7-12
	43-49	Clay loam, sandy clay loam, loam	ML	A-4	0	0-9	80-100	80-100	65-100	50-85	20-34	2-8
	49-62	Sandy loam, loam, sandy clay loam, fine sandy loam	SM, CL-ML	A-4, A-2	0	0-8	80-100	80-100	60-90	30-55	13-24	NP-4
28C:												
Hayesville------	0-6	Loam	SM, ML	A-4	0	0-8	80-100	80-100	65-95	45-70	11-20	NP-2
	6-11	Loam, gravelly fine sandy loam	ML, GM	A-4, A-2	0	0-23	60-100	60-100	45-95	30-70	9-20	NP-2
	11-43	Clay loam, clay	ML	A-4, A-7	0	0-9	80-100	80-100	65-100	55-85	31-42	7-12
	43-49	Clay loam, sandy clay loam, loam	ML	A-4	0	0-9	80-100	80-100	65-100	50-85	20-34	2-8
	49-62	Sandy loam, loam, sandy clay loam, fine sandy loam	SM, CL-ML	A-4, A-2	0	0-8	80-100	80-100	60-90	30-55	13-24	NP-4
Urban land.												
29C:												
Junaluska-------	0-5	Channery loam	GM, ML, SC-SM	A-4, A-6	0-4	12-26	70-85	70-85	55-80	40-60	20-40	NP-12
	5-30	Channery clay loam, channery loam, sandy clay loam, silty clay loam	CL, GC	A-6, A-7	0-7	0-26	70-100	70-100	55-95	45-80	28-45	12-25
	30-45	Weathered bedrock			---	---	---	---	---	---	---	---
	45-55	Unweathered bedrock			---	---	---	---	---	---	---	---
29D:												
Junaluska-------	0-5	Channery loam	GM, ML, SC-SM	A-4, A-6	0-4	12-26	70-85	70-85	55-80	40-60	20-40	NP-12
	5-30	Channery clay loam, channery loam, sandy clay loam, silty clay loam	CL, GC	A-6, A-7	0-7	0-26	70-100	70-100	55-95	45-80	28-45	12-25
	30-45	Weathered bedrock			---	---	---	---	---	---	---	---
	45-55	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
29E:												
Junaluska-------	0-5	Channery loam	GM, ML, SC-SM	A-4, A-6	0-4	12-26	70-85	70-85	55-80	40-60	20-40	NP-12
	5-30	Channery clay loam, channery loam, sandy clay loam, silty clay loam	CL, GC	A-6, A-7	0-7	0-26	70-100	70-100	55-95	45-80	28-45	12-25
	30-45	Weathered bedrock			---	---	---	---	---	---	---	---
	45-55	Unweathered bedrock			---	---	---	---	---	---	---	---
30A:												
Kinkora---------	0-7	Fine sandy loam	SC, SC-SM, SM	A-2, A-6, A-7	0	0	75-100	75-100	65-95	25-45	22-41	6-13
	7-16	Fine sandy loam, silt loam	SC, SC-SM	A-2, A-6	0	0	75-100	75-100	65-95	25-45	21-37	6-13
	16-38	Clay loam, silty clay loam, silty clay, clay	CH, CL	A-7	0	0	75-100	75-100	65-100	50-90	45-65	25-40
	38-48	Gravelly loam, silt loam, very gravelly loam	CL, GC	A-2, A-6	0	0	35-100	35-100	25-95	20-75	24-38	9-19
	48-62	Gravelly loamy sand, sandy loam, very gravelly loamy sand	GP-GC, SC	A-1, A-2	0	0-10	40-100	35-100	30-90	5-30	20-32	6-13
31D:												
Marbleyard------	0-4	Very cobbly sandy loam	SC-SM, GM	A-1, A-2	10-30	25-40	50-70	45-70	35-55	15-30	16-25	2-7
	4-9	Very cobbly sandy loam, very gravelly loam, very stony fine sandy loam	SC-SM, GM	A-2, A-1	0-25	25-40	50-65	45-65	35-50	15-30	13-23	NP-6
	9-23	Extremely cobbly sandy loam, extremely cobbly fine sandy loam, very cobbly sandy loam, very stony sandy loam, very gravelly loam	GC-GM, GM, GP-GM	A-1, A-2	10-20	25-50	35-70	30-70	20-55	10-30	12-20	NP-4
	23-36	Extremely gravelly sandy loam, extremely cobbly loamy sand, very cobbly sandy loam, very stony loam	GC-GM, GP-GC, GP	A-1, A-2	0-30	25-45	15-45	10-45	7-35	3-20	16-25	2-7
	36-46	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
31D:												
Unicoi----------	0-5	Very gravelly sandy loam	GC, GC-GM, GP-GM	A-1, A-2	0	0-10	30-55	30-50	20-45	10-25	17-35	2-13
	5-14	Very gravelly sandy loam, extremely gravelly fine sandy loam, very gravelly loam	GC, GC-GM, GP-GM	A-1, A-2	0	0-10	30-55	30-50	20-45	10-25	16-32	2-13
	14-19	Extremely gravelly sandy loam, extremely gravelly fine sandy loam, very gravelly loam	GC, GC-GM, GP-GM	A-1, A-2	0	0-10	30-55	30-50	20-45	10-25	16-32	2-13
	19-29	Bedrock			---	---	---	---	---	---	---	---
32B:												
Myersville------	0-4	Loam, silt loam	CL, CL-ML, ML	A-4	0	0-14	84-100	84-100	67-94	45-69	17-30	1-11
	4-25	Silty clay loam, loam, channery clay loam	CL, SC	A-6, A-7	0-11	0-29	71-100	71-100	58-99	44-79	28-44	9-22
	25-58	Silt loam, parachannery loam	SC, SM, SC-SM, CL, CL-ML, ML	A-4, A-6	0-11	0-18	88-100	88-100	68-99	46-74	17-36	1-16
	58-70	Bedrock			---	---	---	---	---	---	---	---
	70-80	Bedrock			---	---	---	---	---	---	---	---
32C:												
Myersville------	0-4	Silt loam, loam	CL, CL-ML, ML	A-4	0	0-14	84-100	84-100	67-94	45-69	17-30	1-11
	4-25	Loam, silty clay loam, channery clay loam	CL, SC	A-6, A-7	0-11	0-29	71-100	71-100	58-99	44-79	28-44	9-22
	25-58	Silt loam, parachannery loam	SC, SM, SC-SM, CL, CL-ML, ML	A-4, A-6	0-11	0-18	88-100	88-100	68-99	46-74	17-36	1-16
	58-70	Bedrock			---	---	---	---	---	---	---	---
	70-80	Bedrock			---	---	---	---	---	---	---	---
32D:												
Myersville------	0-4	Loam, silt loam	CL, CL-ML, ML	A-4	0	0-14	84-100	84-100	67-94	45-69	17-30	1-11
	4-25	Channery clay loam, loam, silty clay loam	CL, SC	A-6, A-7	0-11	0-29	71-100	71-100	58-99	44-79	28-44	9-22
	25-58	Silt loam, parachannery loam	SC, SM, SC-SM, CL, CL-ML, ML	A-4, A-6	0-11	0-18	88-100	88-100	68-99	46-74	17-36	1-16
	58-70	Bedrock			---	---	---	---	---	---	---	---
	70-80	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
32E:												
Myersville------	0-4	Loam, silt loam	CL, CL-ML, ML	A-4	0	0-14	84-100	84-100	67-94	45-69	17-30	1-11
	4-25	Silty clay loam, loam, channery clay loam	CL, SC	A-6, A-7	0-11	0-29	71-100	71-100	58-99	44-79	28-44	9-22
	25-58	Silt loam, parachannery loam	SC, SM, SC-SM, CL, CL-ML, ML	A-4, A-6	0-11	0-18	88-100	88-100	68-99	46-74	17-36	1-16
	58-70	Bedrock			---	---	---	---	---	---	---	---
	70-80	Bedrock			---	---	---	---	---	---	---	---
33C:												
Myersville------	0-4	Loam, silt loam	CL, CL-ML, ML	A-4	0	0-14	84-100	84-100	67-94	45-69	17-30	1-11
	4-25	Channery clay loam, loam, silty clay loam	CL, SC	A-6, A-7	0-11	0-29	71-100	71-100	58-99	44-79	28-44	9-22
	25-58	Parachannery loam, silt loam	SC, SM, SC-SM, CL, CL-ML, ML	A-4, A-6	0-11	0-18	88-100	88-100	68-99	46-74	17-36	1-16
	58-70	Bedrock			---	---	---	---	---	---	---	---
	70-80	Bedrock			---	---	---	---	---	---	---	---
33D:												
Myersville------	0-4	Loam, silt loam	CL, CL-ML, ML	A-4	0	0-14	84-100	84-100	67-94	45-69	17-30	1-11
	4-25	Channery clay loam, loam, silty clay loam	CL, SC	A-6, A-7	0-11	0-29	71-100	71-100	58-99	44-79	28-44	9-22
	25-58	Parachannery loam, silt loam	SC, SM, SC-SM, CL, CL-ML, ML	A-4, A-6	0-11	0-18	88-100	88-100	68-99	46-74	17-36	1-16
	58-70	Bedrock			---	---	---	---	---	---	---	---
	70-80	Bedrock			---	---	---	---	---	---	---	---
33E:												
Myersville------	0-4	Silt loam, loam	CL, CL-ML, ML	A-4	0	0-14	84-100	84-100	67-94	45-69	17-30	1-11
	4-25	Silty clay loam, loam, channery clay loam	CL, SC	A-6, A-7	0-11	0-29	71-100	71-100	58-99	44-79	28-44	9-22
	25-58	Parachannery loam, silt loam	SC, SM, SC-SM, CL, CL-ML, ML	A-4, A-6	0-11	0-18	88-100	88-100	68-99	46-74	17-36	1-16
	58-70	Bedrock			---	---	---	---	---	---	---	---
	70-80	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
34C:												
Myersville------	0-4	Loam, silt loam	CL, CL-ML, ML	A-4	0	0-14	84-100	84-100	67-94	45-69	17-30	1-11
	4-25	Loam, silty clay loam, channery clay loam	CL, SC	A-6, A-7	0-11	0-29	71-100	71-100	58-99	44-79	28-44	9-22
	25-58	Parachannery loam, silt loam	SC, SM, SC-SM, CL, CL-ML, ML	A-4, A-6	0-11	0-18	88-100	88-100	68-99	46-74	17-36	1-16
	58-70	Bedrock			---	---	---	---	---	---	---	---
	70-80	Bedrock			---	---	---	---	---	---	---	---
Urban land.												
35D:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---
35E:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
36D:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---
36E:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
36F:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---
37F:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
38D:												
Rock outcrop.												
Clingman--------	0-12	Peat, mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	12-16	Fine sandy loam, sandy loam, loam	SC-SM, SM	A-2, A-4	0-1	0-5	80-100	80-100	70-99	30-50	12-23	NP-4
	16-26	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
38F:												
Rock outcrop.												
Clingman--------	0-12	Peat, mucky peat	PT	A-8	0	0	---	---	---	---	---	---
	12-16	Fine sandy loam, sandy loam, loam	SC-SM, SM	A-2, A-4	0-1	0-5	80-100	80-100	70-99	30-50	12-23	NP-4
	16-26	Unweathered bedrock			---	---	---	---	---	---	---	---
39C:												
Sylco-----------	0-4	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	4-22	Very channery silt loam, very channery loam, channery silty clay loam	CL, GC, GC-GM	A-2, A-6, A-7	0	5-20	50-85	45-80	40-80	30-70	21-42	6-21
	22-27	Extremely channery silt loam, extremely channery loam, very channery silty clay loam	GC, GC-GM	A-1, A-2, A-7	0	15-30	25-55	20-55	20-55	15-50	20-41	6-21
	27-37	Bedrock			---	---	---	---	---	---	---	---
Sylvatus--------	0-2	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	2-11	Very channery silt loam, very channery clay loam, extremely channery loam, channery silty clay loam	CL, GC, GP-GC	A-1, A-2, A-7	0	5-30	20-85	20-80	15-80	10-70	20-41	6-21
	11-16	Extremely channery silt loam, extremely channery loam, very channery clay loam, very channery silty clay loam	GC, GW-GC	A-1, A-2, A-7	0	15-30	10-50	5-45	5-45	5-45	20-44	6-25
	16-26	Bedrock			---	---	---	---	---	---	---	---
39D:												
Sylco-----------	0-4	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	4-22	Very channery silt loam, very channery loam, channery silty clay loam	CL, GC, GC-GM	A-2, A-6, A-7	0	5-20	50-85	45-80	40-80	30-70	21-42	6-21
	22-27	Extremely channery silt loam, extremely channery loam, very channery silty clay loam	GC, GC-GM	A-1, A-2, A-7	0	15-30	25-55	20-55	20-55	15-50	20-41	6-21
	27-37	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
39D:												
Sylvatus--------	0-2	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	2-11	Very channery silt loam, very channery clay loam, extremely channery loam, channery silty clay loam	CL, GC, GP-GC	A-1, A-2, A-7	0	5-30	20-85	20-80	15-80	10-70	20-41	6-21
	11-16	Extremely channery silt loam, extremely channery loam, very channery clay loam, very channery silty clay loam	GC, GW-GC	A-1, A-2, A-7	0	15-30	10-50	5-45	5-45	5-45	20-44	6-25
	16-26	Bedrock			---	---	---	---	---	---	---	---
39E:												
Sylco-----------	0-4	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	4-22	Very channery silt loam, very channery loam, channery silty clay loam	CL, GC, GC-GM	A-2, A-6, A-7	0	5-20	50-85	45-80	40-80	30-70	21-42	6-21
	22-27	Extremely channery silt loam, extremely channery loam, very channery silty clay loam	GC, GC-GM	A-1, A-2, A-7	0	15-30	25-55	20-55	20-55	15-50	20-41	6-21
	27-37	Bedrock			---	---	---	---	---	---	---	---
Sylvatus--------	0-2	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	2-11	Very channery silt loam, very channery clay loam, extremely channery loam, channery silty clay loam	CL, GC, GP-GC	A-1, A-2, A-7	0	5-30	20-85	20-80	15-80	10-70	20-41	6-21
	11-16	Extremely channery silt loam, extremely channery loam, very channery clay loam, very channery silty clay loam	GC, GW-GC	A-1, A-2, A-7	0	15-30	10-50	5-45	5-45	5-45	20-44	6-25
	16-26	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
40D:												
Sylco-----------	0-4	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	4-22	Very channery silt loam, very channery loam, channery silty clay loam	CL, GC, GC-GM	A-2, A-6, A-7	0	5-20	50-85	45-80	40-80	30-70	21-42	6-21
	22-27	Extremely channery silt loam, extremely channery loam, very channery silty clay loam	GC, GC-GM	A-1, A-2, A-7	0	15-30	25-55	20-55	20-55	15-50	20-41	6-21
	27-37	Bedrock			---	---	---	---	---	---	---	---
Sylvatus--------	0-2	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	2-11	Very channery silt loam, very channery clay loam, extremely channery loam, channery silty clay loam	CL, GC, GP-GC	A-1, A-2, A-7	0	5-30	20-85	20-80	15-80	10-70	20-41	6-21
	11-16	Extremely channery silt loam, extremely channery loam, very channery clay loam, very channery silty clay loam	GC, GW-GC	A-1, A-2, A-7	0	15-30	10-50	5-45	5-45	5-45	20-44	6-25
	16-26	Bedrock			---	---	---	---	---	---	---	---
40E:												
Sylco-----------	0-4	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	4-22	Very channery silt loam, very channery loam, channery silty clay loam	CL, GC, GC-GM	A-2, A-6, A-7	0	5-20	50-85	45-80	40-80	30-70	21-42	6-21
	22-27	Extremely channery silt loam, extremely channery loam, very channery silty clay loam	GC, GC-GM	A-1, A-2, A-7	0	15-30	25-55	20-55	20-55	15-50	20-41	6-21
	27-37	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
40E:												
Sylvatus--------	0-2	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	2-11	Very channery silt loam, very channery clay loam, extremely channery loam, channery silty clay loam	CL, GC, GP-GC	A-1, A-2, A-7	0	5-30	20-85	20-80	15-80	10-70	20-41	6-21
	11-16	Extremely channery silt loam, extremely channery loam, very channery clay loam, very channery silty clay loam	GC, GW-GC	A-1, A-2, A-7	0	15-30	10-50	5-45	5-45	5-45	20-44	6-25
	16-26	Bedrock			---	---	---	---	---	---	---	---
41B:												
Tate------------	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
41C:												
Tate------------	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17
41D:												
Tate------------	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
42C:												
Tate------------	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17
42D:												
Tate------------	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
43C:												
Tate------------	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17
Urban land.												
44D. Udorthents												
45D. Udorthents-Urban land												
46D:												
Unaka-----------	0-10	Loam, fine sandy loam	CL, CL-ML, SM	A-4	0-5	0-10	85-100	85-100	65-95	45-70	10-30	NP-10
	10-24	Loam, gravelly loam, cobbly loam, sandy clay loam, sandy loam	CL-ML, CL, SM	A-4	0-5	0-10	80-100	80-100	60-95	40-70	10-30	NP-10
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---
47C:												
Unaka-----------	0-10	Loam, fine sandy loam	CL, CL-ML, SM	A-4	0-5	0-10	85-100	85-100	65-95	45-70	10-30	NP-10
	10-24	Loam, gravelly loam, cobbly loam, sandy clay loam, sandy loam	CL-ML, CL, SM	A-4	0-5	0-10	80-100	80-100	60-95	40-70	10-30	NP-10
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
47C:												
Porters---------	0-11	Loam	SM, OL	A-4	0-2	0-7	80-100	80-100	65-95	45-75	20-35	NP-10
	11-39	Loam, sandy loam, fine sandy loam, sandy clay loam, gravelly loam	CL-ML, ML, GM	A-2, A-4	0-5	0-15	65-100	60-100	50-95	35-75	15-25	NP-7
	39-46	Gravelly loam, loam, sandy loam, fine sandy loam	CL-ML, GM, SM	A-2, A-4	0-5	0-15	65-100	60-100	50-95	35-75	15-25	NP-7
	46-55	Weathered bedrock			---	---	---	---	---	---	---	---
	55-65	Unweathered bedrock			---	---	---	---	---	---	---	---
47D:												
Unaka-----------	0-10	Loam, fine sandy loam	CL, CL-ML, SM	A-4	0-5	0-10	85-100	85-100	65-95	45-70	10-30	NP-10
	10-24	Loam, gravelly loam, cobbly loam, sandy clay loam, sandy loam	CL-ML, CL, SM	A-4	0-5	0-10	80-100	80-100	60-95	40-70	10-30	NP-10
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Porters---------	0-11	Loam	SM, OL	A-4	0-2	0-7	80-100	80-100	65-95	45-75	20-35	NP-10
	11-39	Loam, sandy loam, fine sandy loam, sandy clay loam, gravelly loam	CL-ML, ML, GM	A-2, A-4	0-5	0-15	65-100	60-100	50-95	35-75	15-25	NP-7
	39-46	Gravelly loam, loam, sandy loam, fine sandy loam	CL-ML, GM, SM	A-2, A-4	0-5	0-15	65-100	60-100	50-95	35-75	15-25	NP-7
	46-55	Weathered bedrock			---	---	---	---	---	---	---	---
	55-65	Unweathered bedrock			---	---	---	---	---	---	---	---
48D:												
Unaka-----------	0-10	Loam, fine sandy loam	CL, CL-ML, SM	A-4	0-5	0-10	85-100	85-100	65-95	45-70	10-30	NP-10
	10-24	Loam, gravelly loam, cobbly loam, sandy clay loam, sandy loam	CL-ML, CL, SM	A-4	0-5	0-10	80-100	80-100	60-95	40-70	10-30	NP-10
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
48E:												
Unaka-----------	0-10	Loam, fine sandy loam	CL, CL-ML, SM	A-4	0-5	0-10	85-100	85-100	65-95	45-70	10-30	NP-10
	10-24	Loam, gravelly loam, cobbly loam, sandy clay loam, sandy loam	CL-ML, CL, SM	A-4	0-5	0-10	80-100	80-100	60-95	40-70	10-30	NP-10
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
48F:												
Unaka-----------	0-10	Loam, fine sandy loam	CL, CL-ML, SM	A-4	0-5	0-10	85-100	85-100	65-95	45-70	10-30	NP-10
	10-24	Loam, gravelly loam, cobbly loam, sandy clay loam, sandy loam	CL-ML, CL, SM	A-4	0-5	0-10	80-100	80-100	60-95	40-70	10-30	NP-10
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
49E:												
Unicoi----------	0-5	Very gravelly sandy loam	GC, GC-GM, GP-GM	A-1, A-2	0	0-10	30-55	30-50	20-45	10-25	17-35	2-13
	5-14	Very gravelly sandy loam, extremely gravelly fine sandy loam, very gravelly loam	GC, GC-GM, GP-GM	A-1, A-2	0	0-10	30-55	30-50	20-45	10-25	16-32	2-13
	14-19	Extremely gravelly sandy loam, extremely gravelly fine sandy loam, very gravelly loam	GC, GC-GM, GP-GM	A-1, A-2	0	0-10	30-55	30-50	20-45	10-25	16-32	2-13
	19-29	Bedrock			---	---	---	---	---	---	---	---
Marbleyard------	0-4	Very cobbly sandy loam	SC-SM, GM	A-1, A-2	10-30	25-40	50-70	45-70	35-55	15-30	16-25	2-7
	4-9	Very cobbly sandy loam, very gravelly loam, very stony fine sandy loam	SC-SM, GM	A-2, A-1	0-25	25-40	50-65	45-65	35-50	15-30	13-23	NP-6
	9-23	Extremely cobbly sandy loam, extremely cobbly fine sandy loam, very cobbly sandy loam, very stony sandy loam, very gravelly loam	GC-GM, GM, GP-GM	A-1, A-2	10-20	25-50	35-70	35-70	25-55	10-30	12-20	NP-4
	23-36	Extremely gravelly sandy loam, extremely cobbly loamy sand, very cobbly sandy loam, very stony loam	GC-GM, GP-GC, GP	A-1, A-2	0-30	25-45	15-45	10-45	7-35	3-20	16-25	2-7
	36-46	Bedrock			---	---	---	---	---	---	---	---
W.												
Water												

