United States Department of Agriculture

Natural Resources Conservation Service

United States Department of Agriculture, Forest Service; Virginia Polytechnic Institute and State University; and Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation

Soil Survey of Bath County, Virginia

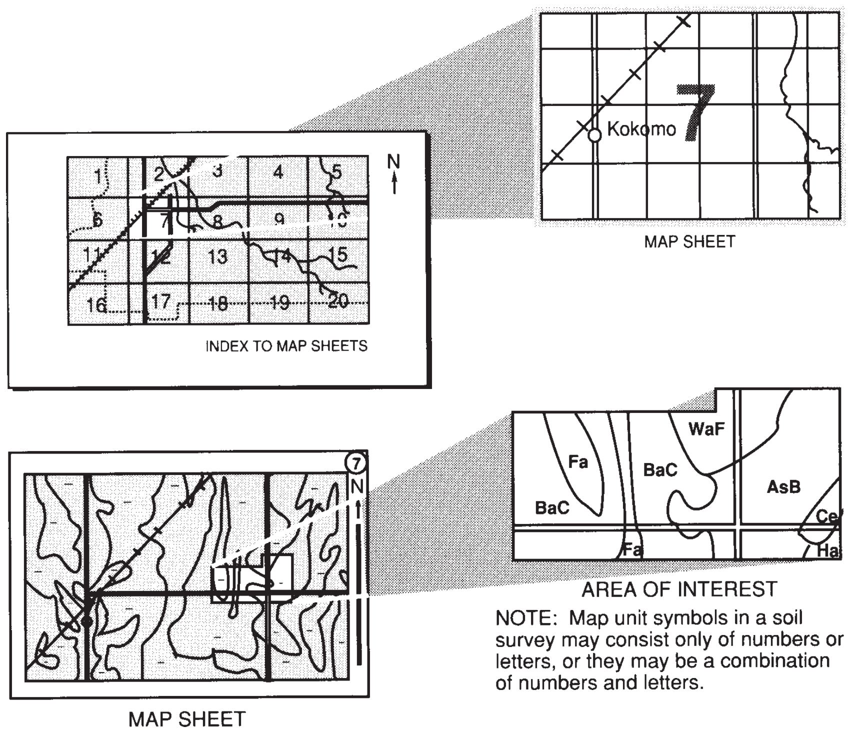
How To Use This Soil Survey

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.



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

Major fieldwork for this soil survey was completed in 2002. Soil names and descriptions were approved in 2005. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2002. The most current official data are available at http://websoilsurvey.nrcs.usda.gov/app/. This survey was made cooperatively by the Natural Resources Conservation Service; the United States Department of Agriculture, Forest Service; the Virginia Polytechnic Institute and State University; and the Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation. Financial assistance was provided by the Bath County Board of Supervisors. The survey is part of the technical assistance furnished to the Mountain Soil and Water Conservation District.

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

Cover: View of the Warm Springs Valley area from the top of Warm Springs Mountain.

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

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Issued 2006

Foreword

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

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

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

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are 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.

M. Denise Doetzer
State Conservationist
Natural Resources Conservation Service

Soil Survey of Bath County, Virginia

By Barrie L. Wolf and Jeffrey R. Thomas, Natural Resources Conservation Service

Fieldwork by Robert Dobos, Jeffrey R. Thomas, Maynard Sweeley, Mark A. VanLear, and Barrie L. Wolf, Natural Resources Conservation Service

Participation in fieldwork by Thomas D. Adkins, Tom Burke, Mary Ellen Cannon, Donna Ferren, Ulf Gafvert, Howard Main, and Mike Schramm, Natural Resources Conservation Service, and Joanne Munson, United States Forest Service

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
United States Department of Agriculture, Forest Service; Virginia Polytechnic Institute and State University; and Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation

Bath County is located in the extreme west-central part of Virginia (fig. 1). It is in the Valley and Ridge Physiographic Province. Bath County is bordered on the north by Highland County, on the south by Alleghany County, on the east by Rockbridge and Augusta Counties, and on the west by Pocahontas and Greenbrier Counties, West Virginia. Elevation ranges from 1,140 feet at the point where the Cowpasture River intersects the Bath-Alleghany County line to 4,477 feet on Paddy Knob.

The soil survey area consists of 344,100 acres. Federal land covers about 50 percent of the survey area, nonfederal land covers about 49 percent, and census water covers about 1 percent. The Federal land is in the George Washington and Jefferson National Forest. In 2000, according to the Bureau of the Census, the population of the county was 5,042 *(19)*.

General Nature of the Survey Area

This section provides general information about the survey area. It discusses history and development, farming, forest resources, water resources, mineral resources, recreation, and climate.

History and Development

On December 14, 1790, Bath County was formed by an act of the General Assembly. It was made from parts of Augusta, Botetourt, and Greenbrier Counties.

The first session of the County Court convened on May 10, 1791, at the home of Margaret Lewis in Warm Springs. The first county building was a jail. Margaret Lewis donated 2 acres of land along the Warm Springs Run. The first courthouse was built on this land about 1802. A second courthouse was built at the same location and completed in 1842. The courthouse was sold at an auction on January 8, 1907, and a

Figure 1.—Location of Bath County in Virginia.

new courthouse was built. This courthouse was destroyed by fire in 1912. The present courthouse was constructed in 1914. In 1980, the courthouse was expanded by 12,000 square feet.

In Bath County, the warm springs pools bubble up in a valley 2,500 feet above sea level. These pools were well known by 1750 and developed in 1761. The water flows at a rate of 1,200 gallons a minute and is uniformly 98 degrees F in temperature.

Hot Springs and The Homestead were constructed in Bath County in 1750. There has been a hotel at Hot Springs since 1766. In 1901, The Homestead was destroyed by fire. It was immediately rebuilt and opened for guests on March 10, 1902. The tower on top of the main building was constructed in 1929. In 1993, The Homestead was sold to Club Resorts and restored.

The rivers, forests, and mild weather attracted the first settlers to the survey area. Today, they continue to entice visitors by providing a wide variety of outdoor activities.

Farming

According to the 2002 Census of Agriculture, Bath County has a total of 124 farms, which average 422 acres in size. This total represents about 52,335 acres of farmland or about 15 percent of the county's total land area. This acreage has decreased since 1997, when it was 58,271 acres. Marginal uplands that are too steep to be farmed with equipment are being naturally reforested. In 2002, total hay was harvested on 7,000 acres and corn for grain was harvested on less than 500 acres *(11)*.

About 10 percent of the farms in the county are operated on a full-time commercial basis and include one dairy farm. Total income from farm products sold amounted to $2,520,000 in 2002. The principal sources of farm income are beef cattle, dairy products, corn, fruit, vegetables, sheep, poultry, and hogs *(11)*.

Forest Resources

About 80 percent of Bath County's total land area is wooded. Most of this area is commercial forestland or timberland. The United States Department of Agriculture, Forest Service, manages most of the federal land as timberland within the George Washington and Jefferson National Forest. About 9,000 acres are classified as wilderness areas, and about 115,000 acres are privately owned. The remaining small portion of timberland is owned by the State.

The forest is composed of a diversity of upland and cove Appalachian hardwoods, with mixed conifer species scattered throughout. The upland oaks, such as chestnut, white, and scarlet, occur primarily on south aspects. Red oak and black oak occur primarily on north aspects. Pines such as Virginia, pitch, shortleaf, Table Mountain, and eastern white occur primarily on south aspects. Areas at high elevations (above

3,800 feet) have northern hardwood stands of red oak, white ash, black cherry, red maple, and sugar maple, with some scattered red spruce. The county depends on the forest resources for wildlife habitat, for watershed protection, and as a source of raw material for the wood industry in the area.

The wood products harvested each year include sawlogs, pulpwood, veneer logs, firewood, and fence posts. The county supplies MeadWestvaco with pulpwood. It is also a major supplier of sawtimber to two sawmills.

Water Resources

Bath County is located in the James River watershed. The Jackson and Cowpasture Rivers are tributaries to the James River. The Jackson River drains the western part of the county, and the Cowpasture River drains the eastern part of the county. Major streams flowing into the Jackson River include Back Creek, Little Back Creek, Muddy Run, Warm Springs Run, and Cowardin Run. Major streams flowing into the Cowpasture River include Bullpasture River, Dry Run, Mare Run, Stuart Run, and Mill Creek.

In 1981, construction of the Gathright Dam on the Jackson River created Lake Moomaw. This lake covers about 1,900 acres in the county.

In 1985, the Bath County Power Station and Pump storage project was completed. The station consists of two large reservoirs connected by huge tunnels to a power house that can generate a total of more than 2.1 million kilowatts of electrical power.

There are many strong flowing springs throughout the county. Some of the springs have water temperatures of about 98 degrees F, such as those near Warm Springs and Hot Springs. The Coursey Springs Trout Hatchery is served by a very large, cool-water spring. Other cool-water springs that feed native trout streams are Bubbling Springs, Dunns Gap Spring, Big Spring, Muddy Run Spring, and Cascades Spring.

Mineral Resources

In Bath County, limestone and dolostone have been quarried near Warm Springs, Millboro Springs, Bolar, Hotchkiss, Sunrise, Hot Springs, and Nimrod Hall and at other sites in order to provide stone for construction purposes. The Port Lock Quarry was located south of Sunrise for use at the VEPCO Hydro-electric project. Sandstone has also been quarried in the county and may have the potential to serve as a raw material for high-silica uses. Gravel, sand, and shale have been extracted in the past from many sites for use in road projects. Manganese minerals have been prospected on Jack and Little Piney Mountains and mined at the Stephenson prospect, north-northeast of Warm Springs, where 20 tons of manganese ore was mined by J. Ed. Gillet, around 1918. It is reported that a carload of ore was shipped from the same site in March 1919. Iron minerals occur on McClung Ridge, on Jack Mountain, in a valley east of Warm Springs Mountain, and in other areas, and some prospect work has been done. Four clay materials have been sampled and tested by the United States Bureau of Mines and found to be potentially useful as a raw material in the manufacture of brick, tile, pottery, and possibly quarry tile. In 1997, about 1,500 tons of shale were excavated at a pit located off State Road 678, about 1.5 miles northwest of Millboro Springs.

An oil and gas test was drilled southwest of Green Valley on the John Lawrence Farm in May 1968. The well was drilled to a depth of 405 feet and was plugged and abandoned as a dry hole.

Resources for the future in Bath County include limestone, dolostone, and sandstone for crushed stone for roadstone, asphalt stone, and concrete aggregate. Adequate shale is available at local burrow pits for farm and local roadstone.

Recreation

Bath County has numerous areas that are used for camping, hiking, rock climbing, hunting, fishing, golfing, boating, mountain biking, and sightseeing. Areas available for recreation include the George Washington and Jefferson National Forest and several State and privately owned areas.

Areas managed as national forest include the Lake Moomaw Recreation Area, the Blowing Springs Campground, the Bubbling Springs Campground, the Hidden Valley Campground, the Bolar Flat Picnic and Boat Launch Area, and the Rough Mountian Wilderness Area. The T.M. Gathright Wildlife Management Area is devoted to the management of wildlife and its habitat, with the emphasis on wild turkey.

Douthat State Park has a 50-acre lake and facilities for camping, hiking, swimming, and picnicking. In addition, private campgrounds are located throughout the county.

The Homestead Resort in Hot Springs offers three golf courses, hiking, horse riding trails, and ski slopes.

The Bath County Power Station has facilities for fishing, non-power boating, picnicking, swimming, hiking, and camping.

Climate

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

In winter, the average temperature is 31.8 degrees F and the average daily minimum temperature is 21.5 degrees. The lowest temperature on record, which occurred at Hot Springs on January 21, 1985, was -20 degrees. In summer, the average temperature is 69.3 degrees and the average daily maximum temperature is 81.8 degrees. The highest recorded temperature, which occurred at Hot Springs on August 20, 1987, was 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.

Average annual total precipitation across Bath County ranges from 40 inches, at the lowest elevations in the extreme south, to slightly more than 50 inches, at the highest elevations in the extreme northwest part of the county on the West Virginia border. At Hot Springs the average annual precipitation is 42.35 inches. Of this, 19.07 inches, or about 45 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 8.25 inches, recorded at Hot Springs on November 5, 1985. Thunderstorms occur on about 45 days each year, and most occur between April and August.

The average seasonal snowfall at Hot Springs is 32.3 inches. The highest elevations in the county on the West Virginia border receive more, as much as 50 inches or more. The greatest snow depth at any one time during the period of record was 21 inches, recorded on January 14, 1968. On average, 29 days per year have at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was 17.0 inches, recorded on March 6, 1962.

The average relative humidity in mid-afternoon is about 60 percent. Humidity is higher at night, and the average at dawn is about 90 percent. The sun shines about 50 percent of the time possible in summer and about 38 percent in winter. The prevailing wind is usually from the southwest; it is from the north and northeast from August to October. Average windspeed is highest, around 9 miles per hour, from January to April.

How This Survey Was Made

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

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they 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 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, Escatawba loam, 8 to 15 percent slopes, very stony, is a phase of the Escatawba series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes. A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. McClung-Lily complex, 3 to 8 percent, slopes, is an example.

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

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

1A—Alonzville loam, 0 to 3 percent slopes, rarely flooded

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Low stream terraces in a river valley
Position on the landform: Treads and risers

Map Unit Composition

Alonzville and similar soils: Typically 80 percent, ranging from about 65 to 90 percent

Typical Profile

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

Subsoil:
5 to 15 inches—brown loam
15 to 55 inches—dark yellowish brown clay loam
55 to 65 inches—dark yellowish brown gravelly loam

Minor Components

Dissimilar components:
- Gladehill and Wolfgap soils, which have dark surface layers more than 10 inches thick; on flood plains
- Coursey soils, which are moderately well drained; on adjacent stream terraces
- Oriskany soils, which have more than 35 percent rock fragments throughout and are not susceptible to flooding; on footslopes
- Ogles soils, which have more than 35 percent rock fragments throughout; on flood plains
- Soils that flood frequently or are not flooded; on landforms similar to those of the Alonzville soil

Similar components:
- Shelocta soils, which are are not susceptible to flooding; on footslopes
- Soils that are redder than the Alonzville soil; on similar landforms
- Soils that have less clay than the Alonzville soil; on landforms similar to those of the Alonzville soil
- Soils that are deep to shale bedrock; on landforms similar to those of the Alonzville soil

- Soils that have 15 to 35 percent rock fragments in the subsoil; on landforms similar to those of the Alonzville soil
- Soils that have more than 35 percent rock fragments in the lower part of the subsoil; on landforms similar to those of the Alonzville soil
- Soils that are well drained and have iron depletions between depths of 30 and 60 inches; on landforms similar to those of the Alonzville soil
- Soils that flood occasionally; on the lower terraces
- Soils that are on slopes that range from 3 to 5 percent; on landforms similar to those of the Alonzville soil

Soil Properties and Qualities

Available water capacity: Moderate (about 6.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: Low
Surface fragments: None
Parent material: Alluvium derived from sandstone and shale

Use and Management Considerations

Cropland

- This soil is well suited to cropland.

Pastureland

- This soil is well suited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak and eastern white pine
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- Because of the flooding, this soil is unsuited to building site development.

Septic tank absorption fields

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

Local roads and streets

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

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 1
Virginia soil management group: L
Hydric soil: No

2B—Alonzville cobbly loam, 3 to 8 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Intermediate level stream terraces in a river valley
Position on the landform: Treads and risers

Map Unit Composition

Alonzville and similar soils: Typically 85 percent, ranging from about 70 to 90 percent

Typical Profile

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

Subsoil:
6 to 16 inches—brown cobbly loam
16 to 57 inches—dark yellowish brown cobbly clay loam
57 to 65 inches—dark yellowish brown cobbly loam

Minor Components

Dissimilar components:
- Derroc soils, which have more rock fragments and less clay in the soil than the Alonzville soil and are susceptible to flooding; on flood plains
- Coursey soils, which are moderately well drained; on low terraces
- Nicelytown soils, which are moderately well drained; on high terraces

Similar components:
- Shelocta soils, which are well drained and formed in colluvium; on footslopes
- Soils that have a surface layer with more gravel and fewer cobbles than that of the Alonzville soil; on similar landforms
- Soils that have more than 35 percent rock fragments within a depth of 40 inches; on landforms similar to those of the Alonzville soil
- Soils that have darker surface layers than the Alonzville soil; on similar landforms
- Soils that are on slopes of 8 to 15 percent; on landforms similar to those of the Alonzville soil

Soil Properties and Qualities

Available water capacity: Moderate (about 6.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: Alluvium derived from sandstone and shale

Use and Management Considerations

Cropland

Suitability: 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
- 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- This soil is well suited to building sites.

Septic tank absorption fields

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

Local roads and streets

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

Interpretive Groups

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

3C—Alticrest-Dekalb complex, 8 to 15 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Summits and shoulders and, in some areas, backslopes

Map Unit Composition

Note: These Alticrest and Dekalb soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Alticrest and similar soils: Typically 50 percent, ranging from about 35 to 65 percent
Dekalb and similar soils: Typically 30 percent, ranging from about 15 to 45 percent

Typical Profile

Alticrest

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsurface layer:
2 to 4 inches—dark yellowish brown channery sandy loam

Subsoil:
4 to 12 inches—dark yellowish brown channery sandy loam
12 to 26 inches—yellowish brown channery sandy loam
26 to 30 inches—strong brown channery sandy loam; red mottles

Hard bedrock:
30 inches—sandstone bedrock

Dekalb

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsoil:
2 to 30 inches—yellowish brown very channery sandy loam

Hard bedrock:
30 inches—sandstone bedrock

Minor Components

Dissimilar components:
- McClung soils, which are very deep to bedrock and have more clay in the subsoil than the Alticrest and Dekalb soils; on similar landforms
- Berks, Weikert, and Gilpin soils, which are over shale bedrock and have siltier subsoils than the Alticrest and Dekalb soils; on similar landforms
- Oriskany soils, which are very deep to bedrock; on footslopes
- Soils that are very shallow to sandstone or shale bedrock; on landforms similar to those of the Alticrest and Dekalb soils
- Soils that have extremely stony or rubbly surfaces; on landforms similar to those of the Alticrest and Dekalb soils
- Areas of rock outcrops; on landforms similar to those of the Alticrest and Dekalb soils

Similar components:
- Lehew soils, which have redder subsoils than the Alticrest and Dekalb soils; on similar landforms
- Lily soils, which have more clay in the subsoil than the Alticrest and Dekalb soils; on similar landforms
- Soils that are shallow or deep to sandstone bedrock; on landforms similar to those of the Alticrest and Dekalb soils
- Soils that have nonstony surfaces; on landforms similar to those of the Alticrest and Dekalb soils
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 35 percent; on landforms similar to those of the Alticrest and Dekalb soils

Soil Properties and Qualities

Available water capacity: Alticrest—very low (about 2.7 inches); Dekalb—very low (about 1.9 inches)

Slowest saturated hydraulic conductivity: Alticrest—high (about 2.0 in/hr); Dekalb—high (about 6.0 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Alticrest—well drained; Dekalb—excessively 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 0.1 to 3.0 percent subangular stones
Parent material: Residuum weathered from sandstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak and chestnut oak
- Bedrock may interfere with the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- Coarse 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.

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, these soils are unsuited to conventional septic tank absorption fields.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

4A—Atkins silt loam, 0 to 3 percent slopes, occasionally flooded

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Low to intermediate level flood plains in river valleys
Position on the landform: Flood-plain steps and backswamps

Map Unit Composition

Atkins and similar soils: Typically 75 percent, ranging from about 60 to 90 percent

Typical Profile

Surface layer:
0 to 4 inches—dark yellowish brown silt loam; strong brown masses of oxidized iron and grayish brown iron depletions

Subsoil:
4 to 8 inches—grayish brown silt loam; dark yellowish brown and strong brown masses of oxidized iron
8 to 29 inches—gray silt loam; yellowish red and strong brown masses of oxidized iron

Substratum:
29 to 47 inches—bluish gray silty clay loam; yellowish brown masses of oxidized iron
47 to 65 inches—bluish gray very gravelly silty clay loam; yellowish brown masses of oxidized iron

Minor Components

Dissimilar components:
- Maurertown soils, which have more clay in the soil and better developed subsoils than the Atkins soil; on low terraces
- Coursey soils, which are moderately well drained; on low terraces
- Irongate soils, which are moderately well drained and have a thick, dark surface layer; on landforms similar to those of the Atkins soil
- Feedstone soils, which are moderately well drained and have a thick, dark surface layer; on the higher flood plains

Similar components:
- Soils that flood rarely; on the higher flood plains
- Soils that are somewhat poorly drained; on landforms similar to those of the Atkins soil
- Soils that have surface layers of silty clay loam and that are darker than those of the Atkins soil; on similar landforms

Soil Properties and Qualities

Available water capacity: High (about 9.2 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 12 inches
Water table (kind): Apparent
Flooding hazard: Occasional
Ponding hazard: Occasional
Depth of ponding: 0.0 to 0.5 foot

Shrink-swell potential: Low
Runoff class: Negligible
Surface fragments: None
Parent material: Alluvium derived from sandstone and shale

Use and Management Considerations

Cropland

Suitability: Poorly suited to corn; not suited to grass-legume hay and alfalfa hay
- Frost action may damage the root system of winter grain crops.
- The risk of compaction increases when the soil is wet.
- Soil crusting results in a decrease in water infiltration and hinders the emergence of seedlings.
- Flooding may damage 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: Moderately suited
- Flooding may damage pastures.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- Compaction may occur when the soil is wet.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Moderately suited to sweetgum
- Flooding may damage haul roads.
- Flooding and ponding restrict the safe use of roads by log trucks.
- Soil wetness may limit the use of log trucks.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- Because of the flooding and ponding, this soil is unsuited to building site development.

Septic tank absorption fields

- Because of the flooding, wetness, and ponding, this soil is unsuited to septic tank absorption fields.

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 soil strength may cause structural damage to local roads and streets.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4w
Virginia soil management group: NN
Hydric soil: Yes

5D—Berks channery silt loam, 15 to 35 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Berks and similar soils: Typically 80 percent, ranging from about 70 to 90 percent

Typical Profile

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Minor Components

Dissimilar components:
- Shelocta and Murrill soils, which are very deep to bedrock and have fewer rock fragments throughout than the Berks soil; on footslopes
- Oriskany soils, which are very deep to bedrock; on footslopes
- Faywood and Poplimento soils, which are moderately deep and very deep to bedrock, respectively, and have more clay and fewer rock fragments in the soil than the Berks soil; on similar landforms
- Rough soils, which are very shallow to bedrock; on landforms similar to those of the Berks soil

Similar components:
- Gilpin soils, which have fewer rock fragments in the subsoil than the Berks soil; on similar landforms
- Dekalb and Lehew soils, which occur over hard sandstone bedrock and have sandier textures in the subsoil than the Berks soil; on similar landforms
- Weikert soils, which are shallow to bedrock; on landforms similar to those of the Berks soil
- Soils that are deep to shale bedrock; on landforms similar to those of the Berks soil
- Soils that have very stony surfaces; on landforms similar to those of the Berks soil
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Berks soil

Soil Properties and Qualities

Available water capacity: Very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: High
Surface fragments: None
Parent material: Residuum weathered from shale and siltstone

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 slope may restrict the use of some farm equipment.
- During the drier summer months, plants may suffer from moisture stress because of the limited available water capacity.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to northern red oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

5E—Berks channery silt loam, 35 to 55 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Backslopes and, in some areas, summits and shoulders

Map Unit Composition

Berks and similar soils: Typically 80 percent, ranging from about 70 to 90 percent

Typical Profile

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Minor Components

Dissimilar components:
- Shelocta and Murrill soils, which are very deep to bedrock and have fewer rock fragments throughout than the Berks soil; on footslopes
- Oriskany soils, which are very deep to bedrock; on footslopes
- Faywood and Poplimento soils, which are moderately deep and very deep to bedrock, respectively, and have more clay and fewer rock fragments in the soil than the Berks soil; on similar landforms
- Rough soils, which are very shallow to bedrock; on landforms similar to those of the Berks soil
- Areas of rock outcrops; on landforms similar to those of the Berks soil

Similar components:
- Gilpin soils, which have fewer rock fragments in the subsoil than the Berks soil; on similar landforms
- Dekalb and Lehew soils, which are over hard sandstone bedrock and have sandier textures in the subsoil than the Berks soil; on similar landforms
- Weikert soils, which are shallow to bedrock; on landforms similar to those of the Berks soil
- Soils that are deep to shale bedrock; on landforms similar to those of the Berks soil
- Soils that have very stony surfaces; on landforms similar to those of the Berks soil
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 65 percent; on landforms similar to those of the Berks soil

Soil Properties and Qualities

Available water capacity: Very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: High
Surface fragments: None
Parent material: Residuum weathered from shale and siltstone

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

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

6B—Berks-Weikert complex, 3 to 8 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits and shoulders

Map Unit Composition

Note: These Berks and Weikert soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Berks and similar soils: Typically 55 percent, ranging from about 35 to 75 percent
Weikert and similar soils: Typically 35 percent, ranging from about 15 to 50 percent

Typical Profile

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Weikert

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 16 inches—yellowish brown very channery silt loam

Hard bedrock:
16 inches—shale bedrock

Minor Components

Dissimilar components:
- Macove and Oriskany soils, which are very deep to bedrock and have many rock fragments on the surface; on colluvial footslopes
- Rough soils, which are very shallow to bedrock; on landforms similar to those of the Berks and Weikert soils
- Rock outcrops; on summits and shoulders

Similar components:
- Soils that have stony surfaces; on landforms similar to those of the Berks and Weikert soils
- Gilpin soils, which have fewer rock fragments and more clay in the subsoil than the Berks and Weikert soils; on similar landforms
- Soils that have fewer rock fragments in the subsoil than the Berks and Weikert soils; on similar landforms

Soil Properties and Qualities

Available water capacity: Berks—very low (about 2.7 inches); Weikert—very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: Berks—moderately high (about 0.6 in/hr); Weikert—high (about 2.0 in/hr)

Depth class: Berks—moderately deep (20 to 40 inches); Weikert—shallow (10 to 20 inches)
Depth to root-restrictive feature: Berks—20 to 40 inches to bedrock (lithic); Weikert—10 to 20 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: Medium
Surface fragments: None
Parent material: Residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay; poorly suited to corn; not suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The bedrock restricts the rooting depth of crops.
- Plants may suffer from moisture stress because of the limited available water capacity.

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.
- During the drier summer months, plants may suffer from moisture stress because of the limited available water capacity.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Moderately suited to chestnut oak and eastern white pine
- Bedrock may interfere with the construction of haul roads and log landings.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength may create unsafe conditions for log trucks.