Table 16.—Physical Soil Properties

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
1E:														
Ashe	0-4	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-8.0	.20	.20	2	5	56
	4-18	30-75	10-50	7-20	1.35-1.60	14.00-42.00	0.07-0.17	0.0-2.9	0.0-1.0	.10	.20			
	18-28	30-85	10-50	5-15	1.45-1.65	14.00-42.00	0.05-0.17	0.0-2.9	0.0-1.0	.17	.37			
	28-38	---	---	---	---	0.00-0.07	0.00-0.00	---	---	---	---			
Edneytown	0-4	35-50	35-50	5-15	1.40-1.60	14.00-42.00	0.14-0.19	0.0-2.9	0.5-5.0	.37	.37	5	5	56
	4-7	35-80	5-50	5-15	1.30-1.40	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	7-20	20-80	5-50	20-35	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24			
	20-27	45-80	5-40	10-25	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	27-62	50-85	2-40	5-15	1.30-1.50	14.00-42.00	0.08-0.19	0.0-2.9	0.0-0.5	.15	.15			
2E:														
Ashe	0-4	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-8.0	.20	.20	2	5	56
	4-18	30-75	10-50	7-20	1.35-1.60	14.00-42.00	0.07-0.17	0.0-2.9	0.0-1.0	.10	.20			
	18-28	30-85	10-50	5-15	1.45-1.65	14.00-42.00	0.05-0.17	0.0-2.9	0.0-1.0	.17	.37			
	28-38	---	---	---	---	0.00-0.07	0.00-0.00	---	---	---	---			
Edneyville	0-5	30-50	30-50	7-20	1.40-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-6.0	.24	.24	5	5	56
	5-11	30-75	10-50	5-20	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.5-2.0	.37	.37			
	11-34	30-75	10-50	5-18	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.2-1.0	.24	.24			
	34-62	30-85	10-50	5-18	1.40-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.0-0.2	.20	.24			
3E:														
Ashe	0-4	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-8.0	.20	.20	2	5	56
	4-18	30-75	10-50	7-20	1.35-1.60	14.00-42.00	0.07-0.17	0.0-2.9	0.0-1.0	.10	.20			
	18-28	30-85	10-50	5-15	1.45-1.65	14.00-42.00	0.05-0.17	0.0-2.9	0.0-1.0	.17	.37			
	28-38	---	---	---	---	0.00-0.07	0.00-0.00	---	---	---	---			
Edneyville	0-5	30-50	30-50	7-20	1.40-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-6.0	.24	.24	5	5	56
	5-11	30-75	10-50	5-20	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.5-2.0	.37	.37			
	11-34	30-75	10-50	5-18	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.2-1.0	.24	.24			
	34-62	30-85	10-50	5-18	1.40-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.0-0.2	.20	.24			
4B:														
Braddock	0-8	25-50	30-50	10-25	1.20-1.50	4.00-42.00	0.17-0.19	0.0-2.9	1.0-2.0	.20	.32	5	5	48
	8-15	20-60	10-50	27-50	1.20-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.5-1.0	.17	.28			
	15-51	10-55	5-50	35-55	1.20-1.50	4.00-14.00	0.10-0.15	3.0-5.9	0.0-0.5	.15	.20			
	51-62	10-55	5-50	35-50	1.20-1.50	4.00-14.00	0.08-0.15	3.0-5.9	0.0-0.5	.20	.28			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
4C:														
Braddock-------------	0-8	25-50	30-50	10-25	1.20-1.50	4.00-42.00	0.17-0.19	0.0-2.9	1.0-2.0	.20	.32	5	5	48
	8-15	20-60	10-50	27-50	1.20-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.5-1.0	.17	.28			
	15-51	10-55	5-50	35-55	1.20-1.50	4.00-14.00	0.10-0.15	3.0-5.9	0.0-0.5	.15	.20			
	51-62	10-55	5-50	35-50	1.20-1.50	4.00-14.00	0.08-0.15	3.0-5.9	0.0-0.5	.20	.28			
4D:														
Braddock-------------	0-8	25-50	30-50	10-25	1.20-1.50	4.00-42.00	0.17-0.19	0.0-2.9	1.0-2.0	.20	.32	5	5	48
	8-15	20-60	10-50	27-50	1.20-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.5-1.0	.17	.28			
	15-51	10-55	5-50	35-55	1.20-1.50	4.00-14.00	0.10-0.15	3.0-5.9	0.0-0.5	.15	.20			
	51-62	10-55	5-50	35-50	1.20-1.50	4.00-14.00	0.08-0.15	3.0-5.9	0.0-0.5	.20	.28			
5D:														
Brownwood------------	0-6	---	---	5-20	1.00-1.40	14.00-42.00	0.12-0.15	0.0-2.9	1.0-5.0	.24	.24	3	3	86
	6-35	---	---	5-18	1.20-1.60	14.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.28	.28			
	35-45	---	---	---	---	0.07-0.42	---	---	---	---	---			
	45-55	---	---	---	---	0.01-0.07	---	---	---	---	---			
5E:														
Brownwood------------	0-6	---	---	5-20	1.00-1.40	14.00-42.00	0.12-0.15	0.0-2.9	1.0-5.0	.24	.24	3	3	86
	6-35	---	---	5-18	1.20-1.60	14.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.28	.28			
	35-45	---	---	---	---	0.07-0.42	---	---	---	---	---			
	45-55	---	---	---	---	0.01-0.07	---	---	---	---	---			
6A:														
Codorus--------------	0-7	30-50	30-50	15-25	1.20-1.40	4.00-14.00	0.13-0.21	0.0-2.9	2.0-4.0	.24	.24	5	6	48
	7-19	10-45	25-60	18-35	1.20-1.50	4.00-14.00	0.09-0.22	0.0-2.9	0.0-0.5	.37	.37			
	19-37	10-45	25-60	18-35	1.20-1.50	4.00-14.00	0.09-0.22	0.0-2.9	0.0-0.5	.37	.37			
	37-49	10-70	10-70	10-35	1.20-1.50	4.00-141.00	0.08-0.22	0.0-2.9	0.0-0.5	.15	.20			
	49-62	10-70	10-70	10-35	1.20-1.50	4.00-141.00	0.02-0.22	0.0-2.9	0.0-0.5	.10	.20			
7A:														
Comus----------------	0-9	55-75	10-35	5-18	1.20-1.40	4.00-14.00	0.12-0.18	0.0-2.9	1.0-4.0	.17	.17	5	3	86
	9-31	20-75	10-70	5-18	1.20-1.40	4.00-14.00	0.12-0.22	0.0-2.9	0.0-0.8	.28	.28			
	31-53	20-75	10-70	5-18	1.30-1.60	4.00-42.00	0.07-0.22	0.0-2.9	0.0-0.8	.28	.28			
	53-62	20-95	5-70	2-18	1.30-1.60	4.00-42.00	0.05-0.22	0.0-2.9	0.0-0.8	.17	.28			
8C:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.24	.28	3	5	56
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.17	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
8D:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.24	.28	3	5	56
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.17	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
8E:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.24	.28	3	5	56
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.17	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
9D:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.11-0.21	0.0-2.9	1.0-5.0	.15	.28	3	5	48
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.07-0.19	0.0-2.9	0.5-1.0	.15	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.10	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
9E:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.11-0.21	0.0-2.9	1.0-5.0	.15	.28	3	5	48
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.07-0.19	0.0-2.9	0.5-1.0	.15	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.10	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
10D:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.24	.28	3	5	56
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.17	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
Rock outcrop.														
10E:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.24	.28	3	5	56
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.17	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
Rock outcrop.														
11C:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.24	.28	3	5	56
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.17	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
Urban land.														
12A:														
Craigsville----------	0-6	55-75	10-40	5-15	1.20-1.40	14.00-141.00	0.09-0.14	0.0-2.9	1.0-4.0	.10	.17	5	3	56
	6-32	40-75	10-50	5-15	1.30-1.60	14.00-141.00	0.05-0.13	0.0-2.9	0.0-0.8	.10	.28			
	32-62	55-85	5-40	5-10	1.35-1.55	42.00-141.00	0.04-0.09	0.0-2.9	0.0-0.8	.05	.17			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
13B:														
Delanco-------------	0-10	55-75	10-40	5-18	1.10-1.30	4.00-14.00	0.11-0.18	0.0-2.9	2.0-4.0	.20	.20	5	3	86
	10-16	35-75	10-45	5-18	1.10-1.30	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.8	.28	.28			
	16-41	30-65	10-40	18-30	1.40-1.60	1.40-4.00	0.09-0.13	3.0-5.9	0.0-0.5	.17	.20			
	41-47	20-75	10-60	15-27	1.40-1.60	1.40-4.00	0.09-0.22	3.0-5.9	0.0-0.5	.37	.37			
	47-62	20-75	10-65	5-25	1.50-1.70	4.00-14.00	0.08-0.21	0.0-2.9	0.0-0.5	.28	.28			
14C:														
Delanco-------------	0-10	55-75	10-40	5-18	1.10-1.30	4.00-14.00	0.11-0.18	0.0-2.9	2.0-4.0	.20	.20	5	3	86
	10-16	35-75	10-45	5-18	1.10-1.30	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.8	.28	.28			
	16-41	30-65	10-40	18-30	1.40-1.60	1.40-4.00	0.09-0.13	3.0-5.9	0.0-0.5	.17	.20			
	41-47	20-75	10-60	15-27	1.40-1.60	1.40-4.00	0.09-0.22	3.0-5.9	0.0-0.5	.37	.37			
	47-62	20-75	10-65	5-25	1.50-1.70	4.00-14.00	0.08-0.21	0.0-2.9	0.0-0.5	.28	.28			
15B:														
Delanco-------------	0-10	55-75	10-40	5-18	1.10-1.30	4.00-14.00	0.11-0.18	0.0-2.9	2.0-4.0	.20	.20	5	3	86
	10-16	35-75	10-45	5-18	1.10-1.30	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.8	.28	.28			
	16-41	30-65	10-40	18-30	1.40-1.60	1.40-4.00	0.09-0.13	3.0-5.9	0.0-0.5	.17	.20			
	41-47	20-75	10-60	15-27	1.40-1.60	1.40-4.00	0.09-0.22	3.0-5.9	0.0-0.5	.37	.37			
	47-62	20-75	10-65	5-25	1.50-1.70	4.00-14.00	0.08-0.21	0.0-2.9	0.0-0.5	.28	.28			
Kinkora-------------	0-7	55-75	10-35	10-20	1.25-1.55	1.40-14.00	0.12-0.18	0.0-2.9	1.0-5.0	.20	.20	5	3	86
	7-16	20-75	10-65	10-20	1.25-1.55	1.40-14.00	0.12-0.22	0.0-2.9	0.5-3.0	.28	.28			
	16-38	10-45	10-55	35-55	1.20-1.50	0.42-1.40	0.09-0.15	6.0-8.9	0.0-0.5	.28	.28			
	38-48	20-50	30-65	15-27	1.25-1.50	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.28	.43			
	48-62	55-85	2-35	10-20	1.25-1.50	4.00-42.00	0.04-0.13	0.0-2.9	0.0-0.5	.10	.20			
16C:														
Edneytown-----------	0-4	35-50	35-50	5-15	1.40-1.60	14.00-42.00	0.14-0.19	0.0-2.9	0.5-5.0	.37	.37	5	5	56
	4-7	35-80	5-50	5-15	1.30-1.40	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	7-20	20-80	5-50	20-35	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24			
	20-27	45-80	5-40	10-25	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	27-62	50-85	2-40	5-15	1.30-1.50	14.00-42.00	0.08-0.19	0.0-2.9	0.0-0.5	.15	.15			
Ashe----------------	0-4	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-8.0	.20	.20	2	5	56
	4-18	30-75	10-50	7-20	1.35-1.60	14.00-42.00	0.07-0.17	0.0-2.9	0.0-1.0	.10	.20			
	18-28	30-85	10-50	5-15	1.45-1.65	14.00-42.00	0.05-0.17	0.0-2.9	0.0-1.0	.17	.37			
	28-38	---	---	---	---	0.00-0.07	0.00-0.00	---	---	---	---			
16D:														
Edneytown-----------	0-4	35-50	35-50	5-15	1.40-1.60	14.00-42.00	0.14-0.19	0.0-2.9	0.5-5.0	.37	.37	5	5	56
	4-7	35-80	5-50	5-15	1.30-1.40	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	7-20	20-80	5-50	20-35	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24			
	20-27	45-80	5-40	10-25	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	27-62	50-85	2-40	5-15	1.30-1.50	14.00-42.00	0.08-0.19	0.0-2.9	0.0-0.5	.15	.15			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
16D:														
Ashe-----------------	0-4	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-8.0	.20	.20	2	5	56
	4-18	30-75	10-50	7-20	1.35-1.60	14.00-42.00	0.07-0.17	0.0-2.9	0.0-1.0	.10	.20			
	18-28	30-85	10-50	5-15	1.45-1.65	14.00-42.00	0.05-0.17	0.0-2.9	0.0-1.0	.17	.37			
	28-38	---	---	---	---	0.00-0.07	0.00-0.00	---	---	---	---			
17C:														
Edneytown------------	0-4	35-50	35-50	5-15	1.40-1.60	14.00-42.00	0.14-0.19	0.0-2.9	0.5-5.0	.37	.37	5	5	56
	4-7	35-80	5-50	5-15	1.30-1.40	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	7-20	20-80	5-50	20-35	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24			
	20-27	45-80	5-40	10-25	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	27-62	50-85	2-40	5-15	1.30-1.50	14.00-42.00	0.08-0.19	0.0-2.9	0.0-0.5	.15	.15			
Urban land.														
18C:														
Edneyville-----------	0-5	30-50	30-50	7-20	1.40-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-6.0	.24	.24	5	5	56
	5-11	30-75	10-50	5-20	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.5-2.0	.37	.37			
	11-34	30-75	10-50	5-18	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.2-1.0	.24	.24			
	34-62	30-85	10-50	5-18	1.40-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.0-0.2	.20	.24			
Ashe-----------------	0-4	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-8.0	.20	.20	2	5	56
	4-18	30-75	10-50	7-20	1.35-1.60	14.00-42.00	0.07-0.17	0.0-2.9	0.0-1.0	.10	.20			
	18-28	30-85	10-50	5-15	1.45-1.65	14.00-42.00	0.05-0.17	0.0-2.9	0.0-1.0	.17	.37			
	28-38	---	---	---	---	0.00-0.07	0.00-0.00	---	---	---	---			
18D:														
Edneyville-----------	0-5	30-50	30-50	7-20	1.40-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-6.0	.24	.24	5	5	56
	5-11	30-75	10-50	5-20	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.5-2.0	.37	.37			
	11-34	30-75	10-50	5-18	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.2-1.0	.24	.24			
	34-62	30-85	10-50	5-18	1.40-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.0-0.2	.20	.24			
Ashe-----------------	0-4	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-8.0	.20	.20	2	5	56
	4-18	30-75	10-50	7-20	1.35-1.60	14.00-42.00	0.07-0.17	0.0-2.9	0.0-1.0	.10	.20			
	18-28	30-85	10-50	5-15	1.45-1.65	14.00-42.00	0.05-0.17	0.0-2.9	0.0-1.0	.17	.37			
	28-38	---	---	---	---	0.00-0.07	0.00-0.00	---	---	---	---			
19D:														
Edneyville-----------	0-5	30-50	30-50	7-20	1.40-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-6.0	.24	.24	5	5	56
	5-11	30-75	10-50	5-20	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.5-2.0	.37	.37			
	11-34	30-75	10-50	5-18	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.2-1.0	.24	.24			
	34-62	30-85	10-50	5-18	1.40-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.0-0.2	.20	.24			
Ashe-----------------	0-4	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-8.0	.20	.20	2	5	56
	4-18	30-75	10-50	7-20	1.35-1.60	14.00-42.00	0.07-0.17	0.0-2.9	0.0-1.0	.10	.20			
	18-28	30-85	10-50	5-15	1.45-1.65	14.00-42.00	0.05-0.17	0.0-2.9	0.0-1.0	.17	.37			
	28-38	---	---	---	---	0.00-0.07	0.00-0.00	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
20B:														
Elsinboro	0-10	55-75	10-40	8-18	1.25-1.40	4.00-14.00	0.13-0.18	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	10-18	15-75	10-75	8-18	1.25-1.40	4.00-14.00	0.09-0.22	0.0-2.9	0.2-0.8	.28	.28			
	18-45	10-75	10-65	18-34	1.30-1.50	4.00-14.00	0.09-0.22	0.0-2.9	0.0-0.5	.32	.32			
	45-62	15-75	10-75	8-34	1.35-1.55	4.00-42.00	0.10-0.22	0.0-2.9	0.0-0.5	.15	.20			
21B:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
Hayesville	0-6	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	0.5-1.0	.32	.32	5	5	56
	6-11	30-70	15-50	5-20	1.20-1.35	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	11-43	20-45	10-40	35-50	1.20-1.35	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	43-49	25-60	10-50	20-40	1.30-1.40	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.28	.28			
	49-62	30-75	5-50	10-25	1.45-1.65	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.20	.20			
22C:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
22D:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
22E:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
22F:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
23C:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	38
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
23D:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	38
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
23E:														
Glenelg--------------	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	38
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
24C:														
Glenelg--------------	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
Urban land.														
25C:														
Greenlee-------------	0-7	25-50	30-50	8-25	1.30-1.50	14.00-42.00	0.11-0.14	0.0-2.9	0.5-5.0	.10	.28	5	5	38
	7-53	25-80	5-50	3-25	1.40-1.60	14.00-42.00	0.07-0.15	0.0-2.9	1.0-2.0	.05	.24			
	53-62	35-90	5-50	1-18	1.40-1.60	14.00-42.00	0.03-0.15	0.0-2.9	0.0-0.5	.05	.28			
25D:														
Greenlee-------------	0-7	25-50	30-50	8-25	1.30-1.50	14.00-42.00	0.11-0.14	0.0-2.9	0.5-5.0	.10	.28	5	5	38
	7-53	25-80	5-50	3-25	1.40-1.60	14.00-42.00	0.07-0.15	0.0-2.9	1.0-2.0	.05	.24			
	53-62	35-90	5-50	1-18	1.40-1.60	14.00-42.00	0.03-0.15	0.0-2.9	0.0-0.5	.05	.28			
26A:														
Hatboro--------------	0-8	55-80	5-40	7-18	1.20-1.40	4.00-14.00	0.10-0.15	0.0-2.9	2.0-6.0	.15	.15	5	3	86
	8-45	10-65	10-65	15-35	1.20-1.40	4.00-14.00	0.10-0.22	0.0-2.9	0.0-0.5	.20	.20			
	45-62	5-95	5-90	5-45	1.20-1.50	4.00-14.00	0.01-0.22	0.0-2.9	0.0-0.5	.43	.43			
27B:														
Hayesville-----------	0-6	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	0.5-1.0	.32	.32	5	5	56
	6-11	30-70	15-50	5-20	1.20-1.35	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	11-43	20-45	10-40	35-50	1.20-1.35	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	43-49	25-60	10-50	20-40	1.30-1.40	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.28	.28			
	49-62	30-75	5-50	10-25	1.45-1.65	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.20	.20			
27C:														
Hayesville-----------	0-6	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	0.5-1.0	.32	.32	5	5	56
	6-11	30-70	15-50	5-20	1.20-1.35	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	11-43	20-45	10-40	35-50	1.20-1.35	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	43-49	25-60	10-50	20-40	1.30-1.40	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.28	.28			
	49-62	30-75	5-50	10-25	1.45-1.65	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.20	.20			
27D:														
Hayesville-----------	0-6	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	0.5-1.0	.32	.32	5	5	56
	6-11	30-70	15-50	5-20	1.20-1.35	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	11-43	20-45	10-40	35-50	1.20-1.35	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	43-49	25-60	10-50	20-40	1.30-1.40	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.28	.28			
	49-62	30-75	5-50	10-25	1.45-1.65	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.20	.20			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
28C:														
Hayesville-----------	0-6	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	0.5-1.0	.32	.32	5	5	56
	6-11	30-70	15-50	5-20	1.20-1.35	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	11-43	20-45	10-40	35-50	1.20-1.35	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	43-49	25-60	10-50	20-40	1.30-1.40	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.28	.28			
	49-62	30-75	5-50	10-25	1.45-1.65	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.20	.20			
Urban land.														
29C:														
Junaluska------------	0-5	30-50	30-50	7-18	1.35-1.60	14.00-42.00	0.13-0.18	0.0-2.9	1.0-5.0	.15	.28	3	6	48
	5-30	15-65	15-60	18-35	1.30-1.65	4.00-14.00	0.09-0.19	0.0-2.9	0.5-1.0	.17	.28			
	30-45	---	---	---	---	1.40-4.00	---	---	---	---	---			
	45-55	---	---	---	---	0.00-0.42	---	---	---	---	---			
29D:														
Junaluska------------	0-5	30-50	30-50	7-18	1.35-1.60	14.00-42.00	0.13-0.18	0.0-2.9	1.0-5.0	.15	.28	3	6	48
	5-30	15-65	15-60	18-35	1.30-1.65	4.00-14.00	0.09-0.19	0.0-2.9	0.5-1.0	.17	.28			
	30-45	---	---	---	---	1.40-4.00	---	---	---	---	---			
	45-55	---	---	---	---	0.00-0.42	---	---	---	---	---			
29E:														
Junaluska------------	0-5	30-50	30-50	7-18	1.35-1.60	14.00-42.00	0.13-0.18	0.0-2.9	1.0-5.0	.15	.28	3	6	48
	5-30	15-65	15-60	18-35	1.30-1.65	4.00-14.00	0.09-0.19	0.0-2.9	0.5-1.0	.17	.28			
	30-45	---	---	---	---	1.40-4.00	---	---	---	---	---			
	45-55	---	---	---	---	0.00-0.42	---	---	---	---	---			
30A:														
Kinkora--------------	0-7	55-75	10-35	10-20	1.25-1.55	1.40-14.00	0.12-0.18	0.0-2.9	1.0-5.0	.20	.20	5	3	86
	7-16	20-75	10-65	10-20	1.25-1.55	1.40-14.00	0.12-0.22	0.0-2.9	0.5-3.0	.28	.28			
	16-38	10-45	10-55	35-55	1.20-1.50	0.42-1.40	0.09-0.15	6.0-8.9	0.0-0.5	.28	.28			
	38-48	20-50	30-65	15-27	1.25-1.50	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.28	.43			
	48-62	55-85	2-35	10-20	1.25-1.50	4.00-42.00	0.04-0.13	0.0-2.9	0.0-0.5	.10	.20			
31D:														
Marbleyard-----------	0-4	55-80	5-45	10-20	1.20-1.50	14.00-141.00	0.06-0.09	0.0-2.9	0.5-2.0	.05	.15	2	6	48
	4-9	40-80	5-45	10-20	1.20-1.50	14.00-141.00	0.06-0.12	0.0-2.9	0.0-0.5	.10	.24			
	9-23	40-80	5-45	7-18	1.20-1.50	14.00-141.00	0.05-0.13	0.0-2.9	0.0-0.5	.05	.24			
	23-36	40-85	5-45	5-15	1.20-1.50	14.00-141.00	0.01-0.09	0.0-2.9	0.0-0.5	.05	.37			
	36-46	---	---	---	---	0.00-0.07	---	---	---	---	---			
Unicoi---------------	0-5	55-80	5-40	5-20	1.45-1.55	14.00-42.00	0.04-0.07	0.0-2.9	0.5-2.0	.10	.24	1	3	48
	5-14	35-80	5-45	5-20	1.45-1.60	14.00-42.00	0.04-0.10	0.0-2.9	0.0-0.5	.10	.37			
	14-19	35-80	5-45	5-20	1.45-1.60	14.00-42.00	0.04-0.10	0.0-2.9	0.0-0.5	.10	.37			
	19-29	---	---	---	---	0.00-0.07	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
32B:														
Myersville-----------	0-4	---	---	5-20	1.20-1.50	14.00-42.00	0.14-0.20	0.0-2.9	1.0-3.0	.28	.28	4	8	0
	4-25	---	---	18-35	1.20-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.32	.32			
	25-58	---	---	5-27	1.20-1.50	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.32	.37			
	58-70	---	---	---	---	0.07-0.42	---	---	---	---	---			
	70-80	---	---	---	---	0.01-0.07	---	---	---	---	---			
32C:														
Myersville-----------	0-4	---	---	5-20	1.20-1.50	14.00-42.00	0.14-0.20	0.0-2.9	1.0-3.0	.28	.28	4	8	0
	4-25	---	---	18-35	1.20-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.32	.32			
	25-58	---	---	5-27	1.20-1.50	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.32	.37			
	58-70	---	---	---	---	0.07-0.42	---	---	---	---	---			
	70-80	---	---	---	---	0.01-0.07	---	---	---	---	---			
32D:														
Myersville-----------	0-4	---	---	5-20	1.20-1.50	14.00-42.00	0.14-0.20	0.0-2.9	1.0-3.0	.28	.28	4	8	0
	4-25	---	---	18-35	1.20-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.32	.32			
	25-58	---	---	5-27	1.20-1.50	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.32	.37			
	58-70	---	---	---	---	0.07-0.42	---	---	---	---	---			
	70-80	---	---	---	---	0.01-0.07	---	---	---	---	---			
32E:														