Building sites

- 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, these soils are unsuited to conventional septic tank absorption fields.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Berks—2e; Weikert—3s

Virginia soil management group: JJ
Hydric soils: No

6C—Berks-Weikert complex, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits and shoulders and, in some areas, backslopes

Map Unit Composition

Note: These Berks and Weikert soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Berks and similar soils: Typically 55 percent, ranging from about 40 to 65 percent
Weikert and similar soils: Typically 30 percent, ranging from about 20 to 45 percent

Typical Profile

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Weikert

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 16 inches—yellowish brown very channery silt loam

Hard bedrock:
16 inches—shale bedrock

Minor Components

Dissimilar components:
- Shelocta soils, which are very deep to bedrock and have fewer rock fragments throughout than the Berks and Weikert soils; on footslopes
- Oriskany and Macove soils, which are very deep to bedrock and have many stones on the surface; on footslopes
- Blairton and Wharton soils, which are moderately well drained; on landforms similar to those of the Berks and Weikert soils
- Rough soils, which are very shallow to bedrock; on landforms similar to those of the Berks and Weikert soils

- Soils that are very deep to shale bedrock; on landforms similar to those of the Berks and Weikert soils

Similar components:
- Gilpin soils, which have fewer rock fragments in the subsoil than the Berks and Weikert soils; on similar landforms
- Soils that have redder subsoils than the Berks and Weikert soils; on similar landforms
- Soils that are deep to shale bedrock; on landforms similar to those of the Berks and Weikert soils
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 35 percent; on landforms similar to those of the Berks and Weikert soils

Soil Properties and Qualities

Available water capacity: Berks—very low (about 2.7 inches); Weikert—very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: Berks—moderately high (about 0.6 in/hr); Weikert—high (about 2.0 in/hr)
Depth class: Berks—moderately deep (20 to 40 inches); Weikert—shallow (10 to 20 inches)
Depth to root-restrictive feature: Berks—20 to 40 inches to bedrock (lithic); Weikert—10 to 20 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: Medium
Surface fragments: None
Parent material: Residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

Suitability: Poorly suited or moderately suited to grass-legume hay; poorly suited to corn; not suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The bedrock restricts the rooting depth of crops.
- Plants may suffer from moisture stress because of the limited available water capacity.

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.
- During the drier summer months, plants may suffer from moisture stress because of the limited available water capacity.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Moderately suited to chestnut oak and eastern white pine
- Bedrock may interfere with the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe, the operating efficiency of log

trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- The low soil strength may create unsafe conditions for log trucks.

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, these soils are unsuited to conventional septic tank absorption fields.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Berks—3e; Weikert—4s
Virginia soil management group: JJ
Hydric soils: No

7C—Berks-Weikert complex, 8 to 15 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits and shoulders and, in some areas, backslopes

Map Unit Composition

Note: These Berks and Weikert soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Berks and similar soils: Typically 50 percent, ranging from about 30 to 80 percent
Weikert and similar soils: Typically 40 percent, ranging from about 20 to 70 percent

Typical Profile

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Weikert

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 16 inches—yellowish brown very channery silt loam

Hard bedrock:
16 inches—shale bedrock

Minor Components

Dissimilar components:
- Macove and Oriskany soils, which are very deep to bedrock; on footslopes
- Rough soils, which are very shallow to bedrock; on similar landforms
- Rock outcrops; on summits and shoulders

Similar components:
- Gilpin soils, which have fewer rock fragments and more clay in the subsoil than the Berks and Weikert soils; on similar landforms
- Soils that have fewer stones on the surface than the Berks and Weikert soils; on similar landforms
- Soils that have fewer rock fragments in the subsoil than the Berks and Weikert soils; on similar landforms

Soil Properties and Qualities

Available water capacity: Berks—very low (about 2.7 inches); Weikert—very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: Berks—moderately high (about 0.6 in/hr); Weikert—high (about 2.0 in/hr)
Depth class: Berks—moderately deep (20 to 40 inches); Weikert—shallow (10 to 20 inches)
Depth to root-restrictive feature: Berks—20 to 40 inches to bedrock (lithic); Weikert—10 to 20 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: Medium
Surface fragments: About 0.1 to 3.0 percent subangular stones
Parent material: Residuum weathered from shale and siltstone

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.
- During the drier summer months, plants may suffer from moisture stress because of the limited available water capacity.
- The bedrock may restrict the rooting depth of plants.
- Large stones on the surface may restrict the operation of some farm machinery.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to northern red oak and eastern white pine

- Bedrock may interfere with the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- The low soil strength may create unsafe conditions for log trucks.

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, these soils are unsuited to conventional septic tank absorption fields.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

7D—Berks-Weikert complex, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Note: These Berks and Weikert soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Berks and similar soils: Typically 70 percent, ranging from about 60 to 80 percent
Weikert and similar soils: Typically 25 percent, ranging from about 15 to 35 percent

Typical Profile

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Weikert

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 16 inches—yellowish brown very channery silt loam

Hard bedrock:
16 inches—shale bedrock

Minor Components

Dissimilar components:
- Shelocta soils, which are very deep to bedrock and have fewer rock fragments throughout than the Berks and Weikert soils; on footslopes
- Oriskany and Macove soils, which are very deep to bedrock; on footslopes
- Rough soils, which are very shallow to bedrock; on landforms similar to those of the Berks and Weikert soils
- Soils that are very deep to shale bedrock; on landforms similar to those of the Berks and Weikert soils
- Areas of rock outcrops; on landforms similar to those of the Berks and Weikert soils

Similar components:
- Gilpin soils, which have fewer rock fragments in the subsoil than the Berks and Weikert soils; on similar landforms
- Dekalb and Lehew soils, which occur over hard sandstone bedrock and have sandier textures in the subsoil than the Berks and Weikert soils; on similar landforms
- Soils that are deep to shale bedrock; on landforms similar to those of the Berks and Weikert soils
- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Berks and Weikert soils
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Berks and Weikert soils

Soil Properties and Qualities

Available water capacity: Berks—very low (about 2.7 inches); Weikert—very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: Berks—moderately high (about 0.6 in/hr); Weikert—high (about 2.0 in/hr)

Depth class: Berks—moderately deep (20 to 40 inches); Weikert—shallow (10 to 20 inches)
Depth to root-restrictive feature: Berks—20 to 40 inches to bedrock (lithic); Weikert—10 to 20 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: High
Surface fragments: About 0.1 to 3.0 percent subangular stones
Parent material: Residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to northern red oak; poorly suited to eastern white pine

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 soil strength may create unsafe conditions for log trucks.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

8B—Blairton-Wharton complex, 3 to 8 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits, shoulders, and footslopes

Map Unit Composition

Note: These Blairton and Wharton soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Blairton and similar soils: Typically 50 percent, ranging from about 35 to 65 percent
Wharton and similar soils: Typically 30 percent, ranging from about 15 to 45 percent

Typical Profile

Blairton

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—very dark grayish brown silt loam

Subsoil:
4 to 9 inches—dark yellowish brown silt loam; dark yellowish brown mottles
9 to 18 inches—brown silty clay loam; dark yellowish brown masses of oxidized iron
18 to 27 inches—yellowish brown silty clay loam; dark yellowish brown masses of oxidized iron and gray iron depletions
27 to 31 inches—light brownish gray silty clay loam; yellowish red masses of oxidized iron
31 to 38 inches—dark grayish brown very channery silt loam; dark yellowish brown masses of oxidized iron and grayish brown iron depletions

Hard bedrock:
38 inches—shale bedrock

Wharton

Organic layer:
0 to 1 inch—moderately decomposed plant material

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

Subsoil:
3 to 8 inches—very dark grayish brown and yellowish brown silt loam
8 to 21 inches—yellowish brown silty clay loam
21 to 37 inches—yellowish brown silty clay loam; strong brown masses of oxidized iron and light brownish gray and light gray iron depletions
37 to 44 inches—yellowish brown silty clay loam; strong brown masses of oxidized iron and light brownish gray iron depletions
44 to 62 inches—gray silty clay loam; strong brown masses of oxidized iron

Minor Components

Dissimilar components:
- McClung and Lily soils, which are well drained and are very deep and moderately deep to sandstone bedrock, respectively; on landforms similar to those of the Blairton and Wharton soils

- Rough soils, which are somewhat excessively drained and very shallow to shale bedrock; on landforms similar to those of the Blairton and Wharton soils
- Dekalb soils, which are excessively drained, moderately deep to sandstone bedrock, and have more rock fragments throughout than the Blairton and Wharton soils; on similar landforms
- Berks and Weikert soils, which are well drained and have more rock fragments throughout than the Blairton and Wharton soils; on similar landforms
- Gilpin soils, which are well drained; on landforms similar to those of the Blairton and Wharton soils

Similar components:
- Soils that have more clay in the upper part of the subsoil than the Blairton and Wharton soils; on similar landforms
- Soils that are on slopes that range from 8 to 15 percent; on landforms similar to those of the Blairton and Wharton soils

Soil Properties and Qualities

Available water capacity: Blairton—low (about 5.9 inches); Wharton—moderate (about 8.9 inches)
Slowest saturated hydraulic conductivity: Blairton—moderately high (about 0.2 in/hr); Wharton—moderately low (about 0.06 in/hr)
Depth class: Blairton—moderately deep (20 to 40 inches); Wharton—deep or very deep (more than 40 inches)
Depth to root-restrictive feature: Blairton—20 to 40 inches to bedrock (lithic); Wharton—40 to 72 inches to bedrock (paralithic)
Drainage class: Moderately well drained
Depth to seasonal water saturation: Blairton—about 6 to 36 inches; Wharton—about 18 to 36 inches
Water table (kind): Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Blairton—low; Wharton—moderate
Runoff class: Blairton—high; Wharton—medium
Surface fragments: None
Parent material: Residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn and grass-legume hay; not suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The bedrock restricts the rooting depth of crops.
- Frost action may damage the root system of winter grain crops.
- The risk of compaction increases when the soil is wet.
- Soil crusting results in a decrease in water infiltration and hinders the emergence of seedlings.
- 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.

- The bedrock may restrict the rooting depth of plants.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to northern red oak and eastern white pine

- Bedrock may interfere with the construction of haul roads and log landings.
- Soil wetness may limit the use of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- The seasonal high water table may restrict the period when excavations can be made.
- 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.
- Because of the limited depth to bedrock, the Blairton soil is unsuited to conventional septic tank absorption fields.

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 the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of shrinking and swelling, the use of these soils as base material for local roads and streets is restricted.
- The low soil strength is unfavorable for supporting heavy loads.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 2e
Virginia soil management group: AA
Hydric soils: No

9C—Caneyville silt loam, 8 to 15 percent slopes, very rocky

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits and shoulders and, in some areas, backslopes
Note: About 2 to 10 percent of the surface is covered with outcrops of limestone bedrock

Map Unit Composition

Caneyville and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—brown silt loam

Subsurface layer:
4 to 10 inches—dark yellowish brown silt loam

Subsoil:
10 to 16 inches—strong brown silty clay; yellowish brown mottles
16 to 22 inches—yellowish red clay; dark brown iron-manganese masses
22 to 29 inches—yellowish red clay; yellowish brown mottles

Hard bedrock:
29 inches—limestone bedrock

Minor Components

Dissimilar components:
- Frederick soils, which are very deep to limestone bedrock; on landforms similar to those of the Caneyville soil
- Murrill soils, which are very deep to bedrock and have less clay in the upper part of the subsoil than the Caneyville soil; on footslopes
- Soils that are very shallow to limestone bedrock; on landforms similar to those of the Caneyville soil
- Areas that contain sinkholes; on landforms similar to those of the Caneyville soil
- Areas that have more than 10 percent rock outcrops; on landforms similar to those of the Caneyville soil

Similar components:
- Faywood soils, which have a yellower subsoil than the Caneyville soil; on similar landforms
- Soils that are shallow or deep to limestone bedrock; on landforms similar to those of the Caneyville soil
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 35 percent; on landforms similar to those of the Caneyville soil
- Areas that have less than 2 percent rock outcrops; on landforms similar to those of the Caneyville soil

Soil Properties and Qualities

Available water capacity: Low (about 4.6 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 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: Moderate
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from limestone

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 bedrock may restrict the rooting depth of plants.
- Rock outcrops may limit machinery operations.

Woodland

Suitability: Moderately suited to northern red oak
- Bedrock may interfere with the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

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 clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.
- Because of the rock outcrops, rock removal may be needed.

Septic tank absorption fields

- Because of the limited depth to bedrock, this soil is unsuited to conventional septic tank absorption fields.

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 shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.
- Because of the rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.
- Frost action may damage local roads and streets.

Interpretive Groups

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

9D—Caneyville silt loam, 15 to 35 percent slopes, very rocky

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits, shoulders, and backslopes

Note: About 2 to 10 percent of the surface is covered with outcrops of limestone bedrock

Map Unit Composition

Caneyville and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—brown silt loam

Subsurface layer:
4 to 10 inches—dark yellowish brown silt loam

Subsoil:
10 to 16 inches—strong brown silty clay; yellowish brown mottles
16 to 22 inches—yellowish red clay; dark brown iron-manganese masses
22 to 29 inches—yellowish red clay; yellowish brown mottles

Hard bedrock:
29 inches—limestone bedrock

Minor Components

Dissimilar components:
- Frederick soils, which are very deep to limestone bedrock; on landforms similar to those of the Caneyville soil
- Murrill soils, which are very deep to bedrock and have less clay in the upper part of the subsoil than the Caneyville soil; on footslopes
- Soils that are very shallow to limestone bedrock; on landforms similar to those of the Caneyville soil
- Areas that contain sinkholes; on landforms similar to those of the Caneyville soil
- Areas that have more than 10 percent rock outcrops; on landforms similar to those of the Caneyville soil

Similar components:
- Faywood soils, which have a yellower subsoil than the Caneyville soil; on similar landforms
- Soils that are shallow or deep to limestone bedrock; on landforms similar to those of the Caneyville soil
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Caneyville soil
- Areas that have less than 2 percent rock outcrops; on landforms similar to those of the Caneyville soil

Soil Properties and Qualities

Available water capacity: Low (about 4.6 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 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: Moderate
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from limestone

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.
- The bedrock may restrict the rooting depth of plants.
- Rock outcrops may limit machinery operations.

Woodland

Suitability: Moderately suited to northern red oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

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 clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.
- Because of the rock outcrops, rock removal may be needed.

Septic tank absorption fields

- Because of the limited depth to bedrock and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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 shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.
- Because of the rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e

Virginia soil management group: Y
Hydric soil: No

9E—Caneyville silt loam, 35 to 55 percent slopes, very rocky

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Backslopes and, in some areas, summits and shoulders
Note: About 2 to 10 percent of the surface is covered with outcrops of limestone bedrock

Map Unit Composition

Caneyville and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—brown silt loam

Subsurface layer:
4 to 10 inches—dark yellowish brown silt loam

Subsoil:
10 to 16 inches—strong brown silty clay; yellowish brown mottles
16 to 22 inches—yellowish red clay; dark brown iron-manganese masses
22 to 29 inches—yellowish red clay; many yellowish brown mottles

Hard bedrock:
29 inches—limestone bedrock

Minor Components

Dissimilar components:
- Frederick soils, which are very deep to limestone bedrock; on landforms similar to those of the Caneyville soil
- Murrill soils, which are very deep to bedrock and have less clay in the upper part of the subsoil than the Caneyville soil; on footslopes
- Oriskany soils, which are very deep to bedrock and have more than 35 percent rock fragments throughout; on footslopes
- Soils that are very shallow to limestone bedrock; on landforms similar to those of the Caneyville soil
- Areas that contain sinkholes; on landforms similar to those of the Caneyville soil
- Areas that have more than 10 percent rock outcrops; on landforms similar to those of the Caneyville soil

Similar components:
- Faywood soils, which have a yellower subsoil than the Caneyville soil; on similar landforms
- Soils that are shallow or deep to limestone bedrock; on landforms similar to those of the Caneyville soil
- Soils that have 15 to 35 percent rock fragments in the subsoil; on landforms similar to those of the Caneyville soil
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 80 percent; on landforms similar to those of the Caneyville soil

- Areas that have less than 2 percent rock outcrops; on landforms similar to those of the Caneyville soil

Soil Properties and Qualities

Available water capacity: Low (about 4.6 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 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: Moderate
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from limestone

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

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 clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.
- Because of the rock outcrops, rock removal may be needed.

Septic tank absorption fields

- Because of the limited depth to bedrock and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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 shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.
- Because of the rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.
- Frost action may damage local roads and streets.

Interpretive Groups

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

10B—Cottonbend silt loam, 3 to 8 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: High stream terraces in a river valley
Position on the landform: Treads and risers

Map Unit Composition

Cottonbend and similar soils: Typically 85 percent, ranging from about 75 to 95 percent

Typical Profile

Surface layer:
0 to 8 inches—brown silt loam

Subsoil:
8 to 17 inches—yellowish brown fine sandy loam
17 to 32 inches—brown loam
32 to 52 inches—strong brown loam
52 to 72 inches—strong brown gravelly loam

Minor Components

Dissimilar components:
- Purdy soils, which are poorly drained; on landforms similar to those of the Cottonbend soil and in backswamps
- Oriskany soils, which have more than 35 percent rock fragments throughout and have many stones on the surface; on footslopes
- Escatawba soils, which have a perched seasonal high water table; on footslopes
- Gilpin soils, which are moderately deep to shale bedrock; on hills
- Nicelytown and Zoar soils, which are moderately well drained; on landforms similar to those of the Cottonbend soil

Similar components:
- Sugarhol soils, which have more than 35 percent clay; on landforms similar to those of the Cottonbend soil
- Alonzville soils, which flood rarely; on the lower terraces
- Soils that have very stony surfaces; on landforms similar to those of the Cottonbend soil
- Soils that have more than 40 percent rock fragments in the lower part of the subsoil; on landforms similar to those of the Cottonbend soil

- Soils that are on slopes that range from less than 3 percent or from 8 to 15 percent; on landforms similar to those of the Cottonbend soil

Soil Properties and Qualities

Available water capacity: High (about 9.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: Alluvium derived from sandstone and shale

Use and Management Considerations

Cropland

Suitability: Well 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 risk of compaction increases when the soil is wet.
- 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 eastern white pine
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- This soil is well suited to building sites.

Septic tank absorption fields

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

Local roads and streets

- Frost action may damage local roads and streets.

Interpretive Groups

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

11A—Coursey silt loam, 0 to 3 percent slopes, rarely flooded

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Low stream terraces in a river valley
Position on the landform: Treads and risers

Map Unit Composition

Coursey and similar soils: Typically 80 percent, ranging from about 65 to 95 percent

Typical Profile

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

Subsoil:
5 to 12 inches—brown loam; dark yellowish brown masses of oxidized iron
12 to 20 inches—brown loam; dark yellowish brown and yellowish brown masses of oxidized iron
20 to 25 inches—brown loam; brown iron depletions and dark yellowish brown and yellowish brown masses of oxidized iron
25 to 50 inches—brown loam; grayish brown iron depletions and yellowish brown and dark yellowish brown masses of oxidized iron
50 to 60 inches—grayish brown loam; yellowish brown masses of oxidized iron

Minor Components

Dissimilar components:
- Alonzville soils, which are well drained; on landforms similar to those of the Coursey soil
- Gladehill and Wolfgap soils, which are well drained, have dark surface layers more than 10 inches thick, and are more susceptible to flooding than the Coursey soil; on flood plains
- Feedstone soils, which have dark surface layers more than 10 inches thick and are more susceptible to flooding than the Coursey soil; on flood plains
- Ogles soils, which are well drained, have more than 35 percent rock fragments throughout, and are more susceptible to flooding than the Coursey soil; on flood plains
- Maurertown soils, which are poorly drained and have more than 35 percent clay throughout; on landforms similar to those of the Coursey soil
- Soils that flood frequently or that are not flooded; on landforms similar to those of the Coursey soil

Similar components:
- Soils that are deep to shale bedrock; on hills
- Soils that have less clay than the Coursey soil; on similar landforms
- Soils that are well drained with iron depletions between depths of 36 and 60 inches; on landforms similar to those of the Coursey soil
- Soils that are somewhat poorly drained; on landforms similar to those of the Coursey soil
- Soils that flood occasionally; on the lower terraces or flood plains
- Soils that are on slopes that range from 3 to 5 percent; on landforms similar to those of the Coursey soil

Soil Properties and Qualities

Available water capacity: High (about 11.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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 24 to 36 inches
Water table (kind): Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Alluvium derived from sandstone and shale

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; not suited to alfalfa hay
- Frost action may damage the root system of winter grain crops.
- The risk of compaction increases when the soil is wet.
- Soil crusting results in a decrease in water infiltration and hinders the emergence of seedlings.

Pastureland

Suitability: Well suited
- Frost action may damage the root systems of plants.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to northern red oak
- The low soil strength interferes with the construction of haul roads and log landings.

Building sites

- Because of the flooding, this soil is unsuited to building site development.

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

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

Interpretive Groups

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

12D—Dekalb-Alticrest complex, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Note: These Dekalb and Alticrest soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Dekalb and similar soils: Typically 60 percent, ranging from about 50 to 75 percent
Alticrest and similar soils: Typically 25 percent, ranging from about 15 to 40 percent

Typical Profile

Dekalb

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsoil:
2 to 30 inches—yellowish brown very channery sandy loam

Hard bedrock:
30 inches—sandstone bedrock

Alticrest

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsurface layer:
2 to 4 inches—dark yellowish brown channery sandy loam

Subsoil:
4 to 12 inches—dark yellowish brown channery sandy loam
12 to 26 inches—yellowish brown channery sandy loam
26 to 30 inches—strong brown channery sandy loam; red mottles

Hard bedrock:
30 inches—sandstone bedrock

Minor Components

Dissimilar components:
- McClung soils, which are very deep to bedrock and have more clay in the subsoil than the Dekalb and Alticrest soils; on similar landforms
- Berks, Weikert, and Gilpin soils, which are over shale bedrock and have siltier subsoils than the Dekalb and Alticrest soils; on similar landforms
- Oriskany soils, which are very deep to bedrock; on footslopes
- Soils that are very shallow to sandstone or shale bedrock; on landforms similar to those of the Dekalb and Alticrest soils

- Soils that have extremely stony or rubbly surfaces; on landforms similar to those of the Dekalb and Alticrest soils
- Areas of rock outcrops; on landforms similar to those of the Dekalb and Alticrest soils

Similar components:
- Lehew soils, which have redder subsoils than the Dekalb and Alticrest soils; on similar landforms
- Lily soils, which have more clay in the subsoil than the Dekalb and Alticrest soils; on similar landforms
- Soils that are shallow or deep to sandstone bedrock; on landforms similar to those of the Dekalb and Alticrest soils
- Soils that have nonstony surfaces; on landforms similar to those of the Dekalb and Alticrest soils
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Dekalb and Alticrest soils

Soil Properties and Qualities

Available water capacity: Dekalb—very low (about 1.9 inches); Alticrest—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Dekalb—high (about 6.0 in/hr); Alticrest—high (about 2.0 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Dekalb—excessively drained; Alticrest—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 0.1 to 3.0 percent subangular stones
Parent material: Residuum weathered from sandstone

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 and eastern white pine
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

12E—Dekalb-Alticrest complex, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Backslopes and, in some areas, summits and shoulders

Map Unit Composition

Note: These Dekalb and Alticrest soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Dekalb and similar soils: Typically 60 percent, ranging from about 50 to 75 percent
Alticrest and similar soils: Typically 25 percent, ranging from about 15 to 40 percent

Typical Profile

Dekalb

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsoil:
2 to 30 inches—yellowish brown very channery sandy loam

Hard bedrock:
30 inches—sandstone bedrock

Alticrest

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsurface layer:
2 to 4 inches—dark yellowish brown channery sandy loam

Subsoil:
4 to 12 inches—dark yellowish brown channery sandy loam
12 to 26 inches—yellowish brown channery sandy loam
26 to 30 inches—strong brown channery sandy loam; red mottles

Hard bedrock:
30 inches—sandstone bedrock

Minor Components

Dissimilar components:
- Berks, Weikert, and Gilpin soils, which are over shale bedrock and have siltier subsoils than the Dekalb and Alticrest soils; on similar landforms
- Oriskany soils, which are very deep to bedrock; on footslopes
- Soils that are very shallow to sandstone or shale bedrock; on landforms similar to those of the Dekalb and Alticrest soils
- Soils that have extremely stony or rubbly surfaces; on landforms similar to those of the Dekalb and Alticrest soils
- Areas of rock outcrops; on landforms similar to those of the Dekalb and Alticrest soils

Similar components:
- Lehew soils, which have redder subsoils than the Dekalb and Alticrest soils; on similar landforms
- Lily soils, which have more clay in the subsoil than the Dekalb and Alticrest soils; on similar landforms
- Soils that are shallow or deep to sandstone bedrock; on landforms similar to those of the Dekalb and Alticrest soils
- Soils that have nonstony surfaces; on landforms similar to those of the Dekalb and Alticrest soils
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 65 percent; on landforms similar to those of the Dekalb and Alticrest soils

Soil Properties and Qualities

Available water capacity: Dekalb—very low (about 1.9 inches); Alticrest—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Dekalb—high (about 6.0 in/hr); Alticrest—high (about 2.0 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Dekalb—excessively drained; Alticrest—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 0.1 to 3.0 percent subangular stones
Parent material: Residuum weathered from sandstone

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 and eastern white pine
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

13D—Dekalb-Lily-McClung complex, 15 to 35 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Note: These Dekalb, Lily, and McClung soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Dekalb and similar soils: Typically 40 percent, ranging from about 35 to 50 percent
Lily and similar soils: Typically 30 percent, ranging from about 25 to 40 percent
McClung and similar soils: Typically 15 percent, ranging from about 10 to 20 percent

Typical Profile

Dekalb

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsoil:
2 to 30 inches—yellowish brown very channery sandy loam

Hard bedrock:
30 inches—sandstone bedrock

Lily

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 3 inches—black sandy loam

Subsoil:
3 to 17 inches—yellowish brown loam
17 to 27 inches—yellowish brown clay loam
27 to 32 inches—strong brown gravelly clay loam

Hard bedrock:
32 inches—sandstone bedrock

McClung

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

Subsurface layer:
2 to 3 inches—light gray sandy loam

Subsoil:
3 to 19 inches—yellowish brown sandy loam
19 to 28 inches—strong brown sandy clay loam
28 to 38 inches—strong brown sandy clay loam; red mottles
38 to 51 inches—yellowish red sandy clay loam; red and brownish yellow mottles
51 to 65 inches—reddish yellow sandy clay loam; yellow mottles

Minor Components

Dissimilar components:
- Oriskany soils, which are very deep to bedrock and have more than 35 percent rock fragments throughout; on landforms similar to those of the Dekalb, Lily, and McClung soils
- Berks, Weikert, and Rough soils, which are moderately deep, shallow, and very

shallow to shale bedrock, respectively; on landforms similar to those of the Dekalb, Lily, and McClung soils
- Soils that are very shallow to sandstone bedrock; on landforms similar to those of the Dekalb, Lily, and McClung soils
- Areas of rock outcrops; on landforms similar to those of the Dekalb, Lily, and McClung soils
- Areas that contain sinkholes; on landforms similar to those of the Dekalb, Lily, and McClung soils

Similar components:
- Alticrest soils, which are moderately deep to sandstone bedrock; on landforms similar to those of the Dekalb, Lily, and McClung soils
- Soils that have less sand and more silt in the subsoil than the Dekalb, Lily, and McClung soils; on similar landforms
- Soils that are shallow or deep to sandstone bedrock; on landforms similar to those of the Dekalb, Lily, and McClung soils
- Soils that have extremely stony surfaces; on landforms similar to those of the Dekalb, Lily, and McClung soils
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Dekalb, Lily, and McClung soils

Soil Properties and Qualities

Available water capacity: Dekalb—very low (about 1.9 inches); Lily—low (about 4.0 inches); McClung—moderate (about 7.4 inches)
Slowest saturated hydraulic conductivity: Dekalb—high (about 6.0 in/hr); Lily and McClung—moderately high (about 0.6 in/hr)
Depth class: Dekalb and Lily—moderately deep (20 to 40 inches); McClung—very deep (more than 60 inches)
Depth to root-restrictive feature: Dekalb and Lily—20 to 40 inches to bedrock (lithic); McClung—more than 60 inches
Drainage class: Dekalb—excessively drained; Lily and McClung—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Dekalb and Lily—very high; McClung—high
Surface fragments: Dekalb and Lily—about 0.1 to 3.0 percent subangular stones; McClung—none
Parent material: Dekalb and Lily—residuum weathered from sandstone; McClung—residuum weathered from sandstone with interbeds of limestone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.

- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Dekalb and Lily—7s; McClung—6e
Virginia soil management group: Dekalb—FF; Lily—U; McClung—M
Hydric soils: No

14E—Dekalb-Lily complex, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Backslopes and, in some areas, summits and shoulders

Map Unit Composition

Note: These Dekalb and Lily soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Dekalb and similar soils: Typically 65 percent, ranging from about 55 to 70 percent
Lily and similar soils: Typically 20 percent, ranging from about 15 to 25 percent

Typical Profile

Dekalb

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsoil:
2 to 30 inches—yellowish brown very channery sandy loam

Hard bedrock:
30 inches—sandstone bedrock

Lily

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 3 inches—black sandy loam

Subsoil:
3 to 17 inches—yellowish brown loam
17 to 27 inches—yellowish brown clay loam
27 to 32 inches—strong brown gravelly clay loam

Hard bedrock:
32 inches—sandstone bedrock

Minor Components

Dissimilar components:
- McClung soils, which are very deep to bedrock and have fewer rock fragments in the soil than the Dekalb soil; on similar landforms
- Oriskany soils, which are very deep to bedrock and have more than 35 percent rock fragments throughout; on footslopes
- Berks, Weikert, and Rough soils, which are moderately deep, shallow, and very shallow to shale bedrock, respectively; on landforms similar to those of the Dekalb and Lily soils
- Soils that are very shallow to sandstone bedrock; on landforms similar to those of the Dekalb and Lily soils
- Areas of rock outcrops; on landforms similar to those of the Dekalb and Lily soils
- Areas with sinkholes; on landforms similar to those of the Dekalb and Lily soils

Similar components:
- Alticrest soils, which are moderately deep to sandstone bedrock and have less clay in the subsoil than the Lily soil; on similar landforms
- Soils that have less sand and more silt in the subsoil than the Dekalb and Lily soils; on similar landforms
- Soils that are shallow or deep to sandstone bedrock; on landforms similar to those of the Dekalb and Lily soils
- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Dekalb and Lily soils
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 65 percent; on landforms similar to those of the Dekalb and Lily soils

Soil Properties and Qualities

Available water capacity: Dekalb—very low (about 1.9 inches); Lily—low (about 4.0 inches)
Slowest saturated hydraulic conductivity: Dekalb—high (about 6.0 in/hr); Lily—moderately high (about 0.6 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Dekalb—excessively drained; Lily—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 0.1 to 3.0 percent subangular stones
Parent material: Residuum weathered from sandstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak and chestnut oak; poorly suited to eastern white pine

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.

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

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Dekalb—FF; Lily—U
Hydric soils: No

15D—Dekalb-Rock outcrop complex, 15 to 35 percent slopes, extremely stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Summits, shoulders, and backslopes; in some areas, the Rock outcrop occurs as near-vertical cliffs

Map Unit Composition

Note: This Dekalb soil and Rock outcrop occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Dekalb and similar soils: Typically 60 percent, ranging from about 50 to 70 percent
Rock outcrop: Typically 30 percent, ranging from about 20 to 40 percent

Typical Profile

Dekalb

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsoil:
2 to 30 inches—yellowish brown very channery sandy loam

Hard bedrock:
30 inches—sandstone bedrock

Rock outcrop

This part of the map unit consists of outcrops of sandstone bedrock. Outcrops range from a few inches to about 100 feet high; some occur as near-vertical cliffs.

Minor Components

Dissimilar components:
- Berks and Weikert soils, which are over shale bedrock and have more silt and less sand than the Dekalb soil; on similar landforms
- Oriskany soils, which are very deep to bedrock; on footslopes
- Lily soils, which have more clay and fewer rock fragments in the subsoil than the Dekalb soil; on similar landforms
- Soils that are very deep to bedrock; on landforms similar to those of the Dekalb soil
- Soils that are very shallow to sandstone bedrock; on landforms similar to those of the Dekalb soil

Similar components:
- Alticrest soils, which have fewer rock fragments throughout than the Dekalb soil; on similar landforms
- Lehew soils, which have redder subsoils than the Dekalb soil; on similar landforms
- Soils that are shallow or deep to sandstone bedrock; on landforms similar to those of the Dekalb soil

Properties and Qualities of the Dekalb Soil

Available water capacity: Very low (about 1.9 inches)
Slowest saturated hydraulic conductivity: High (about 6.0 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: 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 3.0 to 15.0 percent subangular stones
Parent material: Residuum weathered from sandstone

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 chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 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.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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.

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 rock outcrops, rock removal may be needed.

Septic tank absorption fields

- Because of the limited depth to bedrock and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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 the rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.
- Frost action may damage local roads and streets.

Interpretive Groups

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

15E—Dekalb-Rock outcrop complex, 35 to 80 percent slopes, extremely stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Summits, shoulders, and backslopes; in some areas, the Rock outcrop occurs as near-vertical cliffs

Map Unit Composition

Note: This Dekalb soil and Rock outcrop occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Dekalb and similar soils: Typically 60 percent, ranging from about 50 to 70 percent
Rock outcrop: Typically 30 percent, ranging from about 20 to 40 percent

Typical Profile

Dekalb

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsoil:
2 to 30 inches—yellowish brown very channery sandy loam

Hard bedrock:
30 inches—sandstone bedrock

Rock outcrop

This part of the map unit consists of outcrops of sandstone bedrock. Outcrops range from a few inches to about 100 feet high; some occur as near-vertical cliffs.

Minor Components

Dissimilar components:
- Berks and Weikert soils, which are over shale bedrock and have more silt and less sand in the subsoil than the Dekalb soil; on similar landforms
- Oriskany soils, which are very deep to bedrock; on footslopes
- Lily soils, which have more clay and fewer rock fragments in the subsoil than the Dekalb soil; on similar landforms
- Soils that are very deep to bedrock; on landforms similar to those of the Dekalb soil
- Soils that have very rubbly surfaces; on landforms similar to those of the Dekalb soil
- Soils that are very shallow to sandstone bedrock; on landforms similar to those of the Dekalb soil

Similar components:
- Alticrest soils, which have fewer rock fragments throughout than the Dekalb soil; on similar landforms
- Lehew soils, which have redder subsoils than the Dekalb soil; on similar landforms
- Soils that are shallow or deep to sandstone bedrock; on landforms similar to those of the Dekalb soil
- Soils that have very stony or rubbly surfaces; on landforms similar to those of the Dekalb soil
- Soils that are on slopes that range from 15 to 35 percent or are more than 80 percent; on landforms similar to those of the Dekalb soil

Properties and Qualities of the Dekalb Soil

Available water capacity: Very low (about 1.9 inches)
Slowest saturated hydraulic conductivity: High (about 6.0 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: 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 3.0 to 15.0 percent subangular stones
Parent material: Residuum weathered from sandstone

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 chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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.

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 rock outcrops, rock removal may be needed.

Septic tank absorption fields

- Because of the limited depth to bedrock and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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 the rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.
- Frost action may damage local roads and streets.

Interpretive Groups

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

16E—Dekalb-Watahala-McClung complex, 35 to 55 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Backslopes and, in some areas, summits and shoulders

Map Unit Composition

Note: These Dekalb, Watahala, and McClung soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Dekalb and similar soils: Typically 35 percent, ranging from about 15 to 45 percent
Watahala and similar soils: Typically 30 percent, ranging from about 20 to 40 percent
McClung and similar soils: Typically 20 percent, ranging from about 10 to 30 percent

Typical Profile

Dekalb

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsoil:
2 to 30 inches—yellowish brown very channery sandy loam

Hard bedrock:
30 inches—sandstone bedrock

Watahala

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 3 inches—very dark grayish brown very gravelly sandy loam

Subsurface layer:
3 to 12 inches—yellowish brown gravelly silt loam

Subsoil:
12 to 27 inches—yellowish brown gravelly silt loam
27 to 37 inches—yellowish brown gravelly loam
37 to 54 inches—strong brown gravelly clay; light brown mottles
54 to 61 inches—strong brown silty clay; light brown mottles

McClung

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

Subsurface layer:
2 to 3 inches—light gray sandy loam

Subsoil:
3 to 19 inches—yellowish brown sandy loam
19 to 28 inches—strong brown sandy clay loam
28 to 38 inches—strong brown sandy clay loam; red mottles
38 to 51 inches—yellowish red sandy clay loam; red and brownish yellow mottles
51 to 65 inches—reddish yellow sandy clay loam; yellow mottles

Minor Components

Dissimilar components:
- Oriskany soils, which are very deep to bedrock and have more than 35 percent rock fragments in the soil; on footslopes
- Lily soils, which have more than 18 percent clay and less than 35 percent rock fragments in the subsoil; on landforms similar to those of the Dekalb, Watahala, and McClung soils
- Caneyville soils, which are moderately deep to limestone bedrock and have more clay in the soil than the Dekalb, Watahala, and McClung soils; on similar landforms
- Soils that are very shallow to bedrock; on landforms similar to those of the Dekalb, Watahala, and McClung soils
- Soils that have extremely stony surfaces; on landforms similar to those of the Dekalb, Watahala, and McClung soils

- Areas of rock outcrops; on landforms similar to those of the Dekalb, Watahala, and McClung soils
- Areas that have sinkholes; on landforms similar to those of the Dekalb, Watahala, and McClung soils

Similar components:
- Alticrest soils, which are moderately deep to sandstone bedrock and have fewer rock fragments in the soil than the Dekalb soil; on similar landforms
- Frederick soils, which are very deep to bedrock and have more clay in the subsoil than the Dekalb, Watahala, and McClung soils; on similar landforms
- Murrill soils, which are very deep to bedrock and have fewer rock fragments in the soil than the Dekalb soil; on footslopes
- Soils that are shallow to very deep and have more than 35 percent chert gravel throughout; on landforms similar to those of the Dekalb, Watahala, and McClung soils
- Soils that are shallow to sandstone or chert bedrock; on landforms similar to those of the Dekalb, Watahala, and McClung soils
- Soils that have very stony surfaces; on landforms similar to those of the Dekalb, Watahala, and McClung soils
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 65 percent; on landforms similar to those of the Dekalb, Watahala, and McClung soils

Soil Properties and Qualities

Available water capacity: Dekalb—very low (about 1.9 inches); Watahala—moderate (about 6.8 inches); McClung—moderate (about 7.4 inches)
Slowest saturated hydraulic conductivity: Dekalb—high (about 6.0 in/hr); Watahala—moderately high (about 0.2 in/hr); McClung—moderately high (about 0.6 in/hr)
Depth class: Dekalb—moderately deep (20 to 40 inches); Watahala and McClung—very deep (more than 60 inches)
Depth to root-restrictive feature: Dekalb—20 to 40 inches to bedrock (lithic); Watahala and McClung—more than 60 inches
Drainage class: Dekalb—excessively drained; Watahala and McClung—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Dekalb and McClung—low; Watahala—moderate
Runoff class: Dekalb—very high; Watahala and McClung—high
Surface fragments: Dekalb—about 0.01 to 0.1 percent subangular stones; Watahala and McClung—none
Parent material: Dekalb—residuum weathered from sandstone; Watahala—gravelly residuum over clayey residuum weathered from cherty limestone; McClung—residuum weathered from sandstone with interbeds of limestone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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 soil strength interferes with the construction of haul roads and log landings.

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

Septic tank absorption fields

- Because of the limited depth to bedrock and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Dekalb—FF; Watahala and McClung—M
Hydric soils: No

17A—Derroc very cobbly loam, 0 to 3 percent slopes, occasionally flooded

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Low to intermediate level flood plains in a river valley
Position on the landform: Flood-plain steps

Map Unit Composition

Derroc and similar soils: Typically 80 percent, ranging from about 65 to 95 percent

Typical Profile

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

Subsoil:
4 to 17 inches—dark yellowish brown very cobbly sandy loam
17 to 38 inches—dark yellowish brown extremely cobbly sandy loam

Substratum:
38 to 48 inches—dark yellowish brown extremely cobbly sandy loam
48 to 60 inches—yellowish brown extremely cobbly loamy sand; light brownish gray iron depletions

Minor Components

Dissimilar components:
- Gladehill and Wolfgap soils, which have fewer rock fragments in the soil than the Derroc soil and have dark surface layers that are more than 10 inches thick; on similar landforms
- Soils that are somewhat poorly drained; on landforms similar to those of the Derroc soil
- Soils that have more rock fragments in the soil than the Derroc soil; on similar landforms
- Soils that are noncobbly in the surface layers; on landforms similar to those of the Derroc soil
- Soils that are not susceptible to flooding; on the higher landforms

Similar components:
- Ogles soils, which are more acid and have more clay than the Derroc soil; on similar landforms
- Soils that are moderately well drained; on landforms similar to those of the Derroc soil
- Soils that contain fewer than 35 percent rock fragments within a depth of 40 inches; on landforms similar to those of the Derroc soil
- Soils that flood frequently; on the lower flood plains
- Soils that flood rarely; on the higher flood plains

Soil Properties and Qualities

Available water capacity: Low (about 3.8 inches)
Slowest saturated hydraulic conductivity: High (about 2.0 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: About 42 to 72 inches
Water table (kind): Apparent
Flooding hazard: Occasional
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Alluvium derived from limestone, sandstone, and shale

Use and Management Considerations

Cropland

Suitability: Poorly suited or moderately suited to grass-legume hay; poorly suited to corn; not suited to alfalfa hay

- Plants may suffer from moisture stress because of the limited available water capacity.
- Flooding may damage crops.

Pastureland

Suitability: Poorly suited
- During the drier summer months, plants may suffer from moisture stress because of the limited available water capacity.
- Flooding may damage pastures.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Flooding may damage haul roads and 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.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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.

Building sites

- Because of the flooding, this soil is unsuited to building site development.

Septic tank absorption fields

- Because of the flooding, this soil is unsuited to septic tank absorption fields.

Local roads and streets

- Flooding may damage local roads and streets.
- Frost action may damage local roads and streets.

Interpretive Groups

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

18B—Escatawba loam, 3 to 8 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Valleys
Position on the landform: Footslopes and toeslopes

Map Unit Composition

Escatawba and similar soils: Typically 80 percent, ranging from about 75 to 90 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

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

Subsoil:
3 to 30 inches—yellowish brown loam
30 to 44 inches—strong brown clay loam; yellowish red masses of oxidized iron
44 to 50 inches—yellowish brown and strong brown gravelly clay loam; pale brown iron depletions
50 to 65 inches—strong brown cobbly clay loam; pinkish gray iron depletions and yellowish red masses of oxidized iron

Minor Components

Dissimilar components:
- Shelocta soils, which do not have a perched seasonal high water table; on landforms similar to those of the Escatawba soil
- Oriskany soils, which have more than 35 percent rock fragments throughout and do not have a perched seasonal high water table; on landforms similar to those of the Escatawba soil
- Gilpin soils, which are moderately deep to shale bedrock; on hills
- Soils that are poorly drained; on landforms similar to those of the Escatawba soil

Similar components:
- Soils that have a fragipan; on landforms similar to those of the Escatawba soil
- Soils that are moderately well drained; on landforms similar to those of the Escatawba soil
- Soils that have less clay in the lower part of the subsoil than the Escatawba soil; on similar landforms
- Soils that have more clay in the upper part of the subsoil than the Escatawba soil; on similar landforms
- Soils that are deep to shale bedrock; on landforms similar to those of the Escatawba soil
- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Escatawba soil
- Soils that are on slopes that are less than 3 percent or that range from 8 to 15 percent; on landforms similar to those of the Escatawba soil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.2 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: About 30 to 48 inches
Water table (kind): Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0 to 1.0 percent subrounded boulders and about 0.1 to 2.0 percent subrounded stones
Parent material: Colluvium derived from sandstone and shale

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 chestnut oak; moderately suited to eastern white pine
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- 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

- Frost action may damage local roads and streets.

Interpretive Groups

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

18C—Escatawba loam, 8 to 15 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of mountains and hills and areas in valleys
Position on the landform: Footslopes and toeslopes

Map Unit Composition

Escatawba and similar soils: Typically 80 percent, ranging from about 75 to 90 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

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

Subsoil:
3 to 30 inches—yellowish brown loam
30 to 44 inches—strong brown clay loam; yellowish red masses of oxidized iron
44 to 50 inches—yellowish brown and strong brown gravelly clay loam; pale brown iron depletions

50 to 65 inches—strong brown cobbly clay loam; pinkish gray iron depletions and yellowish red masses of oxidized iron

Minor Components

Dissimilar components:
- Shelocta soils, which do not have a perched seasonal high water table; on landforms similar to those of the Escatawba soil
- Oriskany soils, which have more than 35 percent rock fragments throughout and do not have a perched seasonal high water table; on landforms similar to those of the Escatawba soil
- Gilpin soils, which are moderately deep to shale bedrock; on hills
- Soils that are poorly drained; on landforms similar to those of the Escatawba soil

Similar components:
- Soils that have a fragipan; on landforms similar to those of the Escatawba soil
- Soils that are moderately well drained; on landforms similar to those of the Escatawba soil
- Soils that have less clay in the lower part of the subsoil than the Escatawba soil; on similar landforms
- Soils that have more clay in the upper part of the subsoil than the Escatawba soil; on similar landforms
- Soils that are deep to shale bedrock; on landforms similar to those of the Escatawba soil
- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Escatawba soil
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 25 percent; on landforms similar to those of the Escatawba soil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.2 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: About 30 to 48 inches
Water table (kind): Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.1 to 2.0 percent subrounded stones and about 0 to 1.0 percent subrounded boulders
Parent material: Colluvium derived from sandstone and shale

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 chestnut oak; moderately suited to eastern white pine
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

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 effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

18D—Escatawba loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of mountains and hills and areas in valleys
Position on the landform: Footslopes

Map Unit Composition

Escatawba and similar soils: Typically 75 percent, ranging from about 60 to 90 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

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

Subsoil:
3 to 30 inches—yellowish brown loam
30 to 44 inches—strong brown clay loam; yellowish red masses of oxidized iron
44 to 50 inches—yellowish brown and strong brown gravelly clay loam; pale brown iron depletions

50 to 65 inches—strong brown cobbly clay loam; pinkish gray iron depletions and yellowish red masses of oxidized iron

Minor Components

Dissimilar components:
- Shelocta soils, which do not have a perched seasonal high water table; on landforms similar to those of the Escatawba soil
- Oriskany soils, which have more than 35 percent rock fragments throughout and do not have a perched seasonal high water table; on landforms similar to those of the Escatawba soil
- Berks and Weikert soils, which are moderately deep and shallow to shale bedrock, respectively; on hills

Similar components:
- Soils that have a fragipan; on landforms similar to those of the Escatawba soil
- Soils that are moderately well drained; on landforms similar to those of the Escatawba soil
- Soils that have less clay in the lower part of the subsoil than the Escatawba soil; on similar landforms
- Soils that have more clay in the upper part of the subsoil than the Escatawba soil; on similar landforms
- Soils that are deep to shale bedrock; on landforms similar to those of the Escatawba soil
- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Escatawba soil
- Soils that are on slopes that range from 8 to 15 percent; on landforms similar to those of the Escatawba soil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.2 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: About 30 to 48 inches
Water table (kind): Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0 to 1.0 percent subrounded boulders and about 0.1 to 2.0 percent subrounded stones
Parent material: Colluvium derived from sandstone and shale

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 eastern white pine

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

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 effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

19B—Escatawba silt loam, 3 to 8 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Valleys
Position on the landform: Footslopes and toeslopes

Map Unit Composition

Escatawba and similar soils: Typically 80 percent, ranging from about 60 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Subsurface layer:
1 to 4 inches—light yellowish brown silt loam

Subsoil:
4 to 36 inches—light olive brown silt loam
36 to 53 inches—yellowish brown gravelly silty clay loam; yellowish brown masses of oxidized iron and light olive brown iron depletions

53 to 75 inches—yellowish brown gravelly clay; light olive brown iron depletions and yellowish brown masses of oxidized iron

Minor Components

Dissimilar components:
- Berks and Weikert soils, which are moderately deep and shallow to shale bedrock, respectively; on hills
- Macove soils, which have more rock fragments in the subsoil than the Escatawba soil; on similar landforms
- Soils that are moderately well drained; on landforms similar to those of the Escatawba soil
- Soils that are poorly drained; on landforms similar to those of the Escatawba soil

Similar components:
- Soils that have less clay in the subsoil than the Escatawba soil; on similar landforms
- Soils that are on slopes that are less than 3 percent or that range from 8 to 15 percent; on landforms similar to those of the Escatawba soil

Soil Properties and Qualities

Available water capacity: High (about 9.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.2 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: About 30 to 48 inches
Water table (kind): Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Colluvium derived from sandstone and shale

Use and Management Considerations

Cropland

Suitability: Well 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.
- The risk of compaction increases when the soil is wet.
- 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 chestnut oak; moderately suited to eastern white pine
- The slope may restrict the use of some mechanical planting equipment.

Building sites

- The seasonal high water table may restrict the period when excavations can be made.
- 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 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 low soil strength may cause structural damage to local roads and streets.
- Frost action may damage local roads and streets.

Interpretive Groups

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

19C—Escatawba silt loam, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of hills and mountains and areas in valleys
Position on the landform: Footslopes and toeslopes

Map Unit Composition

Escatawba and similar soils: Typically 80 percent, ranging from about 60 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Subsurface layer:
1 to 4 inches—light yellowish brown silt loam

Subsoil:
4 to 36 inches—light olive brown silt loam
36 to 53 inches—yellowish brown gravelly silty clay loam; yellowish brown masses of oxidized iron and light olive brown iron depletions
53 to 75 inches—yellowish brown gravelly clay; light olive brown iron depletions and yellowish brown masses of oxidized iron

Minor Components

Dissimilar components:
- Berks and Weikert soils, which are moderately deep and shallow to shale bedrock, respectively; on hills
- Macove soils, which have more rock fragments in the subsoil than the Escatawba soil; on similar landforms

- Soils that are moderately well drained; on landforms similar to those of the Escatawba soil
- Soils that are poorly drained; on landforms similar to those of the Escatawba soil

Similar components:
- Soils that have less clay in the subsoil than the Escatawba soil; on similar landforms
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 35 percent; on landforms similar to those of the Escatawba soil

Soil Properties and Qualities

Available water capacity: High (about 9.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.2 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: About 30 to 48 inches
Water table (kind): Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Colluvium derived from sandstone and shale

Use and Management Considerations

Cropland

Suitability: Well suited to 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.
- The risk of compaction increases when the soil is wet.
- 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 chestnut oak; moderately suited to eastern white pine
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.

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.
- 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 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 effluent from conventional septic systems.

Local roads and streets

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

Interpretive Groups

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

20C—Faywood-Poplimento complex, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits and shoulders and, in some areas, backslopes

Map Unit Composition

Note: These Faywood and Poplimento soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Faywood and similar soils: Typically 50 percent, ranging from about 30 to 55 percent
Poplimento and similar soils: Typically 40 percent, ranging from about 30 to 55 percent

Typical Profile

Faywood

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

Subsoil:
6 to 15 inches—dark yellowish brown clay
15 to 24 inches—dark yellowish brown clay; very dark gray mottles

Hard bedrock:
24 inches—limestone and shale bedrock

Poplimento

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

Subsoil:
5 to 20 inches—yellowish red silty clay
20 to 35 inches—yellowish red silty clay; yellow mottles

35 to 50 inches—yellowish red and brownish yellow silty clay loam
50 to 60 inches—yellowish red and brownish yellow channery silty clay loam

Minor Components

Dissimilar components:
- Berks soils, which are moderately deep to shale bedrock and have more than 35 percent rock fragments in the subsoil; on landforms similar to those of the Faywood and Poplimento soils
- Oriskany soils, which are very deep to bedrock and have more than 35 percent rock fragments throughout; on footslopes
- Soils that are very shallow to limestone bedrock; on landforms similar to those of the Faywood and Poplimento soils
- Areas of rock outcrops; on landforms similar to those of the Faywood and Poplimento soils

Similar components:
- Caneyville soils, which are moderately deep to bedrock and have redder subsoils than the Faywood and Poplimento soils; on similar landforms
- Frederick soils, which are very deep to bedrock and have redder subsoils than the Faywood and Poplimento soils; on similar landforms
- Murrill soils, which have less clay in the upper part of the soil than the Faywood and Poplimento soils; on footslopes
- Soils that are shallow or deep to limestone or shale bedrock; on landforms similar to those of the Faywood and Poplimento soils
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 35 percent; on landforms similar to those of the Faywood and Poplimento soils

Soil Properties and Qualities

Available water capacity: Faywood—very low (about 2.7 inches); Poplimento—moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Faywood—moderately low (about 0.06 in/hr); Poplimento—moderately high (about 0.2 in/hr)
Depth class: Faywood—moderately deep (20 to 40 inches); Poplimento—very deep (more than 60 inches)
Depth to root-restrictive feature: Faywood—20 to 40 inches to bedrock (lithic); Poplimento—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: Faywood—moderate; Poplimento—high
Runoff class: Faywood—high; Poplimento—medium
Surface fragments: None
Parent material: Residuum weathered from limestone and shale

Use and Management Considerations

Cropland

Suitability: 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 bedrock and high clay content restrict the rooting depth of crops.
- The risk of compaction increases when the soil is wet.
- 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.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Moderately suited to northern red oak
- Bedrock may interfere with the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

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

Septic tank absorption fields

- Because of the limited depth to bedrock, these soils are unsuited to conventional septic tank absorption fields.

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 shrinking and swelling, the use of these soils as base material for local roads and streets is restricted.
- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: Faywood—U; Poplimento—M
Hydric soils: No

20D—Faywood-Poplimento complex, 15 to 35 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Note: These Faywood and Poplimento soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Faywood and similar soils: Typically 50 percent, ranging from about 30 to 55 percent
Poplimento and similar soils: Typically 40 percent, ranging from about 30 to 55 percent

Typical Profile

Faywood

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

Subsoil:
6 to 15 inches—dark yellowish brown clay
15 to 24 inches—dark yellowish brown clay; very dark gray mottles

Hard bedrock:
24 inches—limestone and shale bedrock

Poplimento

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

Subsoil:
5 to 20 inches—yellowish red silty clay
20 to 35 inches—yellowish red silty clay; yellow mottles
35 to 50 inches—yellowish red and brownish yellow silty clay loam
50 to 60 inches—yellowish red and brownish yellow channery silty clay loam

Minor Components

Dissimilar components:
- Berks soils, which are moderately deep to shale bedrock and have more than 35 percent rock fragments in the subsoil; on landforms similar to those of the Faywood and Poplimento soils
- Oriskany soils, which are very deep to bedrock and have more than 35 percent rock fragments throughout; on footslopes
- Soils that are very shallow to limestone bedrock; on landforms similar to those of the Faywood and Poplimento soils
- Areas of rock outcrops; on landforms similar to those of the Faywood and Poplimento soils

Similar components:
- Caneyville soils, which are moderately deep to bedrock and have redder subsoils than the Faywood and Poplimento soils; on similar landforms
- Frederick soils, which are very deep to bedrock and have redder subsoils than the Faywood and Poplimento soils; on similar landforms
- Murrill soils, which have less clay in the upper part of the soil than the Faywood and Poplimento soils; on footslopes
- Soils that are shallow or deep to limestone or shale bedrock; on landforms similar to those of the Faywood and Poplimento soils
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Faywood and Poplimento soils

Soil Properties and Qualities

Available water capacity: Faywood—very low (about 2.7 inches); Poplimento—moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Faywood—moderately low (about 0.06 in/hr); Poplimento—moderately high (about 0.2 in/hr)
Depth class: Faywood—moderately deep (20 to 40 inches); Poplimento—very deep (more than 60 inches)

Depth to root-restrictive feature: Faywood—20 to 40 inches to bedrock (lithic); Poplimento—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: Faywood—moderate; Poplimento—high
Runoff class: Faywood—very high; Poplimento—high
Surface fragments: None
Parent material: Residuum weathered from limestone and shale

Use and Management Considerations

Cropland

- These soils are 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.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Moderately suited to northern red oak; poorly suited to chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

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

Septic tank absorption fields

- Because of the limited depth to bedrock and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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 shrinking and swelling, the use of these soils as base material for local roads and streets is restricted.
- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: Faywood—U; Poplimento—M
Hydric soils: No

20E—Faywood-Poplimento complex, 35 to 55 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Backslopes and, in some areas, summits and shoulders

Map Unit Composition

Note: These Faywood and Poplimento soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Faywood and similar soils: Typically 45 percent, ranging from about 30 to 55 percent
Poplimento and similar soils: Typically 35 percent, ranging from about 20 to 50 percent

Typical Profile

Faywood

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

Subsoil:
6 to 15 inches—dark yellowish brown clay
15 to 24 inches—dark yellowish brown clay; very dark gray mottles

Hard bedrock:
24 inches—limestone and shale bedrock

Poplimento

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

Subsoil:
5 to 20 inches—yellowish red silty clay
20 to 35 inches—yellowish red silty clay; yellow mottles
35 to 50 inches—yellowish red and brownish yellow silty clay loam
50 to 60 inches—yellowish red and brownish yellow channery silty clay loam

Minor Components

Dissimilar components:
- Berks and Weikert soils, which are moderately deep and shallow to shale bedrock, respectively, and have more than 35 percent rock fragments in the subsoil; on landforms similar to those of the Faywood and Poplimento soils
- Oriskany soils, which are very deep to bedrock and have more than 35 percent rock fragments throughout; on footslopes
- Soils that are very shallow to limestone bedrock; on landforms similar to those of the Faywood and Poplimento soils

- Areas of rock outcrops; on landforms similar to those of the Faywood and Poplimento soils

Similar components:

- Caneyville soils, which are moderately deep to bedrock and have redder subsoils than the Faywood and Poplimento soils; on similar landforms
- Frederick soils, which are very deep to bedrock and have redder subsoils than the Faywood and Poplimento soils; on similar landforms
- Murrill soils, which have less clay in the upper part of the soil than the Faywood and Poplimento soils; on footslopes
- Soils that are shallow or deep to limestone or shale bedrock; on landforms similar to those of the Faywood and Poplimento soils
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 65 percent; on landforms similar to those of the Faywood and Poplimento soils

Soil Properties and Qualities

Available water capacity: Faywood—very low (about 2.7 inches); Poplimento—moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Faywood—moderately low (about 0.06 in/hr); Poplimento—moderately high (about 0.2 in/hr)
Depth class: Faywood—moderately deep (20 to 40 inches); Poplimento—very deep (more than 60 inches)
Depth to root-restrictive feature: Faywood—20 to 40 inches to bedrock (lithic); Poplimento—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: Faywood—moderate; Poplimento—high
Runoff class: Faywood—very high; Poplimento—high
Surface fragments: None
Parent material: Residuum weathered from limestone and shale

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak; poorly suited to chestnut oak

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

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

Septic tank absorption fields

- Because of the limited depth to bedrock, these soils are unsuited to conventional septic tank absorption fields.

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 shrinking and swelling, the use of these soils as base material for local roads and streets is restricted.
- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Faywood—U; Poplimento—M
Hydric soils: No

21A—Feedstone silt loam, 0 to 3 percent slopes, rarely flooded

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: High level flood plains in river valleys
Position on the landform: Flood-plain steps

Map Unit Composition

Feedstone and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Surface layer:
0 to 9 inches—very dark gray silt loam

Subsurface layer:
9 to 21 inches—very dark brown silt loam
21 to 26 inches—very dark grayish brown silt loam

Subsoil:
26 to 36 inches—brown loam
36 to 47 inches—brown loam; dark gray iron depletions and reddish brown iron-manganese masses
47 to 50 inches—brown sandy loam; dark gray iron depletions and reddish brown iron-manganese masses

Substratum:
50 to 65 inches—brown very gravelly sandy loam; reddish brown iron-manganese masses and dark gray iron depletions

Minor Components

Dissimilar components:
- Irongate soils, which have less clay than the Feedstone soil; on the lower flood plains
- Coursey soils, which have surface layers that are thinner and lighter colored and which have better developed subsoils than the Feedstone soil; on terraces
- Wolfgap soils, which are well drained and, in some areas, are more susceptible to flooding; on the lower flood plains and on landforms similar to those of the Feedstone soil
- Gladehill soils, which are well drained and more susceptible to flooding; on the lower flood plains
- Derroc soils, which are well drained, have more rock fragments in the soil than the Feedstone soil, and are more susceptible to flooding; on the lower flood plains
- Soils that are poorly drained; in adjacent backswamps
- Soils that have surface layers that are thinner and lighter colored than those of the Feedstone soil; on similar landforms

Similar components:
- Soils that have surface layers that are thinner and darker than those of the Feedstone soil; on similar landforms
- Soils that have more sand and less clay than the Feedstone soil; on similar landforms
- Soils that have surface layers of loam or sandy clay loam; on landforms similar to those of the Feedstone soil

Soil Properties and Qualities

Available water capacity: High (about 10.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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 18 to 36 inches
Water table (kind): Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Alluvium derived from limestone, sandstone, and shale

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; not suited to alfalfa hay
- The risk of compaction increases when the soil is wet.
- Soil crusting results in a decrease in water infiltration and hinders the emergence of seedlings.

Pastureland

- This soil is well suited to pastureland.

Woodland

Suitability: Moderately suited to yellow-poplar
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- Because of the flooding, this soil is unsuited to building site development.

Septic tank absorption fields

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

Local roads and streets

- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Frost action may damage local roads and streets.

Interpretive Groups

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

22C—Frederick silt loam, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits and shoulders and, in some areas, backslopes

Map Unit Composition

Frederick and similar soils: Typically 75 percent, ranging from about 60 to 90 percent

Typical Profile

Surface layer:
0 to 3 inches—brown silt loam

Subsoil:
3 to 8 inches—dark yellowish brown and yellowish brown silt loam
8 to 12 inches—yellowish brown silty clay loam
12 to 20 inches—strong brown silty clay
20 to 46 inches—yellowish red silty clay; strong brown mottles
46 to 72 inches—yellowish red silty clay

Minor Components

Dissimilar components:
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock; on landforms similar to those of the Frederick soil
- Oriskany soils, which have more than 35 percent rock fragments throughout; on footslopes
- Areas of rock outcrops; on landforms similar to those of the Frederick soil
- Areas that have sinkholes; on landforms similar to those of the Frederick soil

Similar components:
- Poplimento soils, which are very deep to bedrock and have yellower colors than the Frederick soil; on similar landforms

- Watahala soils, which have more chert gravel in the upper part than the Frederick soil; on similar landforms
- Murrill soils, which have less clay in the upper part than the Frederick soil; on footslopes
- Soils that are deep to limestone or chert bedrock; on landforms similar to those of the Frederick soil
- Soils that are on slopes that are less than 8 percent or that range from 15 to 35 percent; on landforms similar to those of the Frederick soil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: Medium
Surface fragments: None
Parent material: Residuum weathered from limestone

Use and Management Considerations

Cropland

Suitability: Well suited to 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.
- The risk of compaction increases when the soil is wet.
- 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
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- The low soil strength may create unsafe conditions for log trucks.

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 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 soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

22D—Frederick silt loam, 15 to 25 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Frederick and similar soils: Typically 75 percent, ranging from about 60 to 90 percent

Typical Profile

Surface layer:
0 to 3 inches—brown silt loam

Subsoil:
3 to 8 inches—dark yellowish brown and yellowish brown silt loam
8 to 12 inches—yellowish brown silty clay loam
12 to 20 inches—strong brown silty clay
20 to 46 inches—yellowish red silty clay; strong brown mottles
46 to 72 inches—yellowish red silty clay

Minor Components

Dissimilar components:
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock; on landforms similar to those of the Frederick soil
- Oriskany soils, which have more than 35 percent rock fragments throughout; on footslopes
- Areas of rock outcrops; on landforms similar to those of the Frederick soil
- Areas that have sinkholes; on landforms similar to those of the Frederick soil

Similar components:
- Poplimento soils, which are very deep to bedrock and have yellower colors than the Frederick soil; on similar landforms
- Watahala soils, which have more chert gravel in the upper part than the Frederick soil; on similar landforms
- Murrill soils, which have less clay in the upper part than the Frederick soil; on footslopes
- Soils that are deep to limestone or chert bedrock; on landforms similar to those of the Frederick soil

- Soils that are on slopes that range from 8 to 15 percent or from 25 to 35 percent; on landforms similar to those of the Frederick soil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: Residuum weathered from limestone

Use and Management Considerations

Cropland

Suitability: 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.
- The risk of compaction increases when the soil is wet.
- 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
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

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 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 soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

23C—Frederick-Watahala complex, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits and shoulders and, in some areas, backslopes

Map Unit Composition

Note: These Frederick and Watahala soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Frederick and similar soils: Typically 50 percent, ranging from about 35 to 60 percent
Watahala and similar soils: Typically 40 percent, ranging from about 25 to 50 percent

Typical Profile

Frederick

Surface layer:
0 to 3 inches—brown gravelly silt loam

Subsoil:
3 to 8 inches—dark yellowish brown and yellowish brown silt loam
8 to 12 inches—yellowish brown silty clay loam
12 to 20 inches—strong brown silty clay
20 to 72 inches—yellowish red silty clay

Watahala

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 3 inches—very dark grayish brown very gravelly sandy loam

Subsurface layer:
3 to 12 inches—yellowish brown gravelly silt loam

Subsoil:
12 to 27 inches—yellowish brown gravelly silt loam
27 to 37 inches—yellowish brown gravelly loam
37 to 54 inches—strong brown gravelly clay; light brown mottles
54 to 61 inches—strong brown silty clay; light brown mottles

Minor Components

Dissimilar components:
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock; on landforms similar to those of the Frederick and Watahala soils
- Oriskany soils, which have more than 35 percent rock fragments throughout; on footslopes
- Soils that are shallow to limestone or chert bedrock; on landforms similar to those of the Frederick and Watahala soils
- Soils that have extremely stony surfaces; on landforms similar to those of the Frederick and Watahala soils
- Areas of rock outcrops; on landforms similar to those of the Frederick and Watahala soils
- Areas that have sinkholes; on landforms similar to those of the Frederick and Watahala soils

Similar components:
- Poplimento soils, which are very deep to bedrock and have yellower colors than the Frederick soil; on similar landforms
- McClung soils, which have less clay in the upper part of the subsoil than the Frederick soil; on similar landforms
- Murrill soils, which have less clay in the upper part of the subsoil than the Frederick soil; on footslopes
- Soils that are deep to limestone or chert bedrock; on landforms similar to those of the Frederick and Watahala soils
- Soils that have very stony surfaces; on landforms similar to those of the Frederick and Watahala soils
- Soils that are on slopes that are less than 8 percent or that range from 15 to 35 percent; on landforms similar to those of the Frederick and Watahala soils

Soil Properties and Qualities

Available water capacity: Frederick—moderate (about 8.5 inches); Watahala—moderate (about 6.8 inches)
Slowest saturated hydraulic conductivity: Frederick—moderately high (about 0.6 in/hr); Watahala—moderately high (about 0.2 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: Medium
Surface fragments: Frederick—about 3.0 to 15.0 percent coarse angular gravel; Watahala—about 2.0 to 10.0 percent coarse angular gravel and about 1.0 to 5.0 percent angular cobbles
Parent material: Frederick—residuum weathered from limestone; Watahala—gravelly residuum over clayey residuum weathered from cherty limestone

Use and Management Considerations

Cropland

Suitability: 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.

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
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- 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 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 soil strength may create unsafe conditions for log trucks.

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 effluent from conventional septic systems.

Local roads and streets

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

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Frederick—3e; Watahala—4s
Virginia soil management group: M
Hydric soils: No

23D—Frederick-Watahala complex, 15 to 35 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Note: These Frederick and Watahala soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Frederick and similar soils: Typically 50 percent, ranging from about 35 to 60 percent
Watahala and similar soils: Typically 40 percent, ranging from about 25 to 50 percent

Typical Profile

Frederick

Surface layer:
0 to 3 inches—brown gravelly silt loam

Subsoil:
3 to 8 inches—dark yellowish brown and yellowish brown silt loam
8 to 12 inches—yellowish brown silty clay loam
12 to 20 inches—strong brown silty clay
20 to 72 inches—yellowish red silty clay

Watahala

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 3 inches—very dark grayish brown very gravelly sandy loam

Subsurface layer:
3 to 12 inches—yellowish brown gravelly silt loam

Subsoil:
12 to 27 inches—yellowish brown gravelly silt loam
27 to 37 inches—yellowish brown gravelly loam
37 to 54 inches—strong brown gravelly clay; light brown mottles
54 to 61 inches—strong brown silty clay; light brown mottles

Minor Components

Dissimilar components:
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock; on landforms similar to those of the Frederick and Watahala soils
- Oriskany soils, which have more than 35 percent rock fragments throughout; on footslopes
- Soils that are shallow to limestone or chert bedrock; on landforms similar to those of the Frederick and Watahala soils
- Soils that have extremely stony surfaces; on landforms similar to those of the Frederick and Watahala soils
- Areas of rock outcrops; on landforms similar to those of the Frederick and Watahala soils
- Areas that have sinkholes; on landforms similar to those of the Frederick and Watahala soils

Similar components:
- Poplimento soils, which are very deep to bedrock and have yellower colors than the Frederick soil; on similar landforms
- McClung soils, which have less clay in the upper part of the subsoil than the Frederick soil; on similar landforms
- Murrill soils, which have less clay in the upper part of the subsoil than the Frederick soil; on footslopes
- Soils that are deep to limestone or chert bedrock; on landforms similar to those of the Frederick and Watahala soils
- Soils that have very stony surfaces; on landforms similar to those of the Frederick and Watahala soils

- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Frederick and Watahala soils

Soil Properties and Qualities

Available water capacity: Frederick—moderate (about 8.5 inches); Watahala—moderate (about 6.8 inches)
Slowest saturated hydraulic conductivity: Frederick—moderately high (about 0.6 in/hr); Watahala—moderately high (about 0.2 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: Frederick—about 3.0 to 15.0 percent coarse angular gravel; Watahala—about 2.0 to 10.0 percent coarse angular gravel and about 1.0 to 5.0 percent angular cobbles
Parent material: Frederick—residuum weathered from limestone; Watahala—gravelly residuum over clayey residuum weathered from cherty limestone

Use and Management Considerations

Cropland

- These soils are 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
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 and the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

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 effluent from conventional septic systems.

Local roads and streets

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

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Frederick—6e; Watahala—6s
Virginia soil management group: M
Hydric soils: No

24B—Gilpin silt loam, 3 to 8 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits and shoulders and, in a few areas, eroded high level river terraces

Map Unit Composition

Gilpin and similar soils: Typically 80 percent, ranging from about 70 to 90 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown silt loam

Subsurface layer:
2 to 3 inches—yellowish brown channery silt loam

Subsoil:
3 to 7 inches—yellowish brown channery silt loam
7 to 26 inches—strong brown channery silty clay loam
26 to 32 inches—yellowish brown very channery silty clay loam; strong brown and pale brown mottles

Soft bedrock:
32 inches—pale olive shale bedrock

Minor Components

Dissimilar components:
- Escatawba soils, which are very deep to bedrock and have a perched seasonal high water table; on footslopes
- Weikert soils, which are shallow to shale bedrock; on landforms similar to those of the Gilpin soil

- Sugarhol soils, which are well drained, are very deep to bedrock, and have more clay in the soil than the Gilpin soil; on terraces
- Blairton and Wharton soils, which are moderately well drained; on landforms similar to those of the Gilpin soil

Similar components:
- Berks soils, which have more rock fragments in the soil than the Gilpin soil; on similar landforms
- Soils that have stony surfaces; on landforms similar to those of the Gilpin soil
- Soils that have less clay in the subsoil than the Gilpin soil; on similar landforms
- Soils that have more clay in the subsoil than the Gilpin soil; on similar landforms
- Soils that have thin mantles of alluvial material over the Gilpin soil; on similar landforms

Soil Properties and Qualities

Available water capacity: Low (about 4.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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 shale and siltstone

Use and Management Considerations

Cropland

Suitability: Well suited to 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 bedrock restricts the rooting depth of crops.
- The risk of compaction increases when the soil is wet.
- 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.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to eastern white pine
- Bedrock may interfere with the construction of haul roads and log landings.
- The slope may restrict the use of some mechanical planting equipment.

Building sites

- 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

- Because of the limited depth to bedrock, this soil is unsuited to conventional septic tank absorption fields.

Local roads and streets

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

Interpretive Groups

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

24C—Gilpin silt loam, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits and shoulders and, in some areas, backslopes

Map Unit Composition

Gilpin and similar soils: Typically 80 percent, ranging from about 70 to 90 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown silt loam

Subsurface layer:
2 to 3 inches—yellowish brown channery silt loam

Subsoil:
3 to 7 inches—yellowish brown channery silt loam
7 to 26 inches—strong brown channery silty clay loam
26 to 32 inches—yellowish brown very channery silty clay loam; strong brown and pale brown mottles

Soft bedrock:
32 inches—pale olive shale bedrock

Minor Components

Dissimilar components:

- Escatawba soils, which are very deep to bedrock and a have perched seasonal high water table; on footslopes
- Weikert and Rough soils, which are shallow and very shallow to shale bedrock, respectively, and have more than 35 percent rock fragments throughout; on landforms similar to those of the Gilpin soil
- Wharton and Blairton soils, which are moderately well drained; on landforms similar to those of the Gilpin soil

Similar components:
- Berks soils, which have more than 35 percent rock fragments throughout; on landforms similar to those of the Gilpin soil
- Soils that are shallow or deep to shale bedrock; on landforms similar to those of the Gilpin soil
- Soils that have redder subsoils than the Gilpin soil; on similar landforms
- Soils that have very stony surfaces; on landforms similar to those of the Gilpin soil
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 25 percent; on landforms similar to those of the Gilpin soil

Soil Properties and Qualities

Available water capacity: Low (about 4.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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 shale and siltstone

Use and Management Considerations

Cropland

Suitability: 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 bedrock restricts the rooting depth of crops.
- The risk of compaction increases when the soil is wet.
- 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.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to eastern white pine
- Bedrock may interfere with the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.

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

- Because of the limited depth to bedrock, this soil is unsuited to conventional septic tank absorption fields.

Local roads and streets

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

Interpretive Groups

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

24D—Gilpin silt loam, 15 to 25 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Gilpin and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown silt loam

Subsurface layer:
2 to 3 inches—yellowish brown channery silt loam

Subsoil:
3 to 7 inches—yellowish brown channery silt loam
7 to 26 inches—strong brown channery silty clay loam
26 to 32 inches—yellowish brown very channery silty clay loam; strong brown and pale brown mottles

Soft bedrock:
32 inches—pale olive shale bedrock

Minor Components

Dissimilar components:
- Shelocta soils, which are very deep to bedrock; on footslopes
- Escatawba soils, which are very deep to bedrock and have a perched seasonal high water table; on footslopes
- Weikert and Rough soils, which are shallow and very shallow to shale bedrock, respectively, and have more than 35 percent rock fragments throughout; on landforms similar to those of the Gilpin soil
- Wharton and Blairton soils, which are moderately well drained; on landforms similar to those of the Gilpin soil

Similar components:
- Berks soils, which have more than 35 percent rock fragments throughout; on landforms similar to those of the Gilpin soil
- Soils that are shallow or deep to shale bedrock; on landforms similar to those of the Gilpin soil
- Soils that have redder subsoils than the Gilpin soil; on similar landforms
- Soils that have very stony surfaces; on landforms similar to those of the Gilpin soil
- Soils that are on slopes that range from 8 to 15 percent or from 25 to 35 percent; on landforms similar to those of the Gilpin soil

Soil Properties and Qualities

Available water capacity: Low (about 4.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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 shale and siltstone

Use and Management Considerations

Cropland

Suitability: 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 bedrock restricts the rooting depth of crops.
- The risk of compaction increases when the soil is wet.
- 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.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to eastern white pine
- Bedrock may interfere with the construction of haul roads and log landings.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 soil strength interferes with the construction of haul roads and log landings.

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

- Because of the limited depth to bedrock and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

Local roads and streets

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

Interpretive Groups

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

25A—Gladehill loam, 0 to 3 percent slopes, frequently flooded

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Low level flood plains in a river valley
Position on the landform: Flood-plain steps

Map Unit Composition

Gladehill and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Surface layer:
0 to 10 inches—dark brown loam

Subsurface layer:
10 to 20 inches—dark brown loam

Subsoil:
20 to 33 inches—dark brown loam

Substratum:
33 to 60 inches—brown fine sandy loam

Minor Components

Dissimilar components:
- Atkins soils, which are poorly drained; on adjacent backswamps
- Feedstone and Irongate soils, which are moderately well drained and less susceptible to flooding; on the higher flood plains
- Derroc soils, which have more rock fragments in the soil than the Gladehill soil; on similar landforms and on the higher flood plains
- Wolfgap soils, which have more clay than the Gladehill soil and are susceptible to rare flooding; on the higher flood plains
- Soils that are somewhat poorly drained; on adjacent backswamps

- Soils that have surface layers that are thinner and lighter in color than those of the Gladehill soil; on similar landforms

Similar components:
- Wolfgap soils, which have more clay in the soil than the Gladehill soil and which are susceptible to occasional flooding; on low to intermediate level flood plains
- Soils that have surface layers that are thicker than those of the Gladehill soil; on similar landforms
- Soils that have more sand and less clay in the subsoil than the Gladehill soil; on similar landforms

Soil Properties and Qualities

Available water capacity: High (about 10.6 inches)
Slowest saturated hydraulic conductivity: High (about 2.0 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 limestone, sandstone, and shale

Use and Management Considerations

Cropland

Suitability: Well suited to corn, grass-legume hay, and alfalfa hay
- Frequent flooding restricts the use of winter grain crops.
- Flooding may damage crops.

Pastureland

Suitability: Well suited
- Flooding may damage pastures.

Woodland

Suitability: Moderately suited to yellow-poplar
- Flooding may damage haul roads and restricts the safe use of roads by log trucks.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- Because of the flooding, this soil is unsuited to building site development.

Septic tank absorption fields

- Because of the flooding, this soil is unsuited to septic tank absorption fields.

Local roads and streets

- Flooding may damage local roads and streets.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3w

Virginia soil management group: A
Hydric soil: No

26A—Irongate fine sandy loam, 0 to 3 percent slopes, occasionally flooded

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Low to intermediate level flood plains in river valleys
Position on the landform: Flood-plain steps

Map Unit Composition

Irongate and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

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

Subsurface layer:
10 to 21 inches—very dark grayish brown fine sandy loam

Subsoil:
21 to 30 inches—brown sandy loam
30 to 42 inches—brown sandy loam; dark grayish brown iron depletions and strong brown iron-manganese masses

Substratum:
42 to 55 inches—brown sandy loam; dark grayish brown iron depletions and strong brown iron-manganese masses
55 to 62 inches—brown gravelly sandy loam; strong brown iron-manganese masses and dark grayish brown iron depletions

Minor Components

Dissimilar components:
- Wolfgap and Gladehill soils, which are well drained; on flood plains
- Coursey soils, which have surface layers that are thinner and lighter in color than those of the Irongate soil, have better developed subsoils, have more clay, and are less susceptible to flooding; on low terraces
- Derroc soils, which have more rock fragments in the soil than the Irongate soil and have surface layers that are thinner and lighter in color; on similar landforms
- Feedstone soils, which have more clay in the soil than the Irongate soil, have surface layers that are thicker, and are less susceptible to flooding; on the higher flood plains
- Soils that are poorly drained; on adjacent backswamps
- Soils that have surface layers that are thinner and lighter in color than those of the Irongate soil; on similar landforms

Similar components:
- Gladehill soils, which are well drained and more susceptible to flooding than the Irongate soil; on the lower flood plains
- Soils that have surface layers that are thicker than those of the Irongate soil; on similar landforms
- Soils that have more clay and less sand in the soil than the Irongate soil; on similar landforms

- Soils that have surface layers of silt loam or sandy loam; on landforms similar to those of the Irongate soil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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 18 to 36 inches
Water table (kind): Apparent
Flooding hazard: Occasional
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Alluvium derived from limestone, sandstone, and shale

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; not suited to alfalfa hay
- Frost action may damage the root system of winter grain crops.
- Excessive permeability increases the risk of ground-water contamination.
- Flooding may damage crops.

Pastureland

Suitability: Well suited
- Flooding may damage pastures.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Moderately suited to yellow-poplar
- Flooding may damage haul roads and restricts the safe use of roads by log trucks.

Building sites

- Because of the flooding, this soil is unsuited to building site development.