Myersville-----------	0-4	---	---	5-20	1.20-1.50	14.00-42.00	0.14-0.20	0.0-2.9	1.0-3.0	.28	.28	4	8	0
	4-25	---	---	18-35	1.20-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.32	.32			
	25-58	---	---	5-27	1.20-1.50	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.32	.37			
	58-70	---	---	---	---	0.07-0.42	---	---	---	---	---			
	70-80	---	---	---	---	0.01-0.07	---	---	---	---	---			
33C:														
Myersville-----------	0-4	---	---	5-20	1.20-1.50	14.00-42.00	0.14-0.20	0.0-2.9	1.0-3.0	.28	.28	4	8	0
	4-25	---	---	18-35	1.20-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.32	.32			
	25-58	---	---	5-27	1.20-1.50	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.32	.37			
	58-70	---	---	---	---	0.07-0.42	---	---	---	---	---			
	70-80	---	---	---	---	0.01-0.07	---	---	---	---	---			
33D:														
Myersville-----------	0-4	---	---	5-20	1.20-1.50	14.00-42.00	0.14-0.20	0.0-2.9	1.0-3.0	.28	.28	4	8	0
	4-25	---	---	18-35	1.20-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.32	.32			
	25-58	---	---	5-27	1.20-1.50	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.32	.37			
	58-70	---	---	---	---	0.07-0.42	---	---	---	---	---			
	70-80	---	---	---	---	0.01-0.07	---	---	---	---	---			
33E:														
Myersville-----------	0-4	---	---	5-20	1.20-1.50	14.00-42.00	0.14-0.20	0.0-2.9	1.0-3.0	.28	.28	4	8	0
	4-25	---	---	18-35	1.20-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.32	.32			
	25-58	---	---	5-27	1.20-1.50	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.32	.37			
	58-70	---	---	---	---	0.07-0.42	---	---	---	---	---			
	70-80	---	---	---	---	0.01-0.07	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
34C:														
Myersville	0-4	---	---	5-20	1.20-1.50	14.00-42.00	0.14-0.20	0.0-2.9	1.0-3.0	.28	.28	4	8	0
	4-25	---	---	18-35	1.20-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.32	.32			
	25-58	---	---	5-27	1.20-1.50	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.32	.37			
	58-70	---	---	---	---	0.07-0.42	---	---	---	---	---			
	70-80	---	---	---	---	0.01-0.07	---	---	---	---	---			
Urban land.														
35D:														
Peaks	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
35E:														
Peaks	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
36D:														
Peaks	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
36E:														
Peaks	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
36F:														
Peaks	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
37F:														
Peaks----------------	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
Rock outcrop.														
38D:														
Rock outcrop.														
Clingman-------------	0-12	0-15	0-80	0-10	0.15-0.40	14.00-42.00	0.45-0.65	0.0-2.9	20-90	---	---	1	7	38
	12-16	35-75	15-45	5-18	1.50-1.80	4.00-42.00	0.09-0.20	0.0-2.9	5.0-15	.17	.17			
	16-26	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			
38F:														
Rock outcrop.														
Clingman-------------	0-12	0-15	0-80	0-10	0.15-0.40	14.00-42.00	0.45-0.65	0.0-2.9	20-90	---	---	1	7	38
	12-16	35-75	15-45	5-18	1.50-1.80	4.00-42.00	0.09-0.20	0.0-2.9	5.0-15	.17	.17			
	16-26	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			
39C:														
Sylco----------------	0-4	5-40	50-80	10-25	1.00-1.20	14.00-42.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	2	5	48
	4-22	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.07-0.18	0.0-2.9	0.2-1.5	.17	.49			
	22-27	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.04-0.12	0.0-2.9	0.1-1.0	.10	.49			
	27-37	---	---	---	---	0.00-0.42	---	---	---	---	---			
Sylvatus-------------	0-2	5-40	50-80	10-25	1.00-1.20	4.00-14.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	2-11	5-50	30-80	10-30	1.20-1.50	4.00-14.00	0.03-0.18	0.0-2.9	0.1-1.0	.15	.49			
	11-16	5-50	30-80	10-35	1.20-1.40	4.00-14.00	0.01-0.10	0.0-2.9	0.0-0.5	.10	.49			
	16-26	---	---	---	---	0.00-0.42	---	---	---	---	---			
39D:														
Sylco----------------	0-4	5-40	50-80	10-25	1.00-1.20	14.00-42.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	2	5	48
	4-22	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.07-0.18	0.0-2.9	0.2-1.5	.17	.49			
	22-27	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.04-0.12	0.0-2.9	0.1-1.0	.10	.49			
	27-37	---	---	---	---	0.00-0.42	---	---	---	---	---			
Sylvatus-------------	0-2	5-40	50-80	10-25	1.00-1.20	4.00-14.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	2-11	5-50	30-80	10-30	1.20-1.50	4.00-14.00	0.03-0.18	0.0-2.9	0.1-1.0	.15	.49			
	11-16	5-50	30-80	10-35	1.20-1.40	4.00-14.00	0.01-0.10	0.0-2.9	0.0-0.5	.10	.49			
	16-26	---	---	---	---	0.00-0.42	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
39E:														
Sylco----------------	0-4	5-40	50-80	10-25	1.00-1.20	14.00-42.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	2	5	48
	4-22	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.07-0.18	0.0-2.9	0.2-1.5	.17	.49			
	22-27	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.04-0.12	0.0-2.9	0.1-1.0	.10	.49			
	27-37	---	---	---	---	0.00-0.42	---	---	---	---	---			
Sylvatus-------------	0-2	5-40	50-80	10-25	1.00-1.20	4.00-14.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	2-11	5-50	30-80	10-30	1.20-1.50	4.00-14.00	0.03-0.18	0.0-2.9	0.1-1.0	.15	.49			
	11-16	5-50	30-80	10-35	1.20-1.40	4.00-14.00	0.01-0.10	0.0-2.9	0.0-0.5	.10	.49			
	16-26	---	---	---	---	0.00-0.42	---	---	---	---	---			
40D:														
Sylco----------------	0-4	5-40	50-80	10-25	1.00-1.20	14.00-42.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	2	5	48
	4-22	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.07-0.18	0.0-2.9	0.2-1.5	.17	.49			
	22-27	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.04-0.12	0.0-2.9	0.1-1.0	.10	.49			
	27-37	---	---	---	---	0.00-0.42	---	---	---	---	---			
Sylvatus-------------	0-2	5-40	50-80	10-25	1.00-1.20	4.00-14.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	2-11	5-50	30-80	10-30	1.20-1.50	4.00-14.00	0.03-0.18	0.0-2.9	0.1-1.0	.15	.49			
	11-16	5-50	30-80	10-35	1.20-1.40	4.00-14.00	0.01-0.10	0.0-2.9	0.0-0.5	.10	.49			
	16-26	---	---	---	---	0.00-0.42	---	---	---	---	---			
40E:														
Sylco----------------	0-4	5-40	50-80	10-25	1.00-1.20	14.00-42.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	2	5	48
	4-22	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.07-0.18	0.0-2.9	0.2-1.5	.17	.49			
	22-27	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.04-0.12	0.0-2.9	0.1-1.0	.10	.49			
	27-37	---	---	---	---	0.00-0.42	---	---	---	---	---			
Sylvatus-------------	0-2	5-40	50-80	10-25	1.00-1.20	4.00-14.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	2-11	5-50	30-80	10-30	1.20-1.50	4.00-14.00	0.03-0.18	0.0-2.9	0.1-1.0	.15	.49			
	11-16	5-50	30-80	10-35	1.20-1.40	4.00-14.00	0.01-0.10	0.0-2.9	0.0-0.5	.10	.49			
	16-26	---	---	---	---	0.00-0.42	---	---	---	---	---			
41B:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			
41C:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
41D:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			
42C:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			
42D:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			
43C:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			
Urban land.														
44D.														
Udorthents														
45D.														
Udorthents-Urban land														
46D:														
Unaka----------------	0-10	30-70	15-50	7-25	1.10-1.50	14.00-42.00	0.14-0.18	0.0-2.9	5.0-15	.17	.20	2	5	56
	10-24	30-60	20-50	7-25	1.35-1.50	14.00-42.00	0.14-0.18	0.0-2.9	0.0-1.0	.17	.20			
	24-34	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			
47C:														
Unaka----------------	0-10	30-70	15-50	7-25	1.10-1.50	14.00-42.00	0.14-0.18	0.0-2.9	5.0-15	.17	.20	2	5	56
	10-24	30-60	20-50	7-25	1.35-1.50	14.00-42.00	0.14-0.18	0.0-2.9	0.0-1.0	.17	.20			
	24-34	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
47C:														
Porters--------------	0-11	30-50	30-50	7-25	1.10-1.60	14.00-42.00	0.16-0.21	0.0-2.9	5.0-15	.28	.28	3	5	56
	11-39	30-75	10-50	12-25	1.40-1.60	14.00-42.00	0.10-0.20	0.0-2.9	0.0-1.0	.24	.24			
	39-46	30-75	10-50	7-25	1.40-1.60	14.00-42.00	0.10-0.20	0.0-2.9	0.0-1.0	.24	.24			
	46-55	---	---	---	---	0.00-14.00	0.00-0.01	---	0.0-0.0	---	---			
	55-65	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			
47D:														
Unaka----------------	0-10	30-70	15-50	7-25	1.10-1.50	14.00-42.00	0.14-0.18	0.0-2.9	5.0-15	.17	.20	2	5	56
	10-24	30-60	20-50	7-25	1.35-1.50	14.00-42.00	0.14-0.18	0.0-2.9	0.0-1.0	.17	.20			
	24-34	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			
Porters--------------	0-11	30-50	30-50	7-25	1.10-1.60	14.00-42.00	0.16-0.21	0.0-2.9	5.0-15	.28	.28	3	5	56
	11-39	30-75	10-50	12-25	1.40-1.60	14.00-42.00	0.10-0.20	0.0-2.9	0.0-1.0	.24	.24			
	39-46	30-75	10-50	7-25	1.40-1.60	14.00-42.00	0.10-0.20	0.0-2.9	0.0-1.0	.24	.24			
	46-55	---	---	---	---	0.00-14.00	0.00-0.01	---	0.0-0.0	---	---			
	55-65	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			
48D:														
Unaka----------------	0-10	30-70	15-50	7-25	1.10-1.50	14.00-42.00	0.14-0.18	0.0-2.9	5.0-15	.17	.20	2	5	56
	10-24	30-60	20-50	7-25	1.35-1.50	14.00-42.00	0.14-0.18	0.0-2.9	0.0-1.0	.17	.20			
	24-34	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			
Rock outcrop.														
48E:														
Unaka----------------	0-10	30-70	15-50	7-25	1.10-1.50	14.00-42.00	0.14-0.18	0.0-2.9	5.0-15	.17	.20	2	5	56
	10-24	30-60	20-50	7-25	1.35-1.50	14.00-42.00	0.14-0.18	0.0-2.9	0.0-1.0	.17	.20			
	24-34	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			
Rock outcrop.														
48F:														
Unaka----------------	0-10	30-70	15-50	7-25	1.10-1.50	14.00-42.00	0.14-0.18	0.0-2.9	5.0-15	.17	.20	2	5	56
	10-24	30-60	20-50	7-25	1.35-1.50	14.00-42.00	0.14-0.18	0.0-2.9	0.0-1.0	.17	.20			
	24-34	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			
Rock outcrop.														
49E:														
Unicoi---------------	0-5	55-80	5-40	5-20	1.45-1.55	14.00-42.00	0.04-0.07	0.0-2.9	0.5-2.0	.10	.24	1	3	48
	5-14	35-80	5-45	5-20	1.45-1.60	14.00-42.00	0.04-0.10	0.0-2.9	0.0-0.5	.10	.37			
	14-19	35-80	5-45	5-20	1.45-1.60	14.00-42.00	0.04-0.10	0.0-2.9	0.0-0.5	.10	.37			
	19-29	---	---	---	---	0.00-0.07	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
49E:														
Marbleyard-----------	0-4	55-80	5-45	10-20	1.20-1.50	14.00-141.00	0.06-0.09	0.0-2.9	0.5-2.0	.05	.15	2	6	48
	4-9	40-80	5-45	10-20	1.20-1.50	14.00-141.00	0.06-0.12	0.0-2.9	0.0-0.5	.10	.24			
	9-23	40-80	5-45	7-18	1.20-1.50	14.00-141.00	0.05-0.13	0.0-2.9	0.0-0.5	.05	.24			
	23-36	40-85	5-45	5-15	1.20-1.50	14.00-141.00	0.01-0.09	0.0-2.9	0.0-0.5	.05	.37			
	36-46	---	---	---	---	0.00-0.07	---	---	---	---	---			
W.														
Water														

Table 17.—Chemical Soil Properties

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
1E:				
Ashe	0-4	2.7-11	2.0-8.0	4.5-6.0
	4-18	1.3-6.7	1.0-5.0	4.5-6.0
	18-28	1.3-6.7	1.0-5.0	4.5-6.0
	28-38	---	---	---
Edneytown	0-4	2.0-11	2.0-8.0	4.5-5.5
	4-7	1.0-5.0	1.0-4.0	4.5-5.5
	7-20	5.0-10	4.0-7.0	4.5-5.5
	20-27	3.0-7.0	2.0-6.0	4.5-5.5
	27-62	1.0-5.0	1.0-4.0	4.5-5.5
2E:				
Ashe	0-4	2.7-11	2.0-8.0	4.5-6.0
	4-18	1.3-6.7	1.0-5.0	4.5-6.0
	18-28	1.3-6.7	1.0-5.0	4.5-6.0
	28-38	---	---	---
Edneyville	0-5	4.0-18	3.0-14	4.5-6.0
	5-11	2.4-9.5	1.8-7.1	4.5-6.0
	11-34	1.7-6.8	1.3-5.1	4.5-6.0
	34-62	1.2-5.0	0.9-3.7	4.5-6.0
3E:				
Ashe	0-4	2.7-11	2.0-8.0	4.5-6.0
	4-18	1.3-6.7	1.0-5.0	4.5-6.0
	18-28	1.3-6.7	1.0-5.0	4.5-6.0
	28-38	---	---	---
Edneyville	0-5	4.0-18	3.0-14	4.5-6.0
	5-11	2.4-9.5	1.8-7.1	4.5-6.0
	11-34	1.7-6.8	1.3-5.1	4.5-6.0
	34-62	1.2-5.0	0.9-3.7	4.5-6.0
4B:				
Braddock	0-8	4.8-11	3.6-8.1	3.5-6.5
	8-15	7.9-15	5.9-11	3.5-6.0
	15-51	8.8-15	6.6-11	3.5-5.5
	51-62	8.8-14	6.6-10	3.5-5.5
4C:				
Braddock	0-8	4.8-11	3.6-8.1	3.5-6.5
	8-15	7.9-15	5.9-11	3.5-6.0
	15-51	8.8-15	6.6-11	3.5-5.5
	51-62	8.8-14	6.6-10	3.5-5.5
4D:				
Braddock	0-8	4.8-11	3.6-8.1	3.5-6.5
	8-15	7.9-15	5.9-11	3.5-6.0
	15-51	8.8-15	6.6-11	3.5-5.5
	51-62	8.8-14	6.6-10	3.5-5.5
5D:				
Brownwood	0-6	3.5-16	2.6-12	4.5-5.5
	6-35	1.3-5.6	1.0-4.2	4.5-5.5
	35-45	---	---	---
	45-55	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
5E:				
Brownwood------------	0-6	3.5-16	2.6-12	4.5-5.5
	6-35	1.3-5.6	1.0-4.2	4.5-5.5
	35-45	---	---	---
	45-55	---	---	---
6A:				
Codorus--------------	0-7	10-18	7.0-13	4.5-6.0
	7-19	6.0-13	5.0-10	4.5-6.0
	19-37	6.0-13	5.0-10	5.1-6.5
	37-49	4.0-13	3.0-10	5.1-6.5
	49-62	4.0-13	3.0-10	5.1-6.5
7A:				
Comus----------------	0-9	3.5-14	2.6-10	4.5-6.0
	9-31	1.2-5.6	0.9-4.2	4.5-6.0
	31-53	1.2-5.6	0.9-4.2	4.5-6.0
	53-62	0.5-5.6	0.4-4.2	4.5-6.0
8C:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
8D:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
8E:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
9D:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
9E:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
10D:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
Rock outcrop.				