Septic tank absorption fields

- Because of the flooding, this soil is unsuited to septic tank absorption fields.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

27C—Lehew-Berks complex, 8 to 15 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Summits and shoulders and, in some areas, backslopes

Map Unit Composition

Note: These Lehew and Berks soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Lehew and similar soils: Typically 50 percent, ranging from about 40 to 65 percent
Berks and similar soils: Typically 45 percent, ranging from about 30 to 55 percent

Typical Profile

Lehew

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—brown channery sandy loam

Subsoil:
2 to 21 inches—reddish brown very channery loam

Substratum:
21 to 27 inches—reddish brown extremely channery sandy loam

Hard bedrock:
27 inches—sandstone bedrock

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Minor Components

Dissimilar components:
- Rough soils, which are very shallow to shale bedrock; on landforms similar to those of the Lehew and Berks soils
- Soils that have more than 35 percent clay in the subsoil; on landforms similar to those of the Lehew and Berks soils
- Areas of rock outcrops; on landforms similar to those of the Lehew and Berks soils

Similar components:
- Dekalb soils, which have yellower colors and sandier textures in the subsoil than the Lehew and Berks soils; on similar landforms
- Alticrest, Lily, and Gilpin soils, which have fewer rock fragments throughout than the Lehew and Berks soils; on similar landforms
- Weikert soils, which are shallow to shale bedrock; on landforms similar to those of the Lehew and Berks soils
- Soils that have redder colors and siltier textures in the subsoil than the Lehew and Berks soils; on similar landforms
- Soils that are deep to sandstone or shale bedrock; on landforms similar to those of the Lehew and Berks soils
- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Lehew and Berks soils
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 35 percent; on landforms similar to those of the Lehew and Berks soils

Soil Properties and Qualities

Available water capacity: Lehew—very low (about 2.2 inches); Berks—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Lehew—high (about 2.0 in/hr); Berks—moderately high (about 0.6 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Lehew—somewhat excessively drained; Berks—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Lehew—high; Berks—medium
Surface fragments: About 0.1 to 2.0 percent subangular stones
Parent material: Lehew—red residuum weathered from sandstone; Berks—residuum weathered from shale and siltstone

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 bedrock may restrict the rooting depth of plants.
- Large stones on the surface may restrict the operation of some farm machinery.

Woodland

Suitability: Moderately suited to northern red oak and chestnut oak
- Bedrock may interfere with the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.

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, these soils are unsuited to conventional septic tank absorption fields.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

27D—Lehew-Berks complex, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Note: These Lehew and Berks soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Lehew and similar soils: Typically 50 percent, ranging from about 40 to 65 percent
Berks and similar soils: Typically 45 percent, ranging from about 30 to 60 percent

Typical Profile

Lehew

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—brown channery sandy loam

Subsoil:
2 to 21 inches—reddish brown very channery loam

Substratum:
21 to 27 inches—reddish brown extremely channery sandy loam

Hard bedrock:
27 inches—sandstone bedrock

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Minor Components

Dissimilar components:
- Shelocta, Macove, and Oriskany soils, which formed in colluvium that is very deep to bedrock; on footslopes
- Rough soils, which are very shallow to shale bedrock; on landforms similar to those of the Lehew and Berks soils
- Soils that have more than 35 percent clay in the subsoil; on landforms similar to those of the Lehew and Berks soils
- Soils that have rubbly surfaces; on landforms similar to those of the Lehew and Berks soils
- Areas of rock outcrops; on landforms similar to those of the Lehew and Berks soils

Similar components:
- Dekalb soils, which have yellower colors and sandier textures in the subsoil than the Lehew and Berks soils; on similar landforms
- Alticrest, Lily, and Gilpin soils, which have fewer rock fragments throughout than the Lehew and Berks soils; on similar landforms
- Weikert soils, which are shallow to shale bedrock; on landforms similar to those of the Lehew and Berks soils
- Soils that have redder colors and siltier textures in the subsoil than the Lehew and Berks soils; on similar landforms
- Soils that are deep to sandstone or shale bedrock; on landforms similar to those of the Lehew and Berks soils
- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Lehew and Berks soils
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Lehew and Berks soils

Soil Properties and Qualities

Available water capacity: Lehew—very low (about 2.2 inches); Berks—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Lehew—high (about 2.0 in/hr); Berks—moderately high (about 0.6 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Lehew—somewhat excessively drained; Berks—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Lehew—very high; Berks—high
Surface fragments: About 0.1 to 2.0 percent subangular stones
Parent material: Lehew—red residuum weathered from sandstone; Berks—residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak and chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

27E—Lehew-Berks complex, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Backslopes and, in some areas, summits and shoulders

Map Unit Composition

Note: These Lehew and Berks soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

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

Typical Profile

Lehew

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—brown channery sandy loam

Subsoil:
2 to 21 inches—reddish brown very channery loam

Substratum:
21 to 27 inches—reddish brown extremely channery sandy loam

Hard bedrock:
27 inches—sandstone bedrock

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Minor Components

Dissimilar components:
- Shelocta, Macove, and Oriskany soils, which formed in colluvium that is very deep to bedrock; on footslopes
- Rough soils, which are very shallow to shale bedrock; on landforms similar to those of the Lehew and Berks soils
- Soils that have more than 35 percent clay in the subsoil; on landforms similar to those of the Lehew and Berks soils
- Soils that have rubbly surfaces; on landforms similar to those of the Lehew and Berks soils
- Areas of rock outcrops; on landforms similar to those of the Lehew and Berks soils

Similar components:
- Dekalb soils, which have yellower colors and sandier textures in the subsoil than the Lehew and Berks soils; on similar landforms
- Alticrest, Lily, and Gilpin soils, which have fewer rock fragments throughout than the Lehew and Berks soils; on similar landforms
- Weikert soils, which are shallow to shale bedrock; on landforms similar to those of the Lehew and Berks soils
- Soils that have redder colors and siltier textures in the subsoil than the Lehew and Berks soils; on similar landforms
- Soils that are deep to sandstone or shale bedrock; on landforms similar to those of the Lehew and Berks soils

- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Lehew and Berks soils
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 65 percent; on landforms similar to those of the Lehew and Berks soils

Soil Properties and Qualities

Available water capacity: Lehew—very low (about 2.2 inches); Berks—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Lehew—high (about 2.0 in/hr); Berks—moderately high (about 0.6 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Lehew—somewhat excessively drained; Berks—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Lehew—very high; Berks—high
Surface fragments: About 0.1 to 2.0 percent subangular stones
Parent material: Lehew—red residuum weathered from sandstone; Berks—residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak and chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- Because of the slope, the use of equipment for planting and seeding is impractical.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

28F—Lehew-Berks-Rock outcrop complex, 55 to 80 percent slopes, extremely stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Backslopes and, in some areas, summits and shoulders

Map Unit Composition

Note: These Lehew and Berks soils and Rock outcrop occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Lehew and similar soils: Typically 45 percent, ranging from about 30 to 55 percent
Berks and similar soils: Typically 40 percent, ranging from about 30 to 55 percent
Rock outcrop: Typically 10 percent, ranging from about 1 to 12 percent

Typical Profile

Lehew

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—brown channery sandy loam

Subsoil:
2 to 21 inches—reddish brown very channery loam

Substratum:
21 to 27 inches—reddish brown extremely channery sandy loam

Hard bedrock:
27 inches—sandstone bedrock

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Rock outcrop

This part of the map unit consists of outcrops of sandstone bedrock. Outcrops range from a few inches to about 5 feet high.

Minor Components

Dissimilar components:
- Shelocta, Macove, and Oriskany soils, which formed in colluvium that is very deep to bedrock; on footslopes
- Rough soils, which are very shallow to shale bedrock; on landforms similar to those of the Lehew and Berks soils
- Soils that have more than 35 percent clay in the subsoil; on landforms similar to those of the Lehew and Berks soils
- Soils that have rubbly surfaces; on landforms similar to those of the Lehew and Berks soils

Similar components:
- Dekalb soils, which have yellower colors and sandier textures in the subsoil than the Lehew and Berks soils; on similar landforms
- Alticrest, Lily, and Gilpin soils, which have fewer rock fragments throughout than the Lehew and Berks soils; on similar landforms
- Weikert soils, which are shallow to shale bedrock; on landforms similar to those of the Lehew and Berks soils
- Soils that have redder colors and siltier textures in the subsoil than the Lehew and Berks soils; on similar landforms
- Soils that are deep to sandstone or shale bedrock; on landforms similar to those of the Lehew and Berks soils
- Soils that have very stony or rubbly surfaces; on landforms similar to those of the Lehew and Berks soils
- Soils that are on slopes that range from 35 to 55 percent or are more than 80 percent; on landforms similar to those of the Lehew and Berks soils

Properties and Qualities and the Lehew and Berks Soils

Available water capacity: Lehew—very low (about 2.2 inches); Berks—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Lehew—high (about 2.0 in/hr); Berks—moderately high (about 0.6 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Lehew—somewhat excessively drained; Berks—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Lehew—very high; Berks—high
Surface fragments: About 1.0 to 10.0 percent subangular stones
Parent material: Lehew—red residuum weathered from sandstone; Berks—residuum weathered from shale and siltstone

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

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 rock outcrops, rock removal may be needed.

Septic tank absorption fields

- Because of the limited depth to bedrock and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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 the rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.
- Frost action may damage local roads and streets.

Interpretive Groups

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

29C—Lily sandy loam, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits and shoulders, and in some areas, backslopes

Map Unit Composition

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

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 3 inches—black sandy loam

Subsoil:
3 to 17 inches—yellowish brown loam

17 to 27 inches—yellowish brown clay loam
27 to 32 inches—strong brown gravelly clay loam

Hard bedrock:
32 inches—sandstone bedrock

Minor Components

Dissimilar components:
- McClung soils, which are very deep to sandstone bedrock; on landforms similar to those of the Lily soil
- Berks and Dekalb soils, which have more rock fragments throughout than the Lily soil; on similar landforms
- Soils that are very shallow to sandstone bedrock; on landforms similar to those of the Lily soil
- Soils that are moderately well drained and have more clay in the subsoil than the Lily soil; on similar landforms
- Soils that have extremely stony surfaces; on landforms similar to those of the Lily soil
- Areas of rock outcrops; on landforms similar to those of the Lily soil

Similar components:
- Alticrest soils, which have less clay than the Lily soil; on similar landforms
- Soils that are shallow or deep to sandstone bedrock; on landforms similar to those of the Lily soil
- Soils that have very stony surfaces; on landforms similar to those of the Lily soil
- Soils that are on slopes that are less than 8 percent or that range from 15 to 25 percent; on landforms similar to those of the Lily soil

Soil Properties and Qualities

Available water capacity: Low (about 4.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: High
Surface fragments: None
Parent material: Residuum weathered from sandstone

Use and Management Considerations

Cropland

Suitability: 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 bedrock restricts the rooting depth of crops.
- Plants may suffer from moisture stress because of the limited available water capacity.

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.

- During the drier summer months, plants may suffer from moisture stress because of the limited available water capacity.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to northern red oak and eastern white pine

- Bedrock may interfere with the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- Coarse 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

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, this soil is unsuited to conventional septic tank absorption fields.

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

Interpretive Groups

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

30D—Lily sandy loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Lily 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 3 inches—black sandy loam

Subsoil:
3 to 17 inches—yellowish brown loam
17 to 27 inches—yellowish brown clay loam
27 to 32 inches—strong brown gravelly clay loam

Hard bedrock:
32 inches—sandstone bedrock

Minor Components

Dissimilar components:
- McClung soils, which are very deep to sandstone bedrock; on landforms similar to those of the Lily soil
- Berks and Dekalb soils, which have more rock fragments throughout than the Lily soil; on similar landforms
- Soils that are very shallow to sandstone bedrock; on landforms similar to those of the Lily soil
- Soils that are moderately well drained and have more clay in the subsoil than the Lily soil; on similar landforms
- Areas of rock outcrops; on landforms similar to those of the Lily soil

Similar components:
- Alticrest soils, which have less clay than the Lily soil; on similar landforms
- Soils that are shallow or deep to sandstone bedrock; on landforms similar to those of the Lily soil
- Soils that have extremely stony surfaces; on landforms similar to those of the Lily soil
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Lily soil

Soil Properties and Qualities

Available water capacity: Low (about 4.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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 0.1 to 3.0 percent subangular stones
Parent material: Residuum weathered from sandstone

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 northern red oak and eastern white pine
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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

Interpretive Groups

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

31C—Lily-McClung-Dekalb complex, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits and shoulders and, in some areas, backslopes

Map Unit Composition

Note: These Lily, McClung, and Dekalb soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Lily and similar soils: Typically 45 percent, ranging from about 35 to 55 percent
McClung and similar soils: Typically 30 percent, ranging from about 20 to 45 percent
Dekalb and similar soils: Typically 20 percent, ranging from about 10 to 25 percent

Typical Profile

Lily

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 3 inches—black sandy loam

Subsoil:
3 to 17 inches—yellowish brown loam
17 to 27 inches—yellowish brown clay loam
27 to 32 inches—strong brown gravelly clay loam

Hard bedrock:
32 inches—sandstone bedrock

McClung

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

Subsurface layer:
2 to 3 inches—light gray sandy loam

Subsoil:
3 to 19 inches—yellowish brown sandy loam
19 to 28 inches—strong brown sandy clay loam
28 to 38 inches—strong brown sandy clay loam; red mottles
38 to 51 inches—yellowish red sandy clay loam; red and brownish yellow mottles
51 to 65 inches—reddish yellow sandy clay loam; yellow mottles

Dekalb

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsoil:
2 to 30 inches—yellowish brown very channery sandy loam

Hard bedrock:
30 inches—sandstone bedrock

Minor Components

Dissimilar components:
- Oriskany soils, which are very deep to bedrock and have more than 35 percent rock fragments throughout; on landforms similar to those of the Lily, McClung, and Dekalb soils

- Soils that have extremely stony surfaces; on landforms similar to those of the Lily, McClung, and Dekalb soils
- Soils that are very shallow to sandstone bedrock; on landforms similar to those of the Lily, McClung, and Dekalb soils
- Areas of rock outcrops; on landforms similar to those of the Lily, McClung, and Dekalb soils
- Areas that contain sinkholes; on landforms similar to those of the Lily, McClung, and Dekalb soils

Similar components:
- Alticrest soils, which are moderately deep to sandstone bedrock; on landforms similar to those of the Lily, McClung, and Dekalb soils
- Soils that have less sand and more silt in the subsoil than the Lily, McClung, and Dekalb soils; on similar landforms
- Soils that are shallow or deep to sandstone bedrock; on landforms similar to those of the Lily, McClung, and Dekalb soils
- Soils that have very stony surfaces; on landforms similar to those of the Lily, McClung, and Dekalb soils
- Soils that are on slopes that are less than 8 percent or that range from 15 to 35 percent; on landforms similar to those of the Lily, McClung, and Dekalb soils

Soil Properties and Qualities

Available water capacity: Lily—low (about 4.0 inches); McClung—moderate (about 7.4 inches); Dekalb—very low (about 1.9 inches)
Slowest saturated hydraulic conductivity: Lily and McClung—moderately high (about 0.6 in/hr); Dekalb—high (about 6.0 in/hr)
Depth class: Lily and Dekalb—moderately deep (20 to 40 inches); McClung—very deep (more than 60 inches)
Depth to root-restrictive feature: Lily and Dekalb—20 to 40 inches to bedrock (lithic); McClung—more than 60 inches
Drainage class: Lily and McClung—well drained; Dekalb—excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Lily and Dekalb—high; McClung—medium
Surface fragments: Lily and McClung—none; Dekalb—about 0.01 to 0.1 percent subangular stones
Parent material: Lily and Dekalb—residuum weathered from sandstone; McClung—residuum weathered from sandstone with interbeds of limestone

Use and Management Considerations

Cropland

Suitability: 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.
- Rock fragments on the surface may restrict the operation of farm machinery and interfere with the emergence of seedlings.
- The bedrock 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.

- The bedrock may restrict the rooting depth of plants.
- Rock fragments on the surface may restrict the operation of farm machinery.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to northern red oak and eastern white pine

- Bedrock may interfere with the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- Coarse 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

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, these soils are unsuited to conventional septic tank absorption fields.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Lily and McClung—3e; Dekalb—7s
Virginia soil management group: Lily—U; McClung—M; Dekalb—FF
Hydric soils: No

32C—Macove channery silt loam, 3 to 15 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of hills and mountains and areas in valleys
Position on the landform: Footslopes and toeslopes

Map Unit Composition

Macove and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Surface layer:
0 to 1 inch—dark brown channery silt loam

Subsurface layer:
1 to 4 inches—brown channery loam

Subsoil:
4 to 7 inches—yellowish brown channery silt loam
7 to 14 inches—yellowish brown very channery silt loam
14 to 23 inches—yellowish brown very channery silty clay loam
23 to 37 inches—strong brown very channery silty clay loam
37 to 65 inches—brown extremely channery silty clay loam; black iron-manganese concretions

Minor Components

Dissimilar components:
- Berks soils, which are moderately deep to shale bedrock; on hills or mountains
- Lehew soils, which are moderately deep to sandstone bedrock; on hills or mountains
- Weikert and Rough soils, which are shallow and very shallow to bedrock, respectively; on landforms similar to those of the Macove soil
- Ogles soils, which are susceptible to flooding; on flood plains
- Coursey soils, which are moderately well drained; on terraces
- Soils that have rubbly or very rubbly surfaces; on landforms similar to those of the Macove soil

Similar components:
- Oriskany soils, which have more sand and less silt throughout than the Macove soil; on similar landforms
- Shelocta soils, which have fewer rock fragments throughout than the Macove soil; on similar landforms
- Soils that are deep to shale or sandstone bedrock; on landforms similar to those of the Macove soil
- Soils that have a seasonal high water table with a top depth between 40 and 72 inches; on landforms similar to those of the Macove soil
- Soils that have extremely stony surfaces; on landforms similar to those of the Macove soil
- Soils that are on slopes that are less than 8 percent or that range from 15 to 35 percent; on landforms similar to those of the Macove soil

Soil Properties and Qualities

Available water capacity: Low (about 4.6 inches)
Slowest saturated hydraulic conductivity: High (about 2.0 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 0.1 to 2.0 percent subrounded stones and about 0 to 1.0 percent subrounded boulders
Parent material: Colluvium derived from shale, siltstone, and sandstone

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, chestnut oak, and eastern white pine
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- 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.

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 effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

32D—Macove channery silt loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of hills and mountains and areas in valleys
Position on the landform: Footslopes

Map Unit Composition

Macove and similar soils: Typically 75 percent, ranging from about 65 to 85 percent

Typical Profile

Surface layer:
0 to 1 inch—dark brown channery silt loam

Subsurface layer:
1 to 4 inches—brown channery loam

Subsoil:
4 to 7 inches—yellowish brown channery silt loam
7 to 14 inches—yellowish brown very channery silt loam

14 to 23 inches—yellowish brown very channery silty clay loam
23 to 37 inches—strong brown very channery silty clay loam
37 to 65 inches—brown extremely channery silty clay loam; black iron-manganese concretions

Minor Components

Dissimilar components:
- Escatawba soils, which have a perched seasonal high water table at depth of about 2.5 to 4.0 feet; on footslopes and toeslopes
- Derroc and Ogles soils, which have many rounded rock fragments in the soil and are susceptible to flooding; on flood plains along small drainageways and creeks
- Coursey soils, which are moderately well drained, have fewer rock fragments in the soil than the Macove soil, and are susceptible to flooding; on terraces
- Berks soils, which are moderately deep to shale bedrock; on hills or mountains
- Soils that have rubbly or very rubbly surfaces; on landforms similar to those of the Macove soil
- Colluvial soils that are moderately well drained; on landforms similar to those of the Macove soil or in drainageways

Similar components:
- Shelocta soils, which are very deep to bedrock and have fewer rock fragments in the soil than the Macove soil; on footslopes and toeslopes
- Oriskany soils, which may have more sand in the soil than the Macove soil; on footslopes and toeslopes
- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Macove soil
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Macove soil

Soil Properties and Qualities

Available water capacity: Low (about 4.6 inches)
Slowest saturated hydraulic conductivity: High (about 2.0 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 0.1 to 2.0 percent subrounded stones and about 0 to 1.0 percent subrounded boulders
Parent material: Colluvium derived from shale, siltstone, and sandstone

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, chestnut oak, and eastern white pine

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 and the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.

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 effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

33E—Macove extremely stony loam, 35 to 60 percent slopes, very rubbly

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of hills and mountains and areas on hills and mountains
Position on the landform: Footslopes and the lower part of backslopes

Map Unit Composition

Macove and similar soils: Typically 75 percent, ranging from about 65 to 85 percent

Typical Profile

Surface layer:
0 to 3 inches—dark brown extremely stony loam

Subsurface layer:
3 to 12 inches—brown very stony loam

Subsoil:
12 to 20 inches—yellowish brown very stony silt loam
20 to 26 inches—yellowish brown very channery silt loam
26 to 36 inches—yellowish brown very channery silty clay loam
36 to 50 inches—strong brown very channery silty clay loam
50 to 65 inches—brown extremely channery silty clay loam

Minor Components

Dissimilar components:
- Berks soils, which are moderately deep to shale bedrock; on hills or mountains
- Weikert soils, which are shallow to shale bedrock; on hills or mountains
- Rough soils, which are very shallow to shale bedrock; on hills or mountains
- Soils that have extremely stony surfaces; on landforms similar to those of the Macove soil
- Colluvial soils that are moderately well drained; on landforms similar to those of the Macove soil or in drainageways

Similar components:
- Shelocta soils, which are very deep to bedrock and have fewer rock fragments in the soil than the Macove soil; on footslopes and toeslopes
- Oriskany soils, which may have more sand in the soil than the Macove soil; on footslopes and toeslopes
- Soils that have rubbly surfaces; on landforms similar to those of the Macove soil
- Soils that are on slopes that range from 15 to 35 percent or that are more than 60 percent; on landforms similar to those of the Macove soil

Soil Properties and Qualities

Available water capacity: Low (about 5.2 inches)
Slowest saturated hydraulic conductivity: High (about 2.0 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 25.0 to 45.0 percent subrounded boulders and stones
Parent material: Colluvium derived from shale, siltstone, and sandstone

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 and eastern white pine; moderately suited to northern red oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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.
- Stones or boulders on the surface make the use of mechanical planting equipment impractical.
- The volume of rock fragments on the surface may reduce the traction of wheeled harvest equipment.

- Because of the high content of surface rock fragments, this soil is unsuited to mechanical site preparation for planting and seeding.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- The low soil strength interferes with the construction of haul roads and log landings.

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 effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

34D—Macove-Berks complex, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains, hills, and valleys
Position on the landform: Macove—footslopes and, in some areas, concave backslopes; Berks—the lower backslopes and, in some areas, the upper parts of footslopes

Map Unit Composition

Note: These Macove and Berks soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Macove and similar soils: Typically 55 percent, ranging from about 45 to 70 percent
Berks and similar soils: Typically 35 percent, ranging from about 20 to 45 percent

Typical Profile

Macove

Surface layer:
0 to 1 inch—dark brown channery silt loam

Subsurface layer:
1 to 4 inches—brown channery loam

Subsoil:
4 to 7 inches—yellowish brown channery silt loam
7 to 14 inches—yellowish brown very channery silt loam
14 to 23 inches—yellowish brown very channery silty clay loam
23 to 37 inches—strong brown very channery silty clay loam

37 to 65 inches—brown extremely channery silty clay loam; black iron-manganese concretions

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Minor Components

Dissimilar components:
- Escatawba soils, which have a perched seasonal high water table in the lower part of the soil; on footslopes and toeslopes
- Derroc soils, which have many rounded rock fragments in the soil and are susceptible to flooding; on flood plains along small drainageways and creeks
- Soils that have nonstony or very rubbly surfaces; on landforms similar to those of the Macove and Berks soils
- Soils that are moderately well drained; on landforms similar to those of the Macove and Berks soils or in drainageways

Similar components:
- Shelocta soils, which are very deep to bedrock and have fewer rock fragments in the soil than the Macove and Berks soils; on footslopes and toeslopes
- Weikert soils, which are shallow to shale bedrock; on hills
- Oriskany soils, which are very deep to bedrock and may have more sand in the soil than the Macove and Berks soils; on footslopes and toeslopes
- Gilpin soils, which are moderately deep to shale bedrock and have fewer rock fragments in the soil than the Macove and Berks soils; on hills
- Soils that have very stony or rubbly surfaces; on landforms similar to those of the Macove and Berks soils
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 60 percent; on landforms similar to those of the Macove and Berks soils

Soil Properties and Qualities

Available water capacity: Macove—low (about 4.6 inches); Berks—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Macove—high (about 2.0 in/hr); Berks—moderately high (about 0.6 in/hr)
Depth class: Macove—very deep (more than 60 inches); Berks—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Macove—more than 60 inches; Berks—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: Macove—medium; Berks—high
Surface fragments: About 0.1 to 3.0 percent subrounded stones
Parent material: Macove—colluvium derived from shale, siltstone, and sandstone; Berks—residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak, chestnut oak, and eastern white pine
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 and the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: Macove—CC; Berks—JJ
Hydric soils: No

34E—Macove-Berks complex, 35 to 60 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains, hills, and valleys

Position on the landform: Macove—footslopes and, in some areas, concave backslopes; Berks—the lower backslopes and, in some areas, the upper parts of footslopes

Map Unit Composition

Note: These Macove and Berks soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Macove and similar soils: Typically 55 percent, ranging from about 45 to 70 percent
Berks and similar soils: Typically 35 percent, ranging from about 20 to 45 percent

Typical Profile

Macove

Surface layer:
0 to 1 inch—dark brown channery silt loam

Subsurface layer:
1 to 4 inches—brown channery loam

Subsoil:
4 to 7 inches—yellowish brown channery silt loam
7 to 14 inches—yellowish brown very channery silt loam
14 to 23 inches—yellowish brown very channery silty clay loam
23 to 37 inches—strong brown very channery silty clay loam
37 to 65 inches—brown extremely channery silty clay loam; black iron-manganese concretions

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Minor Components

Dissimilar components:
- Escatawba soils, which have a perched seasonal high water table in the lower part of the soil; on footslopes and toeslopes
- Derroc soils, which have many rounded rock fragments in the soil and are susceptible to flooding; on flood plains along small drainageways and creeks
- Soils that have nonstony or very rubbly surfaces; on landforms similar to those of the Macove and Berks soils
- Soils that are moderately well drained; on landforms similar to those of the Macove and Berks soils or in drainageways

Similar components:
- Shelocta soils, which are very deep to bedrock and have fewer rock fragments in the soil than the Macove and Berks soils; on footslopes and toeslopes
- Weikert soils, which are shallow to shale bedrock; on hills

- Oriskany soils, which are very deep to bedrock and may have more sand in the soil than the Macove and Berks soils; on footslopes and toeslopes
- Gilpin soils, which are moderately deep to shale bedrock and have fewer rock fragments in the soil than the Macove and Berks soils; on hills
- Soils that have very stony or rubbly surfaces; on landforms similar to those of the Macove and Berks soils
- Soils that are on slopes that range from 15 to 35 percent or that are more than 60 percent; on landforms similar to those of the Macove and Berks soils

Soil Properties and Qualities

Available water capacity: Macove—low (about 4.6 inches); Berks—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Macove—high (about 2.0 in/hr); Berks—moderately high (about 0.6 in/hr)
Depth class: Macove—very deep (more than 60 inches); Berks—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Macove—more than 60 inches; Berks—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: Macove—medium; Berks—high
Surface fragments: About 0.1 to 3.0 percent subrounded stones
Parent material: Macove—colluvium derived from shale, siltstone, and sandstone; Berks—residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak, chestnut oak, and eastern white pine
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 slope and the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Macove—CC; Berks—JJ
Hydric soils: No

35C—Mandy channery silt loam, 8 to 15 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Summits and shoulders
Note: This map unit occurs at high elevations

Map Unit Composition

Mandy and similar soils: Typically 75 percent, ranging from about 60 to 90 percent

Typical Profile

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—very dark brown channery silt loam

Subsurface layer:
4 to 6 inches—dark brown channery silt loam

Subsoil:
6 to 10 inches—dark yellowish brown channery silt loam
10 to 29 inches—yellowish brown very channery silt loam

Substratum:
29 to 37 inches—yellowish brown extremely channery silt loam

Soft bedrock:
37 inches—siltstone bedrock

Minor Components

Dissimilar components:
- Colluvial soils that are very deep, are well drained, and have fewer rock fragments in the soil than the Mandy soil; on footslopes and at the heads of drainageways

- Colluvial soils that are very deep and well drained; on footslopes and at the heads of drainageways
- Colluvial soils that are very deep, are moderately well drained, and have fewer rock fragments in the soil than the Mandy soil; on footslopes and at the bottoms of drainageways

Similar components:
- Paddyknob soils, which have less silt and more sand than the Mandy soil; on similar landforms in areas of sandstone bedrock
- Madsheep soils, which have redder colors than the Mandy soil; on similar landforms in areas of red bedrock
- Soils that are shallow to shale or siltstone bedrock; on landforms similar to those of the Mandy soil
- Soils that have fewer rock fragments in the soil than the Mandy soil; on similar landforms
- Soils that have slopes that range from 3 to 8 percent or from 15 to 35 percent; on landforms similar to those of the Mandy soil

Soil Properties and Qualities

Available water capacity: Low (about 4.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: About 0.1 to 3.0 percent subangular stones
Parent material: Residuum weathered from interbedded siltstone, shale, and fine-grained sandstone

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.
- During the drier summer months, plants may suffer from moisture stress because of the limited available water capacity.
- The bedrock may restrict the rooting depth of plants.
- Large stones on the surface may restrict the operation of some farm machinery.