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
10E:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
Rock outcrop.				
11C:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
Urban land.				
12A:				
Craigsville----------	0-6	3.8-13	2.6-9.6	4.5-5.5
	6-32	1.2-5.4	0.9-4.1	4.5-5.5
	32-62	1.2-4.2	0.9-3.1	4.5-5.5
13B:				
Delanco--------------	0-10	6.2-15	4.7-12	3.5-5.5
	10-16	1.8-8.0	1.3-6.0	3.5-5.5
	16-41	6.3-12	4.7-8.7	3.5-5.5
	41-47	5.2-11	3.9-7.9	3.5-5.5
	47-62	1.8-9.9	1.3-7.4	3.5-5.5
14C:				
Delanco--------------	0-10	6.2-15	4.7-12	3.5-5.5
	10-16	1.8-8.0	1.3-6.0	3.5-5.5
	16-41	6.3-12	4.7-8.7	3.5-5.5
	41-47	5.2-11	3.9-7.9	3.5-5.5
	47-62	1.8-9.9	1.3-7.4	3.5-5.5
15B:				
Delanco--------------	0-10	6.2-15	4.7-12	3.5-5.5
	10-16	1.8-8.0	1.3-6.0	3.5-5.5
	16-41	6.3-12	4.7-8.7	3.5-5.5
	41-47	5.2-11	3.9-7.9	3.5-5.5
	47-62	1.8-9.9	1.3-7.4	3.5-5.5
Kinkora--------------	0-7	5.8-18	4.3-14	3.5-5.5
	7-16	4.6-14	3.5-10	3.5-5.5
	16-38	12-20	9.2-15	3.5-5.5
	38-48	5.2-11	3.9-7.9	3.5-5.5
	48-62	3.5-8.1	2.6-6.1	3.5-5.5
16C:				
Edneytown------------	0-4	2.0-11	2.0-8.0	4.5-5.5
	4-7	1.0-5.0	1.0-4.0	4.5-5.5
	7-20	5.0-10	4.0-7.0	4.5-5.5
	20-27	3.0-7.0	2.0-6.0	4.5-5.5
	27-62	1.0-5.0	1.0-4.0	4.5-5.5
Ashe-----------------	0-4	2.7-11	2.0-8.0	4.5-6.0
	4-18	1.3-6.7	1.0-5.0	4.5-6.0
	18-28	1.3-6.7	1.0-5.0	4.5-6.0
	28-38	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
16D:				
Edneytown-----------	0-4	2.0-11	2.0-8.0	4.5-5.5
	4-7	1.0-5.0	1.0-4.0	4.5-5.5
	7-20	5.0-10	4.0-7.0	4.5-5.5
	20-27	3.0-7.0	2.0-6.0	4.5-5.5
	27-62	1.0-5.0	1.0-4.0	4.5-5.5
Ashe-----------------	0-4	2.7-11	2.0-8.0	4.5-6.0
	4-18	1.3-6.7	1.0-5.0	4.5-6.0
	18-28	1.3-6.7	1.0-5.0	4.5-6.0
	28-38	---	---	---
17C:				
Edneytown-----------	0-4	2.0-11	2.0-8.0	4.5-5.5
	4-7	1.0-5.0	1.0-4.0	4.5-5.5
	7-20	5.0-10	4.0-7.0	4.5-5.5
	20-27	3.0-7.0	2.0-6.0	4.5-5.5
	27-62	1.0-5.0	1.0-4.0	4.5-5.5
Urban land.				
18C:				
Edneyville-----------	0-5	4.0-18	3.0-14	4.5-6.0
	5-11	2.4-9.5	1.8-7.1	4.5-6.0
	11-34	1.7-6.8	1.3-5.1	4.5-6.0
	34-62	1.2-5.0	0.9-3.7	4.5-6.0
Ashe-----------------	0-4	2.7-11	2.0-8.0	4.5-6.0
	4-18	1.3-6.7	1.0-5.0	4.5-6.0
	18-28	1.3-6.7	1.0-5.0	4.5-6.0
	28-38	---	---	---
18D:				
Edneyville-----------	0-5	4.0-18	3.0-14	4.5-6.0
	5-11	2.4-9.5	1.8-7.1	4.5-6.0
	11-34	1.7-6.8	1.3-5.1	4.5-6.0
	34-62	1.2-5.0	0.9-3.7	4.5-6.0
Ashe-----------------	0-4	2.7-11	2.0-8.0	4.5-6.0
	4-18	1.3-6.7	1.0-5.0	4.5-6.0
	18-28	1.3-6.7	1.0-5.0	4.5-6.0
	28-38	---	---	---
19D:				
Edneyville-----------	0-5	4.0-18	3.0-14	4.5-6.0
	5-11	2.4-9.5	1.8-7.1	4.5-6.0
	11-34	1.7-6.8	1.3-5.1	4.5-6.0
	34-62	1.2-5.0	0.9-3.7	4.5-6.0
Ashe-----------------	0-4	2.7-11	2.0-8.0	4.5-6.0
	4-18	1.3-6.7	1.0-5.0	4.5-6.0
	18-28	1.3-6.7	1.0-5.0	4.5-6.0
	28-38	---	---	---
20B:				
Elsinboro------------	0-10	4.2-11	3.2-8.4	4.5-5.5
	10-18	2.6-6.2	1.9-4.6	4.5-5.5
	18-45	4.5-9.6	3.4-7.2	4.5-5.5
	45-62	2.0-9.6	1.5-7.2	4.5-5.5

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
21B:				
Glenelg	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
Hayesville	0-6	1.8-4.2	1.4-3.2	4.5-6.0
	6-11	0.5-3.1	0.4-2.3	4.5-6.0
	11-43	3.5-6.1	2.6-4.6	4.5-6.0
	43-49	2.0-5.1	1.5-3.8	4.5-6.0
	49-62	1.0-3.6	0.8-2.7	4.5-6.0
22C:				
Glenelg	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
22D:				
Glenelg	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
22E:				
Glenelg	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
22F:				
Glenelg	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
23C:				
Glenelg	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
23D:				
Glenelg	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
23E:				
Glenelg	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
24C:				
Glenelg	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
Urban land.				
25C:				
Greenlee	0-7	3.0-15	2.0-11	3.6-6.0
	7-53	3.0-11	2.0-8.0	3.6-6.0
	53-62	1.0-6.0	1.0-4.0	3.6-6.0

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
25D:				
Greenlee-------------	0-7	3.0-15	2.0-11	3.6-6.0
	7-53	3.0-11	2.0-8.0	3.6-6.0
	53-62	1.0-6.0	1.0-4.0	3.6-6.0
26A:				
Hatboro--------------	0-8	7.0-20	5.2-15	4.5-7.3
	8-45	5.2-13	3.9-10	4.5-7.3
	45-62	1.8-17	1.3-13	5.6-6.5
27B:				
Hayesville-----------	0-6	1.8-4.2	1.4-3.2	4.5-6.0
	6-11	0.5-3.1	0.4-2.3	4.5-6.0
	11-43	3.5-6.1	2.6-4.6	4.5-6.0
	43-49	2.0-5.1	1.5-3.8	4.5-6.0
	49-62	1.0-3.6	0.8-2.7	4.5-6.0
27C:				
Hayesville-----------	0-6	1.8-4.2	1.4-3.2	4.5-6.0
	6-11	0.5-3.1	0.4-2.3	4.5-6.0
	11-43	3.5-6.1	2.6-4.6	4.5-6.0
	43-49	2.0-5.1	1.5-3.8	4.5-6.0
	49-62	1.0-3.6	0.8-2.7	4.5-6.0
27D:				
Hayesville-----------	0-6	1.8-4.2	1.4-3.2	4.5-6.0
	6-11	0.5-3.1	0.4-2.3	4.5-6.0
	11-43	3.5-6.1	2.6-4.6	4.5-6.0
	43-49	2.0-5.1	1.5-3.8	4.5-6.0
	49-62	1.0-3.6	0.8-2.7	4.5-6.0
28C:				
Hayesville-----------	0-6	1.8-4.2	1.4-3.2	4.5-6.0
	6-11	0.5-3.1	0.4-2.3	4.5-6.0
	11-43	3.5-6.1	2.6-4.6	4.5-6.0
	43-49	2.0-5.1	1.5-3.8	4.5-6.0
	49-62	1.0-3.6	0.8-2.7	4.5-6.0
Urban land.				
29C:				
Junaluska------------	0-5	4.0-16	3.0-12	3.5-6.0
	5-30	5.6-11	4.2-8.2	3.5-6.0
	30-45	---	---	---
	45-55	---	---	---
29D:				
Junaluska------------	0-5	4.0-16	3.0-12	3.5-6.0
	5-30	5.6-11	4.2-8.2	3.5-6.0
	30-45	---	---	---
	45-55	---	---	---
29E:				
Junaluska------------	0-5	4.0-16	3.0-12	3.5-6.0
	5-30	5.6-11	4.2-8.2	3.5-6.0
	30-45	---	---	---
	45-55	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
30A:				
Kinkora	0-7	5.8-18	4.3-14	3.5-5.5
	7-16	4.6-14	3.5-10	3.5-5.5
	16-38	12-20	9.2-15	3.5-5.5
	38-48	5.2-11	3.9-7.9	3.5-5.5
	48-62	3.5-8.1	2.6-6.1	3.5-5.5
31D:				
Marbleyard	0-4	2.5-6.1	1.9-4.7	3.5-5.5
	4-9	1.8-5.6	1.3-4.2	3.5-5.5
	9-23	1.2-4.9	0.9-3.7	3.5-5.5
	23-36	3.6-9.5	2.7-7.1	3.5-5.5
	36-46	---	---	---
Unicoi	0-5	2.4-9.5	1.8-7.1	3.5-5.5
	5-14	1.2-6.4	0.9-4.6	3.5-5.5
	14-19	1.2-6.1	0.9-4.6	3.5-5.5
	19-29	---	---	---
32B:				
Myersville	0-4	4.0-14	3.0-10	5.1-6.0
	4-25	6.3-13	4.7-10	5.1-6.0
	25-58	1.8-11	1.4-8.0	5.1-6.0
	58-70	---	---	---
	70-80	---	---	---
32C:				
Myersville	0-4	4.0-14	3.0-10	5.1-6.0
	4-25	6.3-13	4.7-10	5.1-6.0
	25-58	1.8-11	1.4-8.0	5.1-6.0
	58-70	---	---	---
	70-80	---	---	---
32D:				
Myersville	0-4	4.0-14	3.0-10	5.1-6.0
	4-25	6.3-13	4.7-10	5.1-6.0
	25-58	1.8-11	1.4-8.0	5.1-6.0
	58-70	---	---	---
	70-80	---	---	---
32E:				
Myersville	0-4	4.0-14	3.0-10	5.1-6.0
	4-25	6.3-13	4.7-10	5.1-6.0
	25-58	1.8-11	1.4-8.0	5.1-6.0
	58-70	---	---	---
	70-80	---	---	---
33C:				
Myersville	0-4	4.0-14	3.0-10	5.1-6.0
	4-25	6.3-13	4.7-10	5.1-6.0
	25-58	1.8-11	1.4-8.0	5.1-6.0
	58-70	---	---	---
	70-80	---	---	---
33D:				
Myersville	0-4	4.0-14	3.0-10	5.1-6.0
	4-25	6.3-13	4.7-10	5.1-6.0
	25-58	1.8-11	1.4-8.0	5.1-6.0
	58-70	---	---	---
	70-80	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
33E:				
Myersville-----------	0-4	4.0-14	3.0-10	5.1-6.0
	4-25	6.3-13	4.7-10	5.1-6.0
	25-58	1.8-11	1.4-8.0	5.1-6.0
	58-70	---	---	---
	70-80	---	---	---
34C:				
Myersville-----------	0-4	4.0-14	3.0-10	5.1-6.0
	4-25	6.3-13	4.7-10	5.1-6.0
	25-58	1.8-11	1.4-8.0	5.1-6.0
	58-70	---	---	---
	70-80	---	---	---
Urban land.				
35D:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
35E:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
36D:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
36E:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
36F:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
37F:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
Rock outcrop.				

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
38D:				
Rock outcrop.				
Clingman-------------	0-12	47-120	35-90	3.5-4.4
	12-16	6.7-33	5.0-25	3.5-5.5
	16-26	---	---	---
38F:				
Rock outcrop.				
Clingman-------------	0-12	47-120	35-90	3.5-4.4
	12-16	6.7-33	5.0-25	3.5-5.5
	16-26	---	---	---
39C:				
Sylco----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-22	3.1-11	2.3-8.2	3.5-5.5
	22-27	2.7-9.8	2.0-7.3	3.5-5.5
	27-37	---	---	---
Sylvatus-------------	0-2	3.6-11	2.7-8.1	3.5-5.0
	2-11	2.7-9.8	2.0-7.3	3.5-5.0
	11-16	2.6-9.9	1.9-7.4	3.5-5.0
	16-26	---	---	---
39D:				
Sylco----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-22	3.1-11	2.3-8.2	3.5-5.5
	22-27	2.7-9.8	2.0-7.3	3.5-5.5
	27-37	---	---	---
Sylvatus-------------	0-2	3.6-11	2.7-8.1	3.5-5.0
	2-11	2.7-9.8	2.0-7.3	3.5-5.0
	11-16	2.6-9.9	1.9-7.4	3.5-5.0
	16-26	---	---	---
39E:				
Sylco----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-22	3.1-11	2.3-8.2	3.5-5.5
	22-27	2.7-9.8	2.0-7.3	3.5-5.5
	27-37	---	---	---
Sylvatus-------------	0-2	3.6-11	2.7-8.1	3.5-5.0
	2-11	2.7-9.8	2.0-7.3	3.5-5.0
	11-16	2.6-9.9	1.9-7.4	3.5-5.0
	16-26	---	---	---
40D:				
Sylco----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-22	3.1-11	2.3-8.2	3.5-5.5
	22-27	2.7-9.8	2.0-7.3	3.5-5.5
	27-37	---	---	---
Sylvatus-------------	0-2	3.6-11	2.7-8.1	3.5-5.0
	2-11	2.7-9.8	2.0-7.3	3.5-5.0
	11-16	2.6-9.9	1.9-7.4	3.5-5.0
	16-26	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
40E:				
Sylco	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-22	3.1-11	2.3-8.2	3.5-5.5
	22-27	2.7-9.8	2.0-7.3	3.5-5.5
	27-37	---	---	---
Sylvatus	0-2	3.6-11	2.7-8.1	3.5-5.0
	2-11	2.7-9.8	2.0-7.3	3.5-5.0
	11-16	2.6-9.9	1.9-7.4	3.5-5.0
	16-26	---	---	---
41B:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
41C:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
41D:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
42C:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
42D:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
43C:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
Urban land.				
44D.				
Udorthents				

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
45D. Udorthents-Urban land				
46D:				
Unaka	0-10	7.5-20	5.6-15	4.5-5.5
	10-24	1.8-4.8	1.4-3.6	4.5-5.5
	24-34	---	---	---
47C:				
Unaka	0-10	7.5-20	5.6-15	4.5-5.5
	10-24	1.8-4.8	1.4-3.6	4.5-5.5
	24-34	---	---	---
Porters	0-11	7.5-20	5.6-15	4.5-6.5
	11-39	1.8-4.8	1.4-3.6	4.5-6.5
	39-46	1.8-4.8	1.4-3.6	4.5-6.5
	46-55	---	---	---
	55-65	---	---	---
47D:				
Unaka	0-10	7.5-20	5.6-15	4.5-5.5
	10-24	1.8-4.8	1.4-3.6	4.5-5.5
	24-34	---	---	---
Porters	0-11	7.5-20	5.6-15	4.5-6.5
	11-39	1.8-4.8	1.4-3.6	4.5-6.5
	39-46	1.8-4.8	1.4-3.6	4.5-6.5
	46-55	---	---	---
	55-65	---	---	---
48D:				
Unaka	0-10	7.5-20	5.6-15	4.5-5.5
	10-24	1.8-4.8	1.4-3.6	4.5-5.5
	24-34	---	---	---
Rock outcrop.				
48E:				
Unaka	0-10	7.5-20	5.6-15	4.5-5.5
	10-24	1.8-4.8	1.4-3.6	4.5-5.5
	24-34	---	---	---
Rock outcrop.				
48F:				
Unaka	0-10	7.5-20	5.6-15	4.5-5.5
	10-24	1.8-4.8	1.4-3.6	4.5-5.5
	24-34	---	---	---
Rock outcrop.				
49E:				
Unicoi	0-5	2.4-9.5	1.8-7.1	3.5-5.5
	5-14	1.2-6.4	0.9-4.6	3.5-5.5
	14-19	1.2-6.1	0.9-4.6	3.5-5.5
	19-29	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
49E:				
Marbleyard-----------	0-4	2.5-6.1	1.9-4.7	3.5-5.5
	4-9	1.8-5.6	1.3-4.2	3.5-5.5
	9-23	1.2-4.9	0.9-3.7	3.5-5.5
	23-36	3.6-9.5	2.7-7.1	3.5-5.5
	36-46	---	---	---
W.				
Water				

Table 18.—Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
1E:										
Ashe	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Edneytown	B	High	Jan-Dec	---	---	---	---	None	---	None
2E:										
Ashe	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Edneyville	B	Medium	Jan-Dec	---	---	---	---	None	---	None
3E:										
Ashe	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Edneyville	B	Medium	Jan-Dec	---	---	---	---	None	---	None
4B:										
Braddock	B	High	Jan-Dec	---	---	---	---	None	---	None
4C:										
Braddock	B	High	Jan-Dec	---	---	---	---	None	---	None
4D:										
Braddock	B	High	Jan-Dec	---	---	---	---	None	---	None
5D:										
Brownwood	B	High	Jan-Dec	---	---	---	---	None	---	None
5E:										
Brownwood	B	High	Jan-Dec	---	---	---	---	None	---	None
6A:										
Codorus	C	Very high	Jan-May	1.0-2.0	>6.0	---	---	None	Brief	Frequent
			Jun-Sep	2.0-6.6	>6.0	---	---	None	Brief	Frequent
			Oct-Dec	1.0-2.0	>6.0	---	---	None	Brief	Frequent
7A:										
Comus	B	Low	Jan-Dec	---	---	---	---	None	Brief	Frequent
8C:										
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
8D:										
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None
8E:										
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None
9D:										
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None
9E:										
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None
10D:										
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D	---	Jan-Dec	---	---	---	---	None	---	None
10E:										
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D	---	Jan-Dec	---	---	---	---	None	---	None
11C:										
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Urban land.										
12A:										
Craigsville	B	Very low	Jan-Dec	---	---	---	---	None	Brief	Frequent
13B:										
Delanco	C	Medium	Jan-May	1.0-2.5	>6.0	---	---	None	Very brief	Rare
			Jun	2.5-6.0	>6.0	---	---	None	Very brief	Rare
			Jul-Aug	---	---	---	---	None	Very brief	Rare
			Sep	2.5-6.0	>6.0	---	---	None	Very brief	Rare
			Oct-Dec	1.0-2.5	>6.0	---	---	None	Very brief	Rare
14C:										
Delanco	C	Medium	Jan-May	1.0-2.5	>6.0	---	---	None	---	None
			Jun	2.5-6.0	>6.0	---	---	None	---	None
			Jul-Aug	---	---	---	---	None	---	None
			Sep	2.5-6.0	>6.0	---	---	None	---	None
			Oct-Dec	1.0-2.5	>6.0	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
15B:										
Delanco	C	Low	Jan-May	1.0-2.5	>6.0	---	---	None	Very brief	Rare
			Jun	2.5-6.0	>6.0	---	---	None	Very brief	Rare
			Jul-Aug	---	---	---	---	None	Very brief	Rare
			Sep	2.5-6.0	>6.0	---	---	None	Very brief	Rare
			Oct-Dec	1.0-2.5	>6.0	---	---	None	Very brief	Rare
Kinkora	D	Negligible	Jan-May	0.0-0.5	>6.0	0.1-0.5	Brief	Occasional	Very brief	Rare
			Jun-Sep	0.5-6.0	>6.0	0.1-0.5	Brief	Occasional	Very brief	Rare
			Oct-Dec	0.0-0.5	>6.0	0.1-0.5	Brief	Occasional	Very brief	Rare
16C:										
Edneytown	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Ashe	B	Very high	Jan-Dec	---	---	---	---	None	---	None
16D:										
Edneytown	B	High	Jan-Dec	---	---	---	---	None	---	None
Ashe	B	Very high	Jan-Dec	---	---	---	---	None	---	None
17C:										
Edneytown	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Urban land.										
18C:										
Edneyville	B	Low	Jan-Dec	---	---	---	---	None	---	None
Ashe	B	Very high	Jan-Dec	---	---	---	---	None	---	None
18D:										
Edneyville	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Ashe	B	Very high	Jan-Dec	---	---	---	---	None	---	None
19D:										
Edneyville	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Ashe	B	Very high	Jan-Dec	---	---	---	---	None	---	None
20B:										
Elsinboro	B	Medium	Jan-Dec	---	---	---	---	None	Very brief	Rare
21B:										
Glenelg	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Hayesville	B	Medium	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
22C:										
Glenelg	B	Medium	Jan-Dec	---	---	---	---	None	---	None
22D:										
Glenelg	B	High	Jan-Dec	---	---	---	---	None	---	None
22E:										
Glenelg	B	High	Jan-Dec	---	---	---	---	None	---	None
22F:										
Glenelg	B	High	Jan-Dec	---	---	---	---	None	---	None
23C:										
Glenelg	B	Medium	Jan-Dec	---	---	---	---	None	---	None
23D:										
Glenelg	B	High	Jan-Dec	---	---	---	---	None	---	None
23E:										
Glenelg	B	High	Jan-Dec	---	---	---	---	None	---	None
24C:										
Glenelg	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Urban land.										
25C:										
Greenlee	B	Low	Jan-Dec	---	---	---	---	None	---	None
25D:										
Greenlee	B	Medium	Jan-Dec	---	---	---	---	None	---	None
26A:										
Hatboro	D	Negligible	Jan-May	0.0-0.5	>6.0	0.1-0.5	Brief	Frequent	Brief	Frequent
			Jun-Sep	0.5-6.0	>6.0	0.1-0.5	Brief	Frequent	Brief	Frequent
			Oct-Dec	0.0-0.5	>6.0	0.1-0.5	Brief	Frequent	Brief	Frequent
27B:										
Hayesville	B	Medium	Jan-Dec	---	---	---	---	None	---	None
27C:										
Hayesville	B	Medium	Jan-Dec	---	---	---	---	None	---	None
27D:										
Hayesville	B	High	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
28C:										
Hayesville	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Urban land.										
29C:										
Junaluska	B	Medium	Jan-Dec	---	---	---	---	None	---	None
29D:										
Junaluska	B	High	Jan-Dec	---	---	---	---	None	---	None
29E:										
Junaluska	B	High	Jan-Dec	---	---	---	---	None	---	None
30A:										
Kinkora	D	Negligible	Jan-May	0.0-0.5	>6.0	0.1-0.5	Brief	Occasional	Very brief	Rare
			Jun-Sep	0.5-6.0	>6.0	0.1-0.5	Brief	Occasional	Very brief	Rare
			Oct-Dec	0.0-0.5	>6.0	0.1-0.5	Brief	Occasional	Very brief	Rare
31D:										
Marbleyard	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Unicoi	C	Very high	Jan-Dec	---	---	---	---	None	---	None
32B:										
Myersville	B	Medium	Jan-Dec	---	---	---	---	None	---	None
32C:										
Myersville	B	Medium	Jan-Dec	---	---	---	---	None	---	None
32D:										
Myersville	B	High	Jan-Dec	---	---	---	---	None	---	None
32E:										
Myersville	B	High	Jan-Dec	---	---	---	---	None	---	None
33C:										
Myersville	B	Medium	Jan-Dec	---	---	---	---	None	---	None
33D:										
Myersville	B	High	Jan-Dec	---	---	---	---	None	---	None
33E:										
Myersville	B	High	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
34C:										
Myersville	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Urban land.										
35D:										
Peaks	C	Very high	Jan-Dec	---	---	---	---	None	---	None
35E:										
Peaks	C	Very high	Jan-Dec	---	---	---	---	None	---	None
36D:										
Peaks	C	Very high	Jan-Dec	---	---	---	---	None	---	None
36E:										
Peaks	C	Very high	Jan-Dec	---	---	---	---	None	---	None
36F:										
Peaks	C	Very high	Jan-Dec	---	---	---	---	None	---	None
37F:										
Peaks	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D	---	Jan-Dec	---	---	---	---	None	---	None
38D:										
Rock outcrop	D	---	Jan-Dec	---	---	---	---	None	---	None
Clingman	D	Very high	Jan-Dec	---	---	---	---	None	---	None
38F:										
Rock outcrop	D	---	Jan-Dec	---	---	---	---	None	---	None
Clingman	D	Very high	Jan-Dec	---	---	---	---	None	---	None
39C:										
Sylco	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Sylvatus	D	Very high	Jan-Dec	---	---	---	---	None	---	None
39D:										
Sylco	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Sylvatus	D	Very high	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
39E:										
Sylco	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Sylvatus	D	Very high	Jan-Dec	---	---	---	---	None	---	None
40D:										
Sylco	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Sylvatus	D	Very high	Jan-Dec	---	---	---	---	None	---	None
40E:										
Sylco	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Sylvatus	D	Very high	Jan-Dec	---	---	---	---	None	---	None
41B:										
Tate	B	Medium	Jan-Dec	---	---	---	---	None	---	None
41C:										
Tate	B	Medium	Jan-Dec	---	---	---	---	None	---	None
41D:										
Tate	B	High	Jan-Dec	---	---	---	---	None	---	None
42C:										
Tate	B	Medium	Jan-Dec	---	---	---	---	None	---	None
42D:										
Tate	B	High	Jan-Dec	---	---	---	---	None	---	None
43C:										
Tate	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Urban land.										
44D:										
Udorthents	D	Very high	Jan-Dec	---	---	---	---	None	---	None
45D:										
Udorthents	D	Very high	Jan-Dec	---	---	---	---	None	---	None
Urban land.										
46D:										
Unaka	B	Very high	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
47C:										
Unaka	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Porters	B	Low	Jan-Dec	---	---	---	---	None	---	None
47D:										
Unaka	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Porters	B	Medium	Jan-Dec	---	---	---	---	None	---	None
48D:										
Unaka	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D	---	Jan-Dec	---	---	---	---	None	---	None
48E:										
Unaka	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D	---	Jan-Dec	---	---	---	---	None	---	None
48F:										
Unaka	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D	---	Jan-Dec	---	---	---	---	None	---	None
49E:										
Unicoi	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Marbleyard	C	Very high	Jan-Dec	---	---	---	---	None	---	None
W.										
Water										