Woodland

Suitability: Moderately suited to northern red oak
- Bedrock may interfere with the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.

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

- Because of the limited depth to bedrock, this soil is unsuited to conventional septic tank absorption fields.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

35D—Mandy channery silt loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Summits, shoulders, and backslopes
Note: This map unit occurs at high elevations

Map Unit Composition

Mandy and similar soils: Typically 75 percent, ranging from about 60 to 90 percent

Typical Profile

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—very dark brown channery silt loam

Subsurface layer:
4 to 6 inches—dark brown channery silt loam

Subsoil:
6 to 10 inches—dark yellowish brown channery silt loam
10 to 29 inches—yellowish brown very channery silt loam

Substratum:
29 to 37 inches—yellowish brown extremely channery silt loam

Soft bedrock:
37 inches—siltstone bedrock

Minor Components

Dissimilar components:
- Colluvial soils that are very deep, are well drained, and have fewer rock fragments in the soil than the Mandy soil; on footslopes and at the heads of drainageways
- Colluvial soils that are very deep, are moderately well drained, and have fewer rock fragments in the soil than the Mandy soil; on footslopes and at the bottoms of drainageways

Similar components:
- Paddyknob soils, which have less silt and more sand than the Mandy soil; on similar landforms in areas of sandstone bedrock
- Madsheep soils, which have redder colors than the Mandy soil; on similar landforms in areas of red bedrock
- Soils that are shallow to shale or siltstone bedrock; on landforms similar to those of the Mandy soil
- Soils that have fewer rock fragments in the soil than the Mandy soil; on similar landforms
- Soils that have slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Mandy soil

Soil Properties and Qualities

Available water capacity: Low (about 4.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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 0.1 to 3.0 percent subangular stones
Parent material: Residuum weathered from interbedded siltstone, shale, and fine-grained sandstone

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
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- The low soil strength may create unsafe conditions for log trucks.

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

- Because of the limited depth to bedrock and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

35E—Mandy channery silt loam, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Backslopes
Note: This map unit occurs at high elevations

Map Unit Composition

Mandy and similar soils: Typically 75 percent, ranging from about 60 to 90 percent

Typical Profile

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—very dark brown channery silt loam

Subsurface layer:
4 to 6 inches—dark brown channery silt loam

Subsoil:
6 to 10 inches—dark yellowish brown channery silt loam
10 to 29 inches—yellowish brown very channery silt loam

Substratum:
29 to 37 inches—yellowish brown extremely channery silt loam

Soft bedrock:
37 inches—siltstone bedrock

Minor Components

Dissimilar components:
- Colluvial soils that are very deep, are well drained, and have fewer rock fragments in the soil than the Mandy soil; on footslopes and at the heads of drainageways
- Colluvial soils that are very deep, are moderately well drained, and have fewer rock fragments in the soil than the Mandy soil; on footslopes and at the bottoms of drainageways

Similar components:
- Paddyknob soils, which have less silt and more sand than the Mandy soil; on similar landforms in areas of sandstone bedrock
- Madsheep soils, which have redder colors than the Mandy soil; on similar landforms in areas of red bedrock
- Soils that are shallow to shale or siltstone bedrock; on landforms similar to those of the Mandy soil
- Soils that have fewer rock fragments in the soil than the Mandy soil; on similar landforms
- Soils that have slopes that range from 15 to 35 percent or that are more than 55 percent; on landforms similar to those of the Mandy soil

Soil Properties and Qualities

Available water capacity: Low (about 4.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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 0.1 to 3.0 percent subangular stones
Parent material: Residuum weathered from interbedded siltstone, shale, and fine-grained sandstone

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
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- The low soil strength may create unsafe conditions for log trucks.

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

- Because of the limited depth to bedrock and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

36A—Maurertown silty clay loam, 0 to 3 percent slopes, rarely flooded

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Low stream terraces in a river valley
Position on the landform: Treads and backswamps

Map Unit Composition

Maurertown and similar soils: Typically 70 percent, ranging from about 55 to 85 percent

Typical Profile

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

Subsurface layer:
5 to 8 inches—gray silty clay loam

Subsoil:
8 to 11 inches—gray silty clay; strong brown iron-manganese masses
11 to 15 inches—grayish brown silty clay; black and brownish yellow iron-manganese concretions and white iron depletions
15 to 26 inches—light brownish gray silty clay; white iron depletions and brownish yellow iron-manganese masses
26 to 36 inches—light gray silty clay; brownish yellow iron-manganese masses
36 to 44 inches—yellowish brown and brownish yellow silty clay loam; gray iron depletions

Substratum:
44 to 58 inches—strong brown and yellowish brown silty clay loam; grayish brown and gray iron depletions

58 to 63 inches—yellowish brown and strong brown gravelly silty clay loam; grayish brown and gray iron depletions

Minor Components

Dissimilar components:
- Atkins soils, which have less clay and less developed subsoils than the Maurertown soil; on flood plains
- Coursey soils, which are moderately well drained and have less clay in the soil than the Maurertown soil; on low terraces
- Feedstone soils, which are moderately well drained, have less clay in the soil, and have darker surface layers than the Maurertown soil; on flood plains
- Soils that have surface layers that are darker and thicker than those of the Maurertown soil; on similar landforms

Similar components:
- Soils that are more acid in the subsoil than the Maurertown soil; on similar landforms
- Soils that are somewhat poorly drained; on landforms similar to those of the Maurertown
- Soils that have surface layers of silt loam; on landforms similar to those of the Maurertown
- Soils that flood occasionally; on the lower level landforms

Soil Properties and Qualities

Available water capacity: Moderate (about 8.6 inches)
Slowest saturated hydraulic conductivity: Low (about 0.001 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 sandstone and shale and small amounts of limestone

Use and Management Considerations

Cropland

Suitability: Poorly suited to corn; not suited to 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 risk of compaction increases when the soil is wet.
- Soil crusting results in a decrease in water infiltration and hinders the emergence of seedlings.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pastureland

Suitability: Moderately suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

- Compaction may occur when the soil is wet.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Moderately suited to sweetgum
- Ponding restricts the safe use of roads by log trucks.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Building sites

- Because of the flooding and ponding, this soil is unsuited to building site development.

Septic tank absorption fields

- Because of the ponding and wetness, this soil is unsuited to septic tank absorption fields.

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 soil strength is unfavorable for supporting heavy loads.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4w
Virginia soil management group: NN
Hydric soil: Yes

37B—McClung-Lily complex, 3 to 8 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits and shoulders

Map Unit Composition

Note: These McClung and Lily soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

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

Typical Profile

McClung

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

Subsurface layer:
2 to 3 inches—light gray sandy loam

Subsoil:
3 to 19 inches—yellowish brown sandy loam
19 to 28 inches—strong brown sandy clay loam
28 to 38 inches—strong brown sandy clay loam; red mottles
38 to 51 inches—yellowish red sandy clay loam; red and brownish yellow mottles
51 to 65 inches—reddish yellow sandy clay loam; yellow mottles

Lily

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 3 inches—black sandy loam

Subsoil:
3 to 17 inches—yellowish brown loam
17 to 27 inches—yellowish brown clay loam
27 to 32 inches—strong brown gravelly clay loam

Hard bedrock:
32 inches—sandstone bedrock

Minor Components

Dissimilar components:
- Dekalb soils, which are moderately deep to sandstone bedrock and have more rock fragments in the subsoil than the McClung and Lily soils; on similar landforms
- Soils that are very shallow to sandstone or limestone bedrock; on landforms similar to those of the McClung and Lily soils
- Areas with sinkholes; on landforms similar to those of the McClung and Lily soils
- Areas of rock outcrops; on landforms similar to those of the McClung and Lily soils

Similar components:
- Alticrest soils, which are moderately deep to sandstone bedrock and have less clay in the subsoil than the McClung and Lily soils; on similar landforms
- Soils that are deep to sandstone bedrock; on landforms similar to those of the McClung and Lily soils
- Soils that are on slopes that range from 8 to 15 percent; on landforms similar to those of the McClung and Lily soils

Soil Properties and Qualities

Available water capacity: McClung—moderate (about 7.4 inches); Lily—low (about 4.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 in/hr)
Depth class: McClung—very deep (more than 60 inches); Lily—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: McClung—more than 60 inches; Lily—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: McClung—medium; Lily—high
Surface fragments: None

Parent material: McClung—residuum weathered from sandstone with interbeds of limestone; Lily—residuum weathered from sandstone

Use and Management Considerations

Cropland

Suitability: Well 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 bedrock 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.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Well suited to northern red oak and eastern white pine; moderately suited to yellow-poplar
- Bedrock may interfere with the construction of haul roads and log landings.
- The slope may restrict the use of some mechanical planting equipment.
- Coarse 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- 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, these soils are unsuited to conventional septic tank absorption fields.

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

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 2e
Virginia soil management group: McClung—M; Lily—U
Hydric soils: No

38C—McClung-Watahala-Dekalb complex, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits and shoulders and, in some areas, backslopes

Map Unit Composition

Note: These McClung, Watahala, and Dekalb soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

McClung and similar soils: Typically 45 percent, ranging from about 35 to 55 percent
Watahala and similar soils: Typically 25 percent, ranging from about 15 to 30 percent
Dekalb and similar soils: Typically 20 percent, ranging from about 10 to 25 percent

Typical Profile

McClung

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

Subsurface layer:
2 to 3 inches—light gray sandy loam

Subsoil:
3 to 19 inches—yellowish brown sandy loam
19 to 28 inches—strong brown sandy clay loam
28 to 38 inches—strong brown sandy clay loam; red mottles
38 to 51 inches—yellowish red sandy clay loam; red and brownish yellow mottles
51 to 65 inches—reddish yellow sandy clay loam; yellow mottles

Watahala

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 3 inches—very dark grayish brown very gravelly sandy loam

Subsurface layer:
3 to 12 inches—yellowish brown gravelly silt loam

Subsoil:
12 to 27 inches—yellowish brown gravelly silt loam
27 to 37 inches—yellowish brown gravelly loam
37 to 54 inches—strong brown gravelly clay; light brown mottles
54 to 61 inches—strong brown silty clay; light brown mottles

Dekalb

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsoil:
2 to 30 inches—yellowish brown very channery sandy loam

Hard bedrock:
30 inches—sandstone bedrock

Minor Components

Dissimilar components:
- Lily soils, which are moderately deep to sandstone bedrock and have fewer rock fragments and more clay in the soil than the Dekalb soil; on similar landforms
- Oriskany soils, which are very deep to bedrock and have more rock fragments in the soil and on the surface than the McClung and Watahala soils; on footslopes
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock and have more clay in the soil than the McClung, Watahala, and Dekalb soils; on similar landforms
- Areas that have sinkholes; on landforms similar to those of the McClung, Watahala, and Dekalb soils
- Areas that have rock outcrops; on landforms similar to those of the McClung, Watahala, and Dekalb soils

Similar components:
- Murrill soils, which are very deep to bedrock; on footslopes
- Frederick soils, which are very deep to bedrock and have more clay in the soil than the McClung, Watahala, and Dekalb soils; on similar landforms
- Alticrest soils, which are moderately deep to sandstone bedrock and have fewer rock fragments in the soil than the Dekalb soil; on similar landforms
- Soils that are deep to bedrock; on landforms similar to those of the McClung, Watahala, and Dekalb soils
- Soils that are on slopes that range from 15 to 35 percent; on landforms similar to those of the McClung, Watahala, and Dekalb soils

Soil Properties and Qualities

Available water capacity: McClung—moderate (about 7.4 inches); Watahala—moderate (about 6.8 inches); Dekalb—very low (about 1.9 inches)
Slowest saturated hydraulic conductivity: McClung—moderately high (about 0.6 in/hr); Watahala—moderately high (about 0.2 in/hr); Dekalb—high (about 6.0 in/hr)
Depth class: McClung and Watahala—very deep (more than 60 inches); Dekalb—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: McClung and Watahala—more than 60 inches; Dekalb—20 to 40 inches to bedrock (lithic)
Drainage class: McClung and Watahala—well drained; Dekalb—excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: McClung and Dekalb—low; Watahala—moderate
Runoff class: McClung and Watahala—medium; Dekalb—high
Surface fragments: McClung and Watahala—none; Dekalb—about 0.01 to 0.10 percent subangular stones
Parent material: McClung—residuum weathered from sandstone with interbeds of limestone; Watahala—gravelly residuum over clayey residuum weathered from cherty limestone; Dekalb—residuum weathered from sandstone

Use and Management Considerations

Cropland

- These soils are 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 bedrock may restrict the rooting depth of plants.
- Rock fragments on the surface may restrict the operation of farm machinery.

Woodland

Suitability: Well suited to northern red oak and chestnut oak
- Bedrock may interfere with the construction of haul roads and log landings.
- The slope creates unsafe operating conditions, reduces the operating efficiency of log trucks, and may restrict the use of some mechanical planting equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse 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.

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

Septic tank absorption fields

- Because of the limited depth to bedrock, these soils are unsuited to conventional septic tank absorption fields.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: McClung—3e; Watahala—6s; Dekalb—7s
Virginia soil management group: McClung and Watahala—M; Dekalb—FF
Hydric soils: No

38D—McClung-Watahala-Dekalb complex, 15 to 35 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Note: These McClung, Watahala, and Dekalb soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

McClung and similar soils: Typically 45 percent, ranging from about 35 to 55 percent
Watahala and similar soils: Typically 25 percent, ranging from about 15 to 30 percent
Dekalb and similar soils: Typically 20 percent, ranging from about 10 to 25 percent

Typical Profile

McClung

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

Subsurface layer:
2 to 3 inches—light gray sandy loam

Subsoil:
3 to 19 inches—yellowish brown sandy loam
19 to 28 inches—strong brown sandy clay loam
28 to 38 inches—strong brown sandy clay loam; red mottles
38 to 51 inches—yellowish red sandy clay loam; red and brownish yellow mottles
51 to 65 inches—reddish yellow sandy clay loam; yellow mottles

Watahala

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 3 inches—very dark grayish brown very gravelly sandy loam

Subsurface layer:
3 to 12 inches—yellowish brown gravelly silt loam

Subsoil:
12 to 27 inches—yellowish brown gravelly silt loam
27 to 37 inches—yellowish brown gravelly loam
37 to 54 inches—strong brown gravelly clay; light brown mottles
54 to 61 inches—strong brown silty clay; light brown mottles

Dekalb

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 2 inches—very dark grayish brown channery sandy loam

Subsoil:
2 to 30 inches—yellowish brown very channery sandy loam

Hard bedrock:
30 inches—sandstone bedrock

Minor Components

Dissimilar components:
- Oriskany soils, which are very deep to bedrock and have more than 35 percent rock fragments in the soil; on footslopes
- Lily soils, which have more than 18 percent clay and less than 35 percent rock

fragments in the subsoil; on landforms similar to those of the McClung, Watahala, and Dekalb soils
- Caneyville soils, which are moderately deep to limestone bedrock and have more clay in the soil than the McClung, Watahala, and Dekalb soils; on similar landforms
- Soils that have extremely stony surfaces; on landforms similar to those of the McClung, Watahala, and Dekalb soils
- Areas of rock outcrops; on landforms similar to those of the McClung, Watahala, and Dekalb soils
- Areas that have sinkholes; on landforms similar to those of the McClung, Watahala, and Dekalb soils

Similar components:
- Alticrest soils, which are moderately deep to sandstone bedrock and have fewer rock fragments in the soil than the Dekalb soil; on similar landforms
- Frederick soils, which are very deep to bedrock and have more clay in the subsoil than the McClung, Watahala, and Dekalb soils; on similar landforms
- Murrill soils, which are very deep to bedrock and have fewer rock fragments in the soil than the Dekalb soil; on footslopes
- Soils that are shallow to very deep and have more than 35 percent chert gravel throughout; on landforms similar to those of the McClung, Watahala, and Dekalb soils
- Soils that are shallow to sandstone or chert bedrock; on landforms similar to those of the McClung, Watahala, and Dekalb soils
- Soils that have very stony surfaces; on landforms similar to those of the McClung, Watahala, and Dekalb soils
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the McClung, Watahala, and Dekalb soils

Soil Properties and Qualities

Available water capacity: McClung—moderate (about 7.4 inches); Watahala—moderate (about 6.8 inches); Dekalb—very low (about 1.9 inches)
Slowest saturated hydraulic conductivity: McClung—moderately high (about 0.6 in/hr); Watahala—moderately high (about 0.2 in/hr); Dekalb—high (about 6.0 in/hr)
Depth class: McClung and Watahala—very deep (more than 60 inches); Dekalb—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: McClung and Watahala—more than 60 inches; Dekalb—20 to 40 inches to bedrock (lithic)
Drainage class: McClung and Watahala—well drained; Dekalb—excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: McClung and Dekalb—low; Watahala—moderate
Runoff class: McClung and Watahala—high; Dekalb—very high
Surface fragments: McClung and Watahala—none; Dekalb—about 0.01 to 0.10 percent subangular stones
Parent material: McClung—residuum weathered from sandstone with interbeds of limestone; Watahala—gravelly residuum over clayey residuum weathered from cherty limestone; Dekalb—residuum weathered from sandstone

Use and Management Considerations

Cropland

- These soils are 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.
- The bedrock may restrict the rooting depth of plants.
- Rock fragments on the surface may restrict the operation of farm machinery.

Woodland

Suitability: Well suited to northern red oak and chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse 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 soil strength interferes with the construction of haul roads and log landings.

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

Septic tank absorption fields

- Because of the limited depth to bedrock and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: McClung—6e; Watahala and Dekalb—7s
Virginia soil management group: McClung and Watahala—M; Dekalb—FF
Hydric soils: No

39B—Murrill loam, 3 to 8 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of hills and in areas in valleys
Position on the landform: Footslopes and toeslopes

Map Unit Composition

Murrill and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsoil:
4 to 10 inches—yellowish brown channery silt loam
10 to 15 inches—strong brown channery silt loam
15 to 23 inches—strong brown channery silty clay loam
23 to 31 inches—yellowish red channery silty clay loam
31 to 40 inches—yellowish red silty clay loam; black iron-manganese masses
40 to 65 inches—yellowish red silty clay

Minor Components

Dissimilar components:
- Oriskany soils, which have more than 35 percent rock fragments throughout; on landforms similar to those of the Murrill soil
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock; on hills
- Escatawba soils, which have a perched seasonal high water table with a top depth of about 30 to 48 inches; on landforms similar to those of the Murrill soil
- Soils that have extremely stony surfaces; on landforms similar to those of the Murrill soil
- Areas that have sinkholes; on landforms similar to those of the Murrill soil

Similar components:
- Frederick and Poplimento soils, which have more clay in the soil than the Murrill soil; on hills
- Soils that have very stony surfaces; on landforms similar to those of the Murrill soil
- Soils that are deep to limestone bedrock; on landforms similar to those of the Murrill soil
- Soils that have slopes that are less than 3 percent or that range from 8 to 15 percent; on landforms similar to those of the Murrill soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.2 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: Medium

Surface fragments: None
Parent material: Colluvium derived from sandstone and shale over residuum weathered from limestone

Use and Management Considerations

Cropland

Suitability: Well 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.

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

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

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

Interpretive Groups

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

39C—Murrill loam, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Valleys
Position on the landform: Footslopes and toeslopes

Map Unit Composition

Murrill and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsoil:
4 to 10 inches—yellowish brown channery silt loam
10 to 15 inches—strong brown channery silt loam
15 to 23 inches—strong brown channery silty clay loam
23 to 31 inches—yellowish red channery silty clay loam
31 to 40 inches—yellowish red silty clay loam; black iron-manganese masses
40 to 65 inches—yellowish red silty clay

Minor Components

Dissimilar components:
- Oriskany soils, which have more than 35 percent rock fragments throughout; on landforms similar to those of the Murrill soil
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock; on hills
- Escatawba soils, which have a perched seasonal high water table with a top depth of about 30 to 48 inches; on landforms similar to those of the Murrill soil
- Soils that have extremely stony surfaces; on landforms similar to those of the Murrill soil
- Areas that have sinkholes; on landforms similar to those of the Murrill soil

Similar components:
- Frederick and Poplimento soils, which have more clay in the soil than the Murrill soil; on hills
- Soils that have very stony surfaces; on landforms similar to those of the Murrill soil
- Soils that are deep to limestone bedrock; on landforms similar to those of the Murrill soil
- Soils that have slopes that range from 3 to 8 percent or from 15 to 25 percent; on landforms similar to those of the Murrill soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.2 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: Medium
Surface fragments: None
Parent material: Colluvium derived from sandstone and shale over residuum weathered from limestone

Use and Management Considerations

Cropland

Suitability: Well suited to 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.

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 chestnut oak
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

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 effluent from conventional septic systems.

Local roads and streets

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

Interpretive Groups

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

39D—Murrill loam, 15 to 25 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of hills and areas in valleys
Position on the landform: Footslopes

Map Unit Composition

Murrill and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsoil:
4 to 10 inches—yellowish brown channery silt loam
10 to 15 inches—strong brown channery silt loam
15 to 23 inches—strong brown channery silty clay loam
23 to 31 inches—yellowish red channery silty clay loam
31 to 40 inches—yellowish red silty clay loam; black iron-manganese masses
40 to 65 inches—yellowish red silty clay

Minor Components

Dissimilar components:
- Oriskany soils, which have more than 35 percent rock fragments throughout; on landforms similar to those of the Murrill soil
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock; on hills
- Escatawba soils, which have a perched seasonal high water table with a top depth of about 30 to 48 inches; on landforms similar to those of the Murrill soil
- Soils that have extremely stony surfaces; on landforms similar to those of the Murrill soil
- Areas that have sinkholes; on landforms similar to those of the Murrill soil

Similar components:
- Frederick and Poplimento soils, which have more clay in the soil than the Murrill soil; on hills
- Soils that have very stony surfaces; on landforms similar to those of the Murrill soil
- Soils that are deep to limestone bedrock; on landforms similar to those of the Murrill soil
- Soils that are on slopes that range from 8 to 15 percent or from 25 to 35 percent; on landforms similar to those of the Murrill soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.2 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: Colluvium derived from sandstone and shale over residuum weathered from limestone

Use and Management Considerations

Cropland

Suitability: 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.

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 chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.

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

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 effluent from conventional septic systems.

Local roads and streets

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

Interpretive Groups

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

40C—Murrill cobbly loam, 8 to 15 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of hills and areas in valleys
Position on the landform: Footslopes and toeslopes

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 4 inches—brown cobbly loam

Subsoil:
4 to 10 inches—yellowish brown channery silt loam
10 to 15 inches—strong brown channery silt loam
15 to 23 inches—strong brown channery silty clay loam
23 to 31 inches—yellowish red channery silty clay loam
31 to 40 inches—yellowish red silty clay loam; brownish yellow mottles and black iron-manganese masses
40 to 65 inches—yellowish red silty clay; black iron-manganese masses

Minor Components

Dissimilar components:
- Oriskany soils, which have more than 35 percent rock fragments throughout; on landforms similar to those of the Murrill soil

- Caneyville and Faywood soils, which are moderately deep to limestone bedrock; on hills
- Escatawba soils, which have a perched seasonal high water table with a top depth of about 30 to 48 inches; on landforms similar to those of the Murrill soil
- Soils that have rubbly surfaces; on landforms similar to those of the Murrill soil
- Areas that have sinkholes; on landforms similar to those of the Murrill soil

Similar components:
- Frederick and Poplimento soils, which have more clay in the soil than the Murrill soil; on hills
- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Murrill soil
- Soils that are deep to limestone or sandstone bedrock; on landforms similar to those of the Murrill soil
- Soils that have slopes that range from 3 to 8 percent or from 15 to 25 percent; on landforms similar to those of the Murrill soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.2 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: Medium
Surface fragments: About 0.5 to 2.0 percent subrounded stones and about 0 to 1.0 percent subrounded boulders
Parent material: Colluvium derived from sandstone and shale over residuum weathered from limestone

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 and chestnut oak
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low soil strength interferes with the construction of haul roads and log landings.

Building sites

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

- Rock fragments make excavation difficult and cutbanks unstable.
- 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 effluent from conventional septic systems.

Local roads and streets

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

Interpretive Groups

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

40D—Murrill cobbly loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of hills and areas in valleys
Position on the landform: Footslopes

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 4 inches—brown cobbly loam

Subsoil:
4 to 10 inches—yellowish brown channery silt loam
10 to 15 inches—strong brown channery silt loam
15 to 23 inches—strong brown channery silty clay loam
23 to 31 inches—yellowish red channery silty clay loam
31 to 40 inches—yellowish red silty clay loam; brownish yellow mottles and black iron-manganese masses
40 to 65 inches—yellowish red silty clay; black iron-manganese masses

Minor Components

Dissimilar components:
- Oriskany soils, which have more than 35 percent rock fragments throughout; on landforms similar to those of the Murrill soil
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock; on hills
- Escatawba soils, which have a perched seasonal high water table with a top depth of about 30 to 48 inches; on landforms similar to those of the Murrill soil
- Soils that have rubbly surfaces; on landforms similar to those of the Murrill soil
- Areas that have sinkholes; on landforms similar to those of the Murrill soil

Similar components:
- Frederick and Poplimento soils, which have more clay in the soil than the Murrill soil; on hills
- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Murrill soil
- Soils that are deep to limestone or sandstone bedrock; on landforms similar to those of the Murrill soil
- Soils that have slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Murrill soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.2 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: About 0.5 to 2.0 percent subrounded stones and about 0 to 1.0 percent subrounded boulders
Parent material: Colluvium derived from sandstone and shale over residuum weathered from limestone

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 and chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Rock fragments make excavation difficult and cutbanks unstable.
- 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 effluent from conventional septic systems.

Local roads and streets

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

Interpretive Groups

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

40E—Murrill cobbly loam, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of hills and mountains, areas in valleys, and areas on hills and mountains
Position on the landform: Footslopes and the lower part of backslopes

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 4 inches—brown cobbly loam

Subsoil:
4 to 10 inches—yellowish brown channery silt loam
10 to 15 inches—strong brown channery silt loam
15 to 23 inches—strong brown channery silty clay loam
23 to 31 inches—yellowish red channery silty clay loam
31 to 40 inches—yellowish red silty clay loam; brownish yellow mottles and black iron-manganese masses
40 to 65 inches—yellowish red silty clay; black iron-manganese masses

Minor Components

Dissimilar components:
- Faywood and Berks soils, which are moderately deep to bedrock; on hills
- Oriskany soils, which have more rock fragments and less clay in the soil than the Murrill soil and have extremely stony or rubbly surfaces; on similar landforms
- Soils that are moderately well drained and have layers in the subsoil that are firm and brittle; on landforms similar to those of the Murrill soil
- Areas that have sinkholes; on landforms similar to those of the Murrill soil

Similar components:
- Frederick and Poplimento soils, which have more clay in the soil and fewer rock fragments on the surface than the Murrill soil; on hills
- Soils that have extremely stony surfaces; on landforms similar to those of the Murrill soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.2 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: About 0.5 to 2.0 percent subrounded stones and about 0 to 1.0 percent subrounded boulders
Parent material: Colluvium derived from sandstone and shale over residuum weathered from limestone

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 and chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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.
- The low soil strength interferes with the construction of haul roads and log landings.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Rock fragments make excavation difficult and cutbanks unstable.
- 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 effluent from conventional septic systems.

Local roads and streets

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

Interpretive Groups

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

41B—Nicelytown silt loam, 3 to 8 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: High stream terraces in a river valley
Position on the landform: Treads and risers

Map Unit Composition

Nicelytown and similar soils: Typically 80 percent, ranging from about 70 to 90 percent

Typical Profile

Surface layer:
0 to 5 inches—brown silt loam

Subsurface layer:
5 to 8 inches—brown silt loam; dark grayish brown and brown iron depletions

Subsoil:
8 to 17 inches—pale brown silty clay loam; yellowish brown masses of oxidized iron and brown iron depletions
17 to 26 inches—pale brown clay loam; yellowish brown masses of oxidized iron
26 to 34 inches—light yellowish brown clay loam; gray iron depletions and strong brown and brown masses of oxidized iron
34 to 48 inches—light brownish gray silty clay loam; yellowish brown and strong brown masses of oxidized iron
48 to 65 inches—light brownish gray gravelly silty clay loam; yellowish brown masses of oxidized iron

Minor Components

Dissimilar components:
- Purdy soils, which are poorly drained; on landforms similar to those of the Nicelytown soil and in backswamps
- Maurertown soils, which are poorly drained and susceptible to flooding; on low terraces
- Cottonbend soils, which are well drained; on landforms similar to those of the Nicelytown soil
- Sugarhol soils, which are well drained and have more clay in the subsoil than the Nicelytown soil; on similar landforms
- Oriskany soils, which are well drained and have more rock fragments in the soil than the Nicelytown soil; on footslopes

Similar components:
- Zoar soils, which have more clay in the upper part of the subsoil than the Nicelytown soil; on similar landforms
- Soils that are somewhat poorly drained with iron depletions between depths of 10 and 18 inches; on landforms similar to those of the Nicelytown soil
- Soils that are well drained with iron depletions between depths of 36 and 60 inches; on landforms similar to those of the Nicelytown soil
- Soils that are deep to shale bedrock; on landforms similar to those of the Nicelytown soil
- Soils that have slopes that are less than 3 percent or that range from 8 to 15 percent; on landforms similar to those of the Nicelytown soil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.2 inches)

Slowest saturated hydraulic conductivity: Moderately high (about 0.2 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 18 to 30 inches
Water table (kind): Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Alluvium derived from sandstone and shale

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; not 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 risk of compaction increases when the soil is wet.
- 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.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Moderately suited to eastern white pine
- Soil wetness may limit the use of log trucks.
- The slope may restrict the use of some mechanical planting equipment.

Building sites

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

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e

Virginia soil management group: G
Hydric soil: No

42A—Ogles very cobbly loam, 0 to 3 percent slopes, occasionally flooded

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Low to intermediate level flood plains in a river valley
Position on the landform: Flood-plain steps

Map Unit Composition

Ogles and similar soils: Typically 80 percent, ranging from about 65 to 90 percent

Typical Profile

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

Subsoil:
5 to 28 inches—yellowish brown extremely cobbly sandy loam

Substratum:
28 to 47 inches—yellowish brown extremely cobbly sandy loam
47 to 60 inches—yellowish brown very cobbly sandy loam

Minor Components

Dissimilar components:
- Gladehill and Wolfgap soils, which have fewer rock fragments throughout than the Ogles soil and have thick, dark surface layers; on similar landforms
- Soils that are somewhat poorly drained; on landforms similar to those of the Ogles soil
- Soils that are fragmental; on landforms similar to those of the Ogles soil
- Soils that have sand and loamy sand textures throughout; on landforms similar to those of the Ogles soil
- Soils that formed in alluvium and are not prone to flooding; on landforms similar to those of the Ogles soil

Similar components:
- Derroc soils, which are less acid than the Ogles soil; on similar landforms
- Soils that are moderately well drained; on landforms similar to those of the Ogles soil
- Soils that have fewer rock fragments throughout than the Ogles soil; on similar landforms
- Soils that have redder subsoils than the Ogles soil; on similar landforms
- Soils that are alluvial soils and that flood rarely or frequently; on landforms similar to those of the Ogles soil
- Soils that have very stony surfaces; on landforms similar to those of the Ogles soil

Soil Properties and Qualities

Available water capacity: Very low (about 2.9 inches)
Slowest saturated hydraulic conductivity: High (about 2.0 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: About 42 to 72 inches

Water table (kind): Apparent
Flooding hazard: Occasional
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Alluvium derived from sandstone and shale

Use and Management Considerations

Cropland

Suitability: Poorly suited or moderately suited to grass-legume hay; poorly suited to corn; not suited to alfalfa hay
- Plants may suffer from moisture stress because of the limited available water capacity.
- Flooding may damage crops.

Pastureland

Suitability: Poorly suited
- During the drier summer months, plants may suffer from moisture stress because of the limited available water capacity.
- Flooding may damage pastures.

Woodland

Suitability: Moderately suited to yellow-poplar and eastern white pine
- Flooding may damage haul roads and 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.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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.

Building sites

- Because of the flooding, this soil is unsuited to building site development.

Septic tank absorption fields

- Because of the flooding, this soil is unsuited to septic tank absorption fields.

Local roads and streets

- Flooding may damage local roads and streets.
- Frost action may damage local roads and streets.

Interpretive Groups

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

43B—Oriskany cobbly sandy loam, 3 to 8 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Valleys
Position on the landform: Toeslopes and treads

Map Unit Composition

Oriskany and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

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

Surface layer:
2 to 6 inches—very dark grayish brown cobbly sandy loam

Subsurface layer:
6 to 11 inches—brown cobbly sandy loam

Subsoil:
11 to 40 inches—brown very cobbly loam
40 to 65 inches—brown extremely cobbly loam

Minor Components

Dissimilar components:
- Alonzville soils, which have fewer rock fragments in the soil than the Oriskany soil; on flood plains
- Ogles soils, which are susceptible to flooding; on flood plains
- Escatawba soils, which have seasonal high water tables between depths of 36 and 48 inches; on landforms similar to those of the Oriskany soil
- Soils that have rubbly surfaces; on landforms similar to those of the Oriskany soil
- Soils that are moderately well drained; on landforms similar to those of the Oriskany soil

Similar components:
- Macove soils, which have more silt than the Oriskany soil; on similar landforms
- Soils that are deep to shale or sandstone bedrock; on landforms similar to those of the Oriskany soil
- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Oriskany soil
- Soils that are on slopes that are less than 3 percent or that range from 8 to 15 percent; on landforms similar to those of the Oriskany soil

Soil Properties and Qualities

Available water capacity: Moderate (about 6.5 inches)
Slowest saturated hydraulic conductivity: High (about 2.0 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 0.5 to 2.0 percent subrounded stones and about 0 to 1.0 percent subrounded boulders
Parent material: Colluvium derived from sandstone and shale

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 chestnut oak
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- 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.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse 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.

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 and may pollute the water table.

Local roads and streets

- Frost action may damage local roads and streets.

Interpretive Groups

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

44C—Oriskany cobbly sandy loam, 8 to 15 percent slopes, extremely stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of mountains and hills and areas in valleys
Position on the landform: Footslopes and toeslopes

Map Unit Composition

Oriskany and similar soils: Typically 75 percent, ranging from about 65 to 85 percent

Typical Profile

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

Surface layer:
2 to 6 inches—very dark grayish brown cobbly sandy loam

Subsurface layer:
6 to 11 inches—brown cobbly sandy loam

Subsoil:
11 to 40 inches—brown very cobbly loam
40 to 65 inches—brown extremely cobbly loam

Minor Components

Dissimilar components:
- Alonzville soils, which have fewer rock fragments in the soil than the Oriskany soil; on flood plains
- Berks, Lily, Dekalb, and Lehew soils, which are moderately deep to bedrock; on hills or mountains
- Ogles soils, which are susceptible to flooding; on flood plains
- Escatawba soils, which have a seasonal high water table between depths of 36 and 48 inches; on landforms similar to those of the Oriskany soil
- Soils that have nonstony or very rubbly surfaces; on landforms similar to those of the Oriskany soil
- Soils that are moderately well drained; on landforms similar to those of the Oriskany soil

Similar components:
- Macove soils, which have more silt than the Oriskany soil; on similar landforms
- Soils that are deep to shale or sandstone bedrock; on landforms similar to those of the Oriskany soil
- Soils that have very stony or rubbly surfaces; on landforms similar to those of the Oriskany soil
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 35 percent; on landforms similar to those of the Oriskany soil

Soil Properties and Qualities

Available water capacity: Moderate (about 6.5 inches)
Slowest saturated hydraulic conductivity: High (about 2.0 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 3.0 to 10.0 percent subrounded stones and about 0 to 5.0 percent subrounded boulders
Parent material: Colluvium derived from sandstone and shale

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
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- 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 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.

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 effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

44D—Oriskany cobbly sandy loam, 15 to 35 percent slopes, extremely stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of mountains and hills and areas in valleys
Position on the landform: Footslopes

Map Unit Composition

Oriskany and similar soils: Typically 75 percent, ranging from about 65 to 85 percent

Typical Profile

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

Surface layer:
2 to 6 inches—very dark grayish brown cobbly sandy loam

Subsurface layer:
6 to 11 inches—brown cobbly sandy loam

Subsoil:
11 to 40 inches—brown very cobbly loam
40 to 65 inches—brown extremely cobbly loam

Minor Components

Dissimilar components:
- Berks, Lily, Dekalb, and Lehew soils, which are moderately deep to bedrock; on hills or mountains
- Ogles soils, which are susceptible to flooding; on flood plains
- Escatawba soils, which have a seasonal high water table between depths of 36 and 48 inches; on landforms similar to those of the Oriskany soil
- Soils that have nonstony or very rubbly surfaces; on landforms similar to those of the Oriskany soil
- Soils that are moderately well drained; on landforms similar to those of the Oriskany soil

Similar components:
- Macove soils, which have more silt than the Oriskany soil; on similar landforms
- Soils that are deep to shale or sandstone bedrock; on landforms similar to those of the Oriskany soil
- Soils that have very stony or rubbly surfaces; on landforms similar to those of the Oriskany soil
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Oriskany soil

Soil Properties and Qualities

Available water capacity: Moderate (about 6.5 inches)
Slowest saturated hydraulic conductivity: High (about 2.0 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 3.0 to 10.0 percent subrounded stones and about 0 to 5.0 percent subrounded boulders
Parent material: Colluvium derived from sandstone and shale

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 northern red oak

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 and the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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.

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 effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

44E—Oriskany cobbly sandy loam, 35 to 55 percent slopes, extremely stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of mountains and hills and areas on mountains and hills
Position on the landform: Footslopes and the lower part of backslopes

Map Unit Composition

Oriskany and similar soils: Typically 80 percent, ranging from about 70 to 90 percent

Typical Profile

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

Surface layer:
2 to 6 inches—very dark grayish brown cobbly sandy loam

Subsurface layer:
6 to 11 inches—brown cobbly sandy loam

Subsoil:
11 to 40 inches—brown very cobbly loam
40 to 65 inches—brown extremely cobbly loam

Minor Components

Dissimilar components:
- Berks, Lily, Dekalb, and Lehew soils, which are moderately deep to bedrock; on hills or mountains
- Weikert and Rough soils, which are shallow and very shallow to bedrock, respectively; on hills
- Ogles soils, which are susceptible to flooding; on flood plains
- Soils that have nonstony surfaces; on landforms similar to those of the Oriskany soil
- Soils that are moderately well drained; on landforms similar to those of the Oriskany soil

Similar components:
- Macove soils, which have more silt than the Oriskany soil; on similar landforms
- Soils that are deep to shale or sandstone bedrock; on landforms similar to those of the Oriskany soil
- Soils that have very stony or rubbly surfaces; on landforms similar to those of the Oriskany soil
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 65 percent; on landforms similar to those of the Oriskany soil

Soil Properties and Qualities

Available water capacity: Moderate (about 6.5 inches)
Slowest saturated hydraulic conductivity: High (about 2.0 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 3.0 to 10.0 percent subrounded stones and about 0 to 5.0 percent subrounded boulders
Parent material: Colluvium derived from sandstone and shale

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 northern red oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 slope and the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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.

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 effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

45E—Oriskany extremely bouldery sandy loam, 25 to 55 percent slopes, very rubbly

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of mountains and hills and areas on mountains and hills
Position on the landform: Footslopes and the lower part of backslopes

Map Unit Composition

Oriskany and similar soils: Typically 85 percent, ranging from about 80 to 95 percent

Typical Profile

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

Surface layer:
2 to 6 inches—very dark grayish brown extremely bouldery sandy loam

Subsurface layer:
6 to 11 inches—brown cobbly sandy loam

Subsoil:
11 to 40 inches—brown very cobbly loam
40 to 65 inches—brown extremely cobbly loam

Minor Components

Dissimilar components:
- Soils that have nonstony surfaces; on landforms similar to those of the Oriskany soil
- Areas of rock outcrops; on landforms similar to those of the Oriskany soil

Similar components:
- Macove soils, which have more silt throughout than the Oriskany soil; on similar landforms
- Soils that are deep to shale or sandstone bedrock; on landforms similar to those of the Oriskany soil
- Soils that have rubbly surfaces or rubble land; on landforms similar to those of the Oriskany soil
- Soils that are on slopes that range from 8 to 25 percent or from 55 to 65 percent; on landforms similar to those of the Oriskany soil

Soil Properties and Qualities

Available water capacity: Moderate (about 6.4 inches)
Slowest saturated hydraulic conductivity: High (about 2.0 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 10.0 to 20.0 percent subrounded stones and about 40.0 to 60.0 percent subrounded boulders
Parent material: Colluvium derived from sandstone and shale

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 northern red oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 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.

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 effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

46C—Oriskany-Murrill complex, 8 to 15 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of hills and areas in valleys
Position on the landform: Footslopes and toeslopes

Map Unit Composition

Note: These Oriskany and Murrill soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Oriskany and similar soils: Typically 55 percent, ranging from about 45 to 65 percent
Murrill and similar soils: Typically 35 percent, ranging from about 25 to 40 percent

Typical Profile

Oriskany

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

Surface layer:
2 to 6 inches—very dark grayish brown cobbly sandy loam

Subsurface layer:
6 to 11 inches—brown cobbly sandy loam

Subsoil:
11 to 29 inches—brown very cobbly loam
29 to 40 inches—brown very cobbly loam
40 to 65 inches—brown extremely cobbly loam

Murrill

Surface layer:
0 to 4 inches—brown cobbly loam

Subsoil:
4 to 10 inches—yellowish brown channery silt loam
10 to 15 inches—strong brown channery silt loam
15 to 23 inches—strong brown channery silty clay loam
23 to 31 inches—yellowish red channery silty clay loam
31 to 40 inches—yellowish red silty clay loam; brownish yellow mottles and black iron-manganese masses
40 to 65 inches—yellowish red silty clay; black iron-manganese masses

Minor Components

Dissimilar components:
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock and have more clay than the Oriskany and Murrill soils; on hills
- Ogles soils, which are susceptible to flooding; on flood plains
- Escatawba soils, which have a seasonal high water table between depths of 36 and 48 inches; on landforms similar to those of the Oriskany and Murrill soils
- Soils that are moderately well drained; on landforms similar to those of the Oriskany and Murrill soils
- Areas that have sinkholes; on landforms similar to those of the Oriskany and Murrill soils

Similar components:
- Macove soils, which have more silt throughout than the Oriskany and Murrill soils; on similar landforms
- Soils that are deep to shale or sandstone bedrock; on landforms similar to those of the Oriskany and Murrill soils
- Soils that have extremely stony surfaces; on landforms similar to those of the Oriskany and Murrill soils
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 35 percent; on landforms similar to those of the Oriskany and Murrill soils

Soil Properties and Qualities

Available water capacity: Oriskany—moderate (about 6.5 inches); Murrill—moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Oriskany—high (about 2.0 in/hr); Murrill—moderately high (about 0.2 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: Oriskany—low; Murrill—moderate
Runoff class: Oriskany—low; Murrill—medium
Surface fragments: About 0.5 to 2.0 percent subrounded stones and about 0 to 1.0 percent subrounded boulders
Parent material: Oriskany—colluvium derived from sandstone and shale; Murrill—colluvium derived from sandstone and shale over residuum weathered from limestone

Use and Management Considerations

Cropland

- These soils are 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 chestnut oak; moderately suited to northern red oak
- 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.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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 soil strength interferes with the construction of haul roads and log landings.

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 effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6s
Virginia soil management group: Oriskany—CC; Murrill—L
Hydric soils: No

46D—Oriskany-Murrill complex, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of hills and areas in valleys
Position on the landform: Footslopes

Map Unit Composition

Note: These Oriskany and Murrill soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Oriskany and similar soils: Typically 55 percent, ranging from about 45 to 65 percent
Murrill and similar soils: Typically 35 percent, ranging from about 25 to 40 percent

Typical Profile

Oriskany

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

Surface layer:
2 to 6 inches—very dark grayish brown cobbly sandy loam

Subsurface layer:
6 to 11 inches—brown cobbly sandy loam

Subsoil:
11 to 29 inches—brown very cobbly loam
29 to 40 inches—brown very cobbly loam
40 to 65 inches—brown extremely cobbly loam

Murrill

Surface layer:
0 to 4 inches—brown cobbly loam

Subsoil:
4 to 10 inches—yellowish brown channery silt loam
10 to 15 inches—strong brown channery silt loam
15 to 23 inches—strong brown channery silty clay loam
23 to 31 inches—yellowish red channery silty clay loam
31 to 40 inches—yellowish red silty clay loam; brownish yellow mottles and black iron-manganese masses
40 to 65 inches—yellowish red silty clay; black iron-manganese masses

Minor Components

Dissimilar components:
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock and have more clay than the Oriskany and Murrill soils; on hills
- Ogles soils, which are susceptible to flooding; on flood plains
- Escatawba soils, which have a seasonal high water table between depths of 36 and 48 inches; on landforms similar to those of the Oriskany and Murrill soils
- Soils that are moderately well drained; on landforms similar to those of the Oriskany and Murrill soils
- Areas that have sinkholes; on landforms similar to those of the Oriskany and Murrill soils

Similar components:
- Macove soils, which have more silt throughout than the Oriskany and Murrill soils; on similar landforms
- Soils that are deep to shale or sandstone bedrock; on landforms similar to those of the Oriskany and Murrill soils
- Soils that have extremely stony surfaces; on landforms similar to those of the Oriskany and Murrill soils

- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Oriskany and Murrill soils

Soil Properties and Qualities

Available water capacity: Oriskany—moderate (about 6.5 inches); Murrill—moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Oriskany—high (about 2.0 in/hr); Murrill—moderately high (about 0.2 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: Oriskany—low; Murrill—moderate
Runoff class: Oriskany—medium; Murrill—high
Surface fragments: About 0.5 to 2.0 percent subrounded stones and about 0 to 1.0 percent subrounded boulders
Parent material: Oriskany—colluvium derived from sandstone and shale; Murrill—colluvium derived from sandstone and shale over residuum weathered from limestone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to northern red oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 and the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse 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 soil strength interferes with the construction of haul roads and log landings.

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 effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: Oriskany—CC; Murrill—L
Hydric soils: No

47E—Oriskany-Murrill complex, 35 to 55 percent slopes, extremely stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Base of slopes of hills, areas in valleys, and areas on hills
Position on the landform: Footslopes and the lower part of backslopes

Map Unit Composition

Note: These Oriskany and Murrill soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Oriskany and similar soils: Typically 65 percent, ranging from about 55 to 80 percent
Murrill and similar soils: Typically 25 percent, ranging from about 10 to 40 percent

Typical Profile

Oriskany

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

Surface layer:
2 to 6 inches—very dark grayish brown cobbly sandy loam

Subsurface layer:
6 to 11 inches—brown cobbly sandy loam

Subsoil:
11 to 29 inches—brown very cobbly loam
29 to 40 inches—brown very cobbly loam
40 to 65 inches—brown extremely cobbly loam

Murrill

Surface layer:
0 to 4 inches—brown cobbly loam

Subsoil:
4 to 10 inches—yellowish brown channery silt loam
10 to 15 inches—strong brown channery silt loam
15 to 23 inches—strong brown channery silty clay loam
23 to 31 inches—yellowish red channery silty clay loam
31 to 40 inches—yellowish red silty clay loam; brownish yellow mottles and black iron-manganese masses
40 to 65 inches—yellowish red silty clay; black iron-manganese masses

Minor Components

Dissimilar components:
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock and have more clay than the Oriskany and Murrill soils; on hills
- Soils that are moderately well drained; on landforms similar to those of the Oriskany and Murrill soils
- Areas that have sinkholes; on landforms similar to those of the Oriskany and Murrill soils
- Areas of rock outcrops; on landforms similar to those of the Oriskany and Murrill soils

Similar components:
- Macove soils, which have more silt throughout than the Oriskany and Murrill soils; on similar landforms
- Soils that are deep to shale or sandstone bedrock; on landforms similar to those of the Oriskany and Murrill soils
- Soils that have very stony or rubbly surfaces; on landforms similar to those of the Oriskany and Murrill soils
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 65 percent; on landforms similar to those of the Oriskany and Murrill soils

Soil Properties and Qualities

Available water capacity: Oriskany—moderate (about 6.5 inches); Murrill—moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Oriskany—high (about 2.0 in/hr); Murrill—moderately high (about 0.2 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: Oriskany—low; Murrill—moderate
Runoff class: Oriskany—medium; Murrill—high
Surface fragments: About 3.0 to 10.0 percent subrounded stones and about 0 to 5.0 percent subrounded boulders
Parent material: Oriskany—colluvium derived from sandstone and shale; Murrill—colluvium derived from sandstone and shale over residuum weathered from limestone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to northern red oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 slope and the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse 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 soil strength interferes with the construction of haul roads and log landings.

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 effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Oriskany—CC; Murrill—L
Hydric soils: No

48C—Paddyknob-Madsheep complex, 8 to 15 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Summits and shoulders
Note: This map unit occurs at high elevations

Map Unit Composition

Note: These Paddyknob and Madsheep soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Paddyknob and similar soils: Typically 60 percent, ranging from about 50 to 70 percent
Madsheep and similar soils: Typically 35 percent, ranging from about 25 to 50 percent

Typical Profile

Paddyknob

Organic layer:
0 to 1 inch—slightly decomposed plant material

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

Subsoil:
3 to 6 inches—dark yellowish brown very channery loam
6 to 26 inches—dark yellowish brown very channery sandy loam

Hard bedrock:
26 inches—sandstone bedrock

Madsheep

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark brown channery loam

Subsoil:
4 to 17 inches—reddish brown channery loam
17 to 30 inches—dark reddish brown very channery loam

Hard bedrock:
30 inches—sandstone bedrock

Minor Components

Dissimilar components:
- Colluvial soils that are very deep, are well drained, and have fewer rock fragments in the soil than the Paddyknob and Madsheep soils; on footslopes and at the heads of drainageways
- Colluvial soils that are very deep and well drained; on footslopes and at the heads of drainageways
- Colluvial soils that are very deep, are moderately well drained, and have fewer rock fragments in the soil than the Paddyknob and Madsheep soils; on footslopes and at the bottoms of drainageways
- Areas that contain rock outcrops; on shoulders and nose slopes and near footslopes

Similar components:
- Mandy soils, which have yellower colors than the Madsheep soil and have less sand and more silt than the Paddyknob soil; on similar landforms in areas with shale and siltstone bedrock
- Soils that have fewer rock fragments in the soil than the Paddyknob and Madsheep soils and that have more sand than the Madsheep soil; on similar landforms in areas with sandstone bedrock
- Soils which have slopes that range from 3 to 8 percent or from 15 to 35 percent; on landforms similar to those of the Paddyknob and Madsheep soils

Soil Properties and Qualities

Available water capacity: Paddyknob—very low (about 2.1 inches); Madsheep—low (about 3.4 inches)
Slowest saturated hydraulic conductivity: Paddyknob—high (about 6.0 in/hr); Madsheep—high (about 2.0 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Paddyknob—somewhat excessively drained; Madsheep—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 0.1 to 3.0 percent subangular stones

Parent material: Paddyknob—residuum weathered from sandstone interbedded with shale and siltstone; Madsheep—residuum weathered from red shale, siltstone, and sandstone

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 bedrock may restrict the rooting depth of plants.
- Large stones on the surface may restrict the operation of some farm machinery.

Woodland

Suitability: Moderately suited to northern red oak
- Bedrock may interfere with the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse soil layers may slough, thus reducing the efficiency of mechanical planting equipment.