Table 19.—Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
1E:						
Ashe	Lithic bedrock	20-40	Indurated	Moderate	Low	High
Edneytown	---	---	---	Moderate	Moderate	Moderate
2E:						
Ashe	Lithic bedrock	20-40	Indurated	Moderate	Low	High
Edneyville	---	---	---	Moderate	Low	High
3E:						
Ashe	Lithic bedrock	20-40	Indurated	Moderate	Low	High
Edneyville	---	---	---	Moderate	Low	High
4B:						
Braddock	---	---	---	Moderate	High	Moderate
4C:						
Braddock	---	---	---	Moderate	High	Moderate
4D:						
Braddock	---	---	---	Moderate	High	Moderate
5D:						
Brownwood	Paralithic bedrock	20-40	Moderately cemented	Moderate	Low	High
	Lithic bedrock	40-60	Indurated			
5E:						
Brownwood	Paralithic bedrock	20-40	Moderately cemented	Moderate	Low	High
	Lithic bedrock	40-60	Indurated			
6A:						
Codorus	---	---	---	High	High	Moderate
7A:						
Comus	---	---	---	Moderate	Low	High
8C:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
8D:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
8E:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
9D:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
9E:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
10D:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
Rock outcrop	Lithic bedrock	0-0	Indurated	None	---	---
10E:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
Rock outcrop	Lithic bedrock	0-0	Indurated	None	---	---
11C:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
Urban land.						
12A:						
Craigsville	---	---	---	Moderate	Moderate	Moderate
13B:						
Delanco	---	---	---	High	High	High
14C:						
Delanco	---	---	---	High	High	High
15B:						
Delanco	---	---	---	High	High	High
Kinkora	---	---	---	High	High	High
16C:						
Edneytown	---	---	---	Moderate	Moderate	Moderate
Ashe	Lithic bedrock	20-40	Indurated	Moderate	Low	High
16D:						
Edneytown	---	---	---	Moderate	Moderate	Moderate
Ashe	Lithic bedrock	20-40	Indurated	Moderate	Low	High
17C:						
Edneytown	---	---	---	Moderate	Moderate	Moderate
Urban land.						
18C:						
Edneyville	---	---	---	Moderate	Low	High
Ashe	Lithic bedrock	20-40	Indurated	Moderate	Low	High
18D:						
Edneyville	---	---	---	Moderate	Low	High
Ashe	Lithic bedrock	20-40	Indurated	Moderate	Low	High

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
19D:						
Edneyville----------	---	---	---	Moderate	Low	High
Ashe----------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
20B:						
Elsinboro-----------	---	---	---	Moderate	Moderate	High
21B:						
Glenelg-------------	---	---	---	Moderate	Low	High
Hayesville----------	---	---	---	Moderate	Moderate	Moderate
22C:						
Glenelg-------------	---	---	---	Moderate	Low	High
22D:						
Glenelg-------------	---	---	---	Moderate	Low	High
22E:						
Glenelg-------------	---	---	---	Moderate	Low	High
22F:						
Glenelg-------------	---	---	---	Moderate	Low	High
23C:						
Glenelg-------------	---	---	---	Moderate	Low	High
23D:						
Glenelg-------------	---	---	---	Moderate	Low	High
23E:						
Glenelg-------------	---	---	---	Moderate	Low	High
24C:						
Glenelg-------------	---	---	---	Moderate	Low	High
Urban land.						
25C:						
Greenlee------------	---	---	---	Moderate	Low	High
25D:						
Greenlee------------	---	---	---	Moderate	Low	High
26A:						
Hatboro-------------	---	---	---	High	High	Moderate
27B:						
Hayesville----------	---	---	---	Moderate	Moderate	Moderate
27C:						
Hayesville----------	---	---	---	Moderate	Moderate	Moderate
27D:						
Hayesville----------	---	---	---	Moderate	Moderate	Moderate
28C:						
Hayesville----------	---	---	---	Moderate	Moderate	Moderate
Urban land.						

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
29C:						
Junaluska-----------	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	40-79	Indurated			
29D:						
Junaluska-----------	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	40-79	Indurated			
29E:						
Junaluska-----------	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	40-79	Indurated			
30A:						
Kinkora-------------	---	---	---	High	High	High
31D:						
Marbleyard----------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
Unicoi--------------	Lithic bedrock	10-20	Indurated	Moderate	Low	Moderate
32B:						
Myersville----------	Paralithic bedrock	40-60	Moderately cemented	Moderate	Moderate	Moderate
	Lithic bedrock	60-80	Indurated			
32C:						
Myersville----------	Paralithic bedrock	40-60	Moderately cemented	Moderate	Moderate	Moderate
	Lithic bedrock	60-80	Indurated			
32D:						
Myersville----------	Paralithic bedrock	40-60	Moderately cemented	Moderate	Moderate	Moderate
	Lithic bedrock	60-80	Indurated			
32E:						
Myersville----------	Paralithic bedrock	40-60	Moderately cemented	Moderate	Moderate	Moderate
	Lithic bedrock	60-80	Indurated			
33C:						
Myersville----------	Paralithic bedrock	40-60	Moderately cemented	Moderate	Moderate	Moderate
	Lithic bedrock	60-80	Indurated			
33D:						
Myersville----------	Paralithic bedrock	40-60	Moderately cemented	Moderate	Moderate	Moderate
	Lithic bedrock	60-80	Indurated			
33E:						
Myersville----------	Paralithic bedrock	40-60	Moderately cemented	Moderate	Moderate	Moderate
	Lithic bedrock	60-80	Indurated			

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In				
34C:						
Myersville----------	Paralithic bedrock	40-60	Moderately cemented	Moderate	Moderate	Moderate
	Lithic bedrock	60-80	Indurated			
Urban land.						
35D:						
Peaks---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
35E:						
Peaks---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
36D:						
Peaks---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
36E:						
Peaks---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
36F:						
Peaks---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
37F:						
Peaks---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
Rock outcrop--------	Lithic bedrock	0-0	Indurated	None	---	---
38D:						
Rock outcrop--------	Lithic bedrock	0-0	Indurated	None	---	---
Clingman------------	Lithic bedrock	3-20	Indurated	High	High	High
38F:						
Rock outcrop--------	Lithic bedrock	0-0	Indurated	None	---	---
Clingman------------	Lithic bedrock	3-20	Indurated	High	High	High
39C:						
Sylco---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Sylvatus------------	Lithic bedrock	10-20	Indurated	Moderate	Moderate	Moderate
39D:						
Sylco---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Sylvatus------------	Lithic bedrock	10-20	Indurated	Moderate	Moderate	Moderate
39E:						
Sylco---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Sylvatus------------	Lithic bedrock	10-20	Indurated	Moderate	Moderate	Moderate
40D:						
Sylco---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Sylvatus------------	Lithic bedrock	10-20	Indurated	Moderate	Moderate	Moderate
40E:						
Sylco---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Sylvatus------------	Lithic bedrock	10-20	Indurated	Moderate	Moderate	Moderate

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
41B:						
Tate----------------	---	---	---	Moderate	Moderate	Moderate
41C:						
Tate----------------	---	---	---	Moderate	Moderate	Moderate
41D:						
Tate----------------	---	---	---	Moderate	Moderate	Moderate
42C:						
Tate----------------	---	---	---	Moderate	Moderate	Moderate
42D:						
Tate----------------	---	---	---	Moderate	Moderate	Moderate
43C:						
Tate----------------	---	---	---	Moderate	Moderate	Moderate
Urban land.						
44D.						
Udorthents						
45D.						
Udorthents-Urban land						
46D:						
Unaka---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
47C:						
Unaka---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Porters-------------	Paralithic bedrock	40-60	Moderately cemented	Moderate	Low	High
	Lithic bedrock	40-60	Indurated			
47D:						
Unaka---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Porters-------------	Paralithic bedrock	40-60	Moderately cemented	Moderate	Low	High
	Lithic bedrock	40-60	Indurated			
48D:						
Unaka---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Rock outcrop--------	Lithic bedrock	0-0	Indurated	None	---	---
48E:						
Unaka---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Rock outcrop--------	Lithic bedrock	0-0	Indurated	None	---	---
48F:						
Unaka---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Rock outcrop--------	Lithic bedrock	0-0	Indurated	None	---	---

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In				
49E:						
Unicoi--------------	Lithic bedrock	10-20	Indurated	Moderate	Low	Moderate
Marbleyard----------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
W.						
Water						

Table 20.—Classification of the Soils

Soil name	Family or higher taxonomic class
Ashe	Coarse-loamy, mixed, active, mesic Typic Dystrudepts
Braddock	Fine, mixed, semiactive, mesic Typic Hapludults
Brownwood	Coarse-loamy, paramicaceous, mesic Typic Dystrudepts
Clingman	Dysic, frigid Lithic Udifolists
Codorus	Fine-loamy, mixed, active, mesic Fluvaquentic Dystrudepts
Comus	Coarse-loamy, mixed, active, mesic Fluventic Dystrudepts
Cowee	Fine-loamy, parasesquic, mesic Typic Hapludults
Craigsville	Loamy-skeletal, mixed, superactive, mesic Fluventic Dystrudepts
Delanco	Fine-loamy, mixed, semiactive, mesic Aquic Hapludults
Edneytown	Fine-loamy, mixed, active, mesic Typic Hapludults
Edneyville	Coarse-loamy, mixed, active, mesic Typic Dystrudepts
Elsinboro	Fine-loamy, mixed, semiactive, mesic Typic Hapludults
Glenelg	Fine-loamy, mixed, semiactive, mesic Typic Hapludults
Greenlee	Loamy-skeletal, mixed, semiactive, mesic Typic Dystrudepts
Hatboro	Fine-loamy, mixed, active, nonacid, mesic Fluvaquentic Endoaquepts
Hayesville	Fine, kaolinitic, mesic Typic Kanhapludults
Junaluska	Fine-loamy, mixed, subactive, mesic Typic Hapludults
Kinkora	Fine, mixed, semiactive, mesic Typic Endoaquults
Marbleyard	Loamy-skeletal, siliceous, semiactive, mesic Typic Dystrudepts
Myersville	Fine-loamy, mixed, active, mesic Ultic Hapludalfs
Peaks	Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
Porters	Fine-loamy, isotic, mesic Typic Dystrudepts
Sylco	Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
Sylvatus	Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts
Tate	Fine-loamy, mixed, semiactive, mesic Typic Hapludults
Udorthents	Udorthents
Unaka	Fine-loamy, isotic, mesic Typic Dystrudepts
Unicoi	Loamy-skeletal, mixed, semiactive, mesic Lithic Dystrudepts

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