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, these soils are unsuited to conventional septic tank absorption fields.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

48D—Paddyknob-Madsheep complex, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains

Position on the landform: Summits, shoulders, and backslopes
Note: This map unit occurs at high elevations

Map Unit Composition

Note: These Paddyknob and Madsheep soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Paddyknob and similar soils: Typically 55 percent, ranging from about 40 to 70 percent
Madsheep and similar soils: Typically 35 percent, ranging from about 25 to 50 percent

Typical Profile

Paddyknob

Organic layer:
0 to 1 inch—slightly decomposed plant material

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

Subsoil:
3 to 6 inches—dark yellowish brown very channery loam
6 to 26 inches—dark yellowish brown very channery sandy loam

Hard bedrock:
26 inches—sandstone bedrock

Madsheep

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark brown channery loam

Subsoil:
4 to 17 inches—reddish brown channery loam
17 to 30 inches—dark reddish brown very channery loam

Hard bedrock:
30 inches—sandstone bedrock

Minor Components

Dissimilar components:
- Colluvial soils that are very deep, are well drained, and have fewer rock fragments in the soil than the Paddyknob and Madsheep soils; on footslopes and at the heads of drainageways
- Colluvial soils that are very deep and well drained; on footslopes and at the heads of drainageways
- Colluvial soils that are very deep, are moderately well drained, and have fewer rock fragments in the soil than the Paddyknob and Madsheep soils; on footslopes and at the bottoms of drainageways
- Areas that contain rock outcrops; on shoulders and nose slopes and near footslopes

Similar components:
- Mandy soils, which have yellower colors than the Madsheep soil and have less sand and more silt than the Paddyknob soil; on similar landforms in areas with shale and siltstone bedrock
- Soils that have fewer rock fragments in the soil than the Paddyknob and Madsheep soils and that have more sand than the Madsheep soil; on similar landforms in areas with sandstone bedrock

- Soils which have slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Paddyknob and Madsheep soils

Soil Properties and Qualities

Available water capacity: Paddyknob—very low (about 2.1 inches); Madsheep—low (about 3.4 inches)
Slowest saturated hydraulic conductivity: Paddyknob—high (about 6.0 in/hr); Madsheep—high (about 2.0 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Paddyknob—somewhat excessively drained; Madsheep—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 0.1 to 3.0 percent subangular stones
Parent material: Paddyknob—residuum weathered from sandstone interbedded with shale and siltstone; Madsheep—residuum weathered from red shale, siltstone, and sandstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak and chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse soil layers may slough, thus reducing the efficiency of mechanical planting equipment.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

48E—Paddyknob-Madsheep complex, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains
Position on the landform: Backslopes
Note: This map unit occurs at high elevations

Map Unit Composition

Note: These Paddyknob and Madsheep soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Paddyknob and similar soils: Typically 55 percent, ranging from about 40 to 70 percent
Madsheep and similar soils: Typically 35 percent, ranging from about 25 to 50 percent

Typical Profile

Paddyknob

Organic layer:
0 to 1 inch—slightly decomposed plant material

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

Subsoil:
3 to 6 inches—dark yellowish brown very channery loam
6 to 26 inches—dark yellowish brown very channery sandy loam

Hard bedrock:
26 inches—sandstone bedrock

Madsheep

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark brown channery loam

Subsoil:
4 to 17 inches—reddish brown channery loam
17 to 30 inches—dark reddish brown very channery loam

Hard bedrock:
30 inches—sandstone bedrock

Minor Components

Dissimilar components:
- Colluvial soils that are very deep, are well drained, and have fewer rock fragments in the soil than the Paddyknob and Madsheep soils; on footslopes and at the heads of drainageways
- Colluvial soils that are very deep and well drained; on footslopes and at the heads of drainageways
- Colluvial soils that are very deep, are moderately well drained, and have fewer rock fragments in the soil than the Paddyknob and Madsheep soils; on footslopes and at the bottoms of drainageways
- Areas that contain rock outcrops; on shoulders and nose slopes and near footslopes

Similar components:
- Mandy soils, which have yellower colors than the Madsheep soil and have less sand and more silt than the Paddyknob soil; on similar landforms in areas with shale and siltstone bedrock
- Soils that have fewer rock fragments in the soil than the Paddyknob and Madsheep soils and that have more sand than the Madsheep soil; on similar landforms in areas with sandstone bedrock
- Soils which have slopes that range from 15 to 35 percent or are more than 55 percent; on landforms similar to those of the Paddyknob and Madsheep soils

Soil Properties and Qualities

Available water capacity: Paddyknob—very low (about 2.1 inches); Madsheep—low (about 3.4 inches)
Slowest saturated hydraulic conductivity: Paddyknob—high (about 6.0 in/hr); Madsheep—high (about 2.0 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Paddyknob—somewhat excessively drained; Madsheep—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 0.1 to 3.0 percent subangular stones
Parent material: Paddyknob—residuum weathered from sandstone interbedded with shale and siltstone; Madsheep—residuum weathered from red shale, siltstone, and sandstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak and chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.

- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Because of coarse soil layers, the maintenance of haul roads and log landings is increased.
- Coarse soil layers may slough, thus reducing the efficiency of mechanical planting equipment.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

49A—Purdy silty clay loam, 0 to 3 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: High and intermediate level stream terraces in a river valley
Position on the landform: Treads and backswamps

Map Unit Composition

Purdy and similar soils: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

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

Subsoil:
5 to 12 inches—olive gray silty clay; strong brown iron-manganese masses
12 to 23 inches—gray clay; strong brown iron-manganese masses
23 to 48 inches—dark gray clay; strong brown iron-manganese masses

Substratum:
48 to 62 inches—dark gray clay; strong brown iron-manganese masses

Minor Components

Dissimilar components:
- Zoar soils, which are moderately well drained; on landforms similar to those of the Purdy soil
- Nicelytown soils, which are moderately well drained and have less clay in the soil than the Purdy soil; on similar landforms
- Sugarhol and Cottonbend soils, which are well drained; on landforms similar to those of the Purdy soil
- Soils that have surface layers that are thicker and darker than the those of the Purdy soil; on similar landforms

Similar components:
- Soils that are somewhat poorly drained; on landforms similar to those of the Purdy soil
- Soils that have surface layers of silt loam; on landforms similar to those of the Purdy soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Low (about 0.001 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 12 inches
Water table (kind): Apparent
Flooding hazard: None
Ponding hazard: Occasional
Depth of ponding: 0.0 to 0.5 foot
Shrink-swell potential: Moderate
Runoff class: Negligible
Surface fragments: None
Parent material: Alluvium derived from sandstone and shale

Use and Management Considerations

Cropland

Suitability: Poorly suited to corn; not suited to 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 risk of compaction increases when the soil is wet.
- Soil crusting results in a decrease in water infiltration and hinders the emergence of seedlings.
- 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 seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- Compaction may occur when the soil is wet.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Moderately suited to sweetgum
- Ponding restricts the safe use of roads by log trucks.

- Soil wetness may limit the use of log trucks.
- The low soil strength interferes with the construction of haul roads and log landings.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Building sites

- Ponding makes this soil unsuited to building site development.

Septic tank absorption fields

- Because of the ponding and wetness, this soil is unsuited to septic tank absorption fields.

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 soil strength is unfavorable for supporting heavy loads.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4w
Virginia soil management group: NN
Hydric soil: Yes

50C—Shelocta-Berks complex, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains, hills, and valleys
Position on the landform: Shelocta—footslopes; Berks—the lower backslopes and the upper footslopes

Map Unit Composition

Note: These Shelocta and Berks soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Shelocta and similar soils: Typically 60 percent, ranging from about 50 to 75 percent
Berks and similar soils: Typically 20 percent, ranging from about 10 to 35 percent

Typical Profile

Shelocta

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

Subsoil:
2 to 18 inches—brown channery silt loam
18 to 38 inches—strong brown channery silt loam
38 to 60 inches—brown channery silt loam
60 to 65 inches—brown channery silt loam; pale brown and light brownish gray iron depletions

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Minor Components

Dissimilar components:
- Rough soils, which are very shallow to shale bedrock; on hills
- Ogles and Derroc soils, which have more than 35 percent rock fragments throughout; on flood plains
- Coursey soils, which are moderately well drained; on stream terraces
- Soils that are moderately well drained and have dense layers in the subsoil; on footslopes
- Soils that have extremely stony surfaces; on landforms similar to those of the Shelocta and Berks soils
- Areas of rock outcrops; on landforms similar to those of the Shelocta and Berks soils

Similar components:
- Gilpin soils, which are moderately deep to shale bedrock and have less than 35 percent rock fragments throughout; on hills
- Macove soils, which are very deep to bedrock and have more than 35 percent rock fragments throughout; on footslopes
- Weikert soils, which are shallow to bedrock; on hills
- Soils that are deep to shale bedrock; on hills and footslopes
- Soils that have very stony surfaces; on hills and footslopes
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 35 percent; on hills and footslopes

Soil Properties and Qualities

Available water capacity: Shelocta—high (about 9.0 inches); Berks—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 in/hr)
Depth class: Shelocta—very deep (more than 60 inches); Berks—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Shelocta—more than 60 inches; Berks—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: Medium
Surface fragments: None
Parent material: Shelocta—colluvium derived from shale, siltstone, and some fine-grained sandstone; Berks—residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

Suitability: Well suited to 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 bedrock restricts the rooting depth of crops.
- The risk of compaction increases when the soil is wet.
- 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.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to northern red oak
- Bedrock may interfere with the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- The low soil strength may create unsafe conditions for log trucks.

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 Berks soil is unsuited to conventional septic tank absorption fields.
- The slope limits the proper treatment of 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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

50D—Shelocta-Berks complex, 15 to 35 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains, hills, and valleys

Position on the landform: Shelocta—footslopes; Berks—the lower backslopes and the upper footslopes

Map Unit Composition

Note: These Shelocta and Berks soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Shelocta and similar soils: Typically 60 percent, ranging from about 50 to 75 percent
Berks and similar soils: Typically 20 percent, ranging from about 10 to 30 percent

Typical Profile

Shelocta

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

Subsoil:
2 to 18 inches—brown channery silt loam
18 to 38 inches—strong brown channery silt loam
38 to 60 inches—brown channery silt loam
60 to 65 inches—brown channery silt loam; pale brown and light brownish gray iron depletions

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Minor Components

Dissimilar components:
- Rough soils, which are very shallow to shale bedrock; on hills
- Ogles and Derroc soils, which have more than 35 percent rock fragments throughout; on flood plains
- Coursey soils, which are moderately well drained; on stream terraces
- Soils that are moderately well drained and have dense layers in the subsoil; on footslopes
- Soils that have extremely stony surfaces; on landforms similar to those of the Shelocta and Berks soils
- Areas of rock outcrops; on landforms similar to those of the Shelocta and Berks soils

Similar components:
- Gilpin soils, which are moderately deep to shale bedrock and have less than 35 percent rock fragments throughout; on hills
- Macove soils, which are very deep to bedrock and have more than 35 percent rock fragments throughout; on footslopes
- Weikert soils, which are shallow to bedrock; on hills
- Soils that are deep to shale bedrock; on hills and footslopes
- Soils that have very stony surfaces; on hills and footslopes

- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on hills and footslopes

Soil Properties and Qualities

Available water capacity: Shelocta—high (about 9.0 inches); Berks—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 in/hr)
Depth class: Shelocta—very deep (more than 60 inches); Berks—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Shelocta—more than 60 inches; Berks—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: High
Surface fragments: None
Parent material: Shelocta—colluvium derived from shale, siltstone, and some fine-grained sandstone; Berks—residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

- These soils are 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.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to northern red oak; poorly suited to chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 soil strength interferes with the construction of haul roads and log landings.

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 Berks soil is unsuited to conventional septic tank absorption fields.
- The slope limits the proper treatment of 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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

50E—Shelocta-Berks complex, 35 to 55 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Mountains, hills, and valleys
Position on the landform: Shelocta—footslopes; Berks—the lower backslopes and the upper footslopes

Map Unit Composition

Note: These Shelocta and Berks soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Shelocta and similar soils: Typically 70 percent, ranging from about 55 to 85 percent
Berks and similar soils: Typically 25 percent, ranging from about 15 to 40 percent

Typical Profile

Shelocta

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

Subsoil:
2 to 18 inches—brown channery silt loam
18 to 38 inches—strong brown channery silt loam
38 to 60 inches—brown channery silt loam
60 to 65 inches—brown channery silt loam; pale brown and light brownish gray iron depletions

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Minor Components

Dissimilar components:
- Rough soils, which are very shallow to shale bedrock; on hills
- Ogles and Derroc soils, which have more than 35 percent rock fragments throughout; on flood plains
- Coursey soils, which are moderately well drained; on stream terraces
- Soils that are moderately well drained and have dense layers in the subsoil; on footslopes
- Soils that have extremely stony surfaces; on landforms similar to those of the Shelocta and Berks soils
- Areas of rock outcrops; on landforms similar to those of the Shelocta and Berks soils

Similar components:
- Macove soils, which are very deep to bedrock and have more than 35 percent rock fragments throughout; on footslopes
- Weikert soils, which are shallow to bedrock; on hills
- Soils that are deep to shale bedrock; on hills and footslopes
- Soils that have very stony surfaces; on hills and footslopes
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 65 percent; on hills and footslopes

Soil Properties and Qualities

Available water capacity: Shelocta—high (about 9.0 inches); Berks—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 in/hr)
Depth class: Shelocta—very deep (more than 60 inches); Berks—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Shelocta—more than 60 inches; Berks—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: High
Surface fragments: None
Parent material: Shelocta—colluvium derived from shale, siltstone, and some fine-grained sandstone; Berks—residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to northern red oak; poorly suited to chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.

- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.

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 Berks soil is unsuited to conventional septic tank absorption fields.
- The slope limits the proper treatment of 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.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Shelocta—L; Berks—JJ
Hydric soils: No

51B—Sugarhol silt loam, 3 to 8 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: High stream terraces in a river valley
Position on the landform: Treads and risers

Map Unit Composition

Sugarhol and similar soils: Typically 85 percent, ranging from about 75 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—highly decomposed plant material

Surface layer:
1 to 2 inches—dark grayish brown silt loam

Subsurface layer:
2 to 3 inches—grayish brown silt loam

Subsoil:
3 to 11 inches—light yellowish brown silt loam
11 to 34 inches—yellowish brown silty clay
34 to 53 inches—strong brown silty clay; light yellowish brown and yellowish red mottles
53 to 61 inches—yellowish brown clay; strong brown and light yellowish brown mottles

Minor Components

Dissimilar components:
- Oriskany soils, which have more than 35 percent rock fragments throughout; on colluvial footslopes
- Escatawba soils, which have a perched seasonal high water table; on colluvial footslopes
- Purdy soils, which are poorly drained; on landforms similar to those of the Sugarhol soil and in backswamps
- Gilpin soils, which are moderately deep to shale bedrock; on hills
- Nicelytown and Zoar soils, which are moderately well drained; on landforms similar to those of the Sugarhol soil

Similar components:
- Cottonbend soils, which have less clay in the upper part of the subsoil than the Sugarhol soil; on similar landforms
- Alonzville soils, which have less clay throughout than the Sugarhol soil; on the lower terraces
- Soils that have more than 35 percent pebbles or cobbles in the lower part of the subsoil; on landforms similar to those of the Sugarhol soil
- Soils that have very stony surfaces; on landforms similar to those of the Sugarhol soil
- Soils that are on slopes that are less than 3 percent or that range from 8 to 15 percent; on landforms similar to those of the Sugarhol soil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: Medium
Surface fragments: None
Parent material: Alluvium derived from sandstone and shale

Use and Management Considerations

Cropland

Suitability: Well suited to corn 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.
- The high clay content restricts the rooting depth of crops.
- The risk of compaction increases when the soil is wet.
- 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 eastern white pine
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

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 soil strength is unfavorable for supporting heavy loads.
- Frost action may damage local roads and streets.

Interpretive Groups

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

51C—Sugarhol silt loam, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: High stream terraces in a river valley
Position on the landform: Treads and risers

Map Unit Composition

Sugarhol and similar soils: Typically 85 percent, ranging from about 75 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—highly decomposed plant material

Surface layer:
1 to 2 inches—dark grayish brown silt loam

Subsurface layer:
2 to 3 inches—grayish brown silt loam

Subsoil:
3 to 11 inches—light yellowish brown silt loam
11 to 34 inches—yellowish brown silty clay
34 to 53 inches—strong brown silty clay; light yellowish brown and yellowish red mottles
53 to 61 inches—yellowish brown clay; strong brown and light yellowish brown mottles

Minor Components

Dissimilar components:
- Oriskany soils, which have more than 35 percent rock fragments throughout; on colluvial footslopes
- Escatawba soils, which have a perched seasonal high water table; on colluvial footslopes
- Purdy soils, which are poorly drained; on landforms similar to those of the Sugarhol soil and in backswamps
- Gilpin soils, which are moderately deep to shale bedrock; on hills
- Berks, Weikert, and Rough soils, which are moderately deep, shallow, and very shallow to shale bedrock, respectively; on hills
- Nicelytown and Zoar soils, which are moderately well drained; on landforms similar to those of the Sugarhol soil

Similar components:
- Cottonbend soils, which have less clay in the upper part of the subsoil than the Sugarhol soil; on similar landforms
- Alonzville soils, which have less clay throughout than the Sugarhol soil; on the lower terraces
- Soils that have more than 35 percent pebbles or cobbles in the lower part of the subsoil; on landforms similar to those of the Sugarhol soil
- Soils that have very stony surfaces; on landforms similar to those of the Sugarhol soil
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 25 percent; on landforms similar to those of the Sugarhol soil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: Medium
Surface fragments: None
Parent material: Alluvium derived from sandstone and shale

Use and Management Considerations

Cropland

Suitability: Well suited to 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.
- The risk of compaction increases when the soil is wet.
- 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 eastern white pine

- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.
- The low soil strength interferes with the construction of haul roads and log landings.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

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 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 soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

52—Udorthents, dams

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Areas of flood-control earthen dams
Slope: About 0 to 55 percent; steeper in some areas

Map Unit Composition

Udorthents and similar soils: Typically 95 percent, ranging from about 90 to 100 percent

Typical Profile

This map unit consists of areas of disturbed soil and rock material. The disturbance generally results from land leveling, excavation, or filling and the construction of earthen dams. Udorthents have a variable mixture of soil textures and soil colors and various contents of rock fragments, depths to bedrock, and drainage. Differential subsidence can occur in Udorthents. Because of the variablility of the soil material, a typical profile is not given.

Use and Management Considerations

- Onsite investigation is needed to determine the suitability for specific uses.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: None assigned
Virginia soil management group: None assigned
Hydric soils: No

53—Udorthents, smoothed, 3 to 35 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Areas along highways, construction zones, and urban areas or other areas where surface excavations or other land disturbances occur

Map Unit Composition

Udorthents and similar soils: Typically 85 percent, ranging from about 50 to 95 percent

Typical Profile

This map unit consists of areas of disturbed soil and rock material. The disturbance generally results from surface excavations and subsequent deposits of soil and rock material for construction projects. Udorthents have a variable mixture of soil textures and soil colors and various contents of rock fragments, depths to bedrock, density, and drainage. The surface is smoothed. Differential subsidance can occur in Udorthents. Because of the variability of the soil material, a typical profile is not given.

Minor Components

Dissimilar components:
- Berks soils, which are moderately deep to shale bedrock; on hills and mountains
- Weikert soils, which are shallow to shale bedrock; on hills and mountains
- Rough soils, which are very shallow to shale bedrock; on hills and mountains
- Macove soils, which are very deep to bedrock, are well drained, and have many rock fragments in the soil; on footslopes
- Shelocta soils, which are very deep to bedrock and well drained; on footslopes
- Alonzville soils, which are very deep to bedrock and well drained; on terraces
- Escatawba soils, which are very deep to bedrock and have a seasonal high water table at a depth of 2.5 to 4.0 feet; on footslopes
- Derroc soils, which are very deep to bedrock, are well drained, and have many rock fragments in the soil; on flood plains
- Areas that have wet spots and water; on landforms similar to those of the Udorthents

Use and Management Considerations

- Onsite investigation is needed to determine the suitability for specific uses.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: None assigned
Virginia soil management group: None assigned
Hydric soils: No

54—Udorthents-Rock outcrop complex, 15 to 100 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Areas along highways, construction zones, and urban areas or other areas where surface excavations or other land disturbances occur; in some areas, the rock outcrops are near-vertical cliffs

Map Unit Composition

Note: These Udorthents and Rock outcrop occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Udorthents and similar soils: Typically 65 percent, ranging from about 45 to 95 percent
Rock outcrop: Typically 25 percent, ranging from about 10 to 50 percent

Typical Profile

Udorthents

This part of the map unit consists of areas of disturbed soil and rock material. The disturbance generally results from surface excavations and subsequent deposits of soil and rock material for construction projects. Udorthents have a variable mixture of soil textures and soil colors and various contents of rock fragments, depths to bedrock, density, and drainage. Differential subsidence can occur in Udorthents. Because of the variability of the soil material, a typical profile is not given.

Rock outcrop

This part of the map unit consists of outcrops of sandstone, shale, or limestone bedrock. The outcrops are exposures of bedrock resulting from road construction or other earthmoving activities.

Minor Components

Dissimilar components:
- Berks soils, which are moderately deep to shale bedrock; on hills and mountains
- Weikert and Rough soils, which are shallow to shale bedrock; on hills and mountains
- Rough soils, which are very shallow to shale bedrock; on hills and mountains
- Macove soils, which are very deep to bedrock, are well drained, and have many rock fragments in the soil; on footslopes
- Shelocta soils, which are very deep to bedrock and well drained; on footslopes
- Areas that have wet spots and water; on landforms similar to those of the Udorthents

Use and Management Considerations

- Onsite investigation is needed to determine the suitability for specific uses.

Interpretive Groups

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

55E—Watahala-Frederick complex, 35 to 55 percent slopes, very rocky

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Backslopes and, in some areas, summits and shoulders
Note: About 2 to 10 percent of the surface is covered with outcrops of limestone bedrock

Map Unit Composition

Note: These Watahala and Frederick soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Watahala and similar soils: Typically 45 percent, ranging from about 35 to 60 percent
Frederick and similar soils: Typically 35 percent, ranging from about 20 to 45 percent

Typical Profile

Watahala

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 3 inches—very dark grayish brown very gravelly sandy loam

Subsurface layer:
3 to 12 inches—yellowish brown gravelly silt loam

Subsoil:
12 to 27 inches—yellowish brown gravelly silt loam
27 to 37 inches—yellowish brown gravelly loam
37 to 54 inches—strong brown gravelly clay; light brown mottles
54 to 61 inches—strong brown silty clay; light brown mottles

Frederick

Surface layer:
0 to 3 inches—brown gravelly silt loam

Subsoil:
3 to 8 inches—dark yellowish brown and yellowish brown silt loam
8 to 12 inches—yellowish brown silty clay loam
12 to 20 inches—strong brown silty clay
20 to 72 inches—yellowish red silty clay

Minor Components

Dissimilar components:
- Caneyville and Faywood soils, which are moderately deep to limestone bedrock; on landforms similar to those of the Watahala and Frederick soils
- Oriskany soils, which have more than 35 percent rock fragments throughout; on footslopes
- Soils that are shallow to limestone or chert bedrock; on landforms similar to those of the Watahala and Frederick soils
- Areas with more than 10 percent percent rock outcrops; on landforms similar to those of the Watahala and Frederick soils

- Areas that have sinkholes; on landforms similar to those of the Watahala and Frederick soils

Similar components:
- Poplimento soils, which have fewer gravel and more clay in the upper part of the subsoil than the Watahala soil and have yellower colors than the Frederick soil; on similar landforms
- Murrill soils, which have less clay in the upper part of the subsoil than the Watahala and Frederick soils; on footslopes
- Soils that are deep to limestone or chert bedrock; on landforms similar to those of the Watahala and Frederick soils
- Soils that have stony or extremely stony surfaces; on landforms similar to those of the Watahala and Frederick soils
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 65 percent; on landforms similar to those of the Watahala and Frederick soils
- Areas that have less than 2 percent rock outcrops; on landforms similar to those of the Watahala and Frederick soils

Soil Properties and Qualities

Available water capacity: Watahala—moderate (about 6.8 inches); Frederick—moderate (about 8.5 inches)
Slowest saturated hydraulic conductivity: Watahala—moderately high (about 0.2 in/hr); Frederick—moderately high (about 0.6 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: Watahala—about 0.1 to 3.0 percent angular stones; Frederick—about 0.1 to 3.0 percent angular stones, about 2.0 to 10.0 percent angular cobbles, and about 1.0 to 5.0 percent coarse angular gravel
Parent material: Watahala—gravelly residuum over clayey residuum weathered from cherty limestone; Frederick—residuum weathered from limestone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak and chestnut oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

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.
- Because of the rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.
- Because of the rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of shrinking and swelling, the use of these soils as base material for local roads and streets is restricted.
- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.
- Because of the rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.
- Frost action may damage local roads and streets.

Interpretive Groups

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

56E—Weikert-Berks complex, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Backslopes and, in some areas, summits and shoulders

Map Unit Composition

Note: These Weikert and Berks soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Weikert and similar soils: Typically 50 percent, ranging from about 40 to 60 percent
Berks and similar soils: Typically 40 percent, ranging from about 30 to 50 percent

Typical Profile

Weikert

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 16 inches—yellowish brown very channery silt loam

Hard bedrock:
16 inches—shale bedrock

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Minor Components

Dissimilar components:
- Macove or Oriskany soils, which are very deep to bedrock; on footslopes
- Rough soils, which are very shallow to bedrock; on landforms similar to those of Weikert and Berks soils
- Rock outcrops; on summits and shoulders
- Areas with rubbly surfaces; in drainageways

Similar components:
- Soils that have fewer stones on the surface than the Weikert and Berks soils; on similar landforms
- Soils that have fewer rock fragments in the subsoil than the Weikert and Berks soils; on similar landforms
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 65 percent; on landforms similar to those of Weikert and Berks soils

Soil Properties and Qualities

Available water capacity: Weikert—very low (about 1.6 inches); Berks—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Weikert—high (about 2.0 in/hr); Berks—moderately high (about 0.6 in/hr)
Depth class: Weikert—shallow (10 to 20 inches); Berks—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Weikert—10 to 20 inches to bedrock (lithic); Berks—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: High
Surface fragments: About 0.1 to 3.0 percent subangular stones
Parent material: Residuum weathered from shale and siltstone

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; poorly suited to northern red oak and eastern white pine
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength may create unsafe conditions for log trucks.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

57D—Weikert-Berks-Rough complex, 15 to 35 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Note: These Weikert, Berks, and Rough soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Weikert and similar soils: Typically 35 percent, ranging from about 25 to 50 percent
Berks and similar soils: Typically 34 percent, ranging from about 25 to 50 percent
Rough and similar soils: Typically 10 percent, ranging from about 5 to 20 percent

Typical Profile

Weikert

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 16 inches—yellowish brown very channery silt loam

Hard bedrock:
16 inches—shale bedrock

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Rough

Surface layer:
0 to 1 inch—dark yellowish brown very channery silt loam

Subsoil:
1 to 5 inches—yellowish brown extremely channery silt loam

Substratum:
5 to 7 inches—yellowish brown extremely channery silt loam

Hard bedrock:
7 inches—olive brown shale bedrock

Minor Components

Dissimilar components:
- Shelocta soils, which are very deep to bedrock and have fewer rock fragments throughout than the Weikert, Berks, and Rough soils; on footslopes
- Oriskany and Macove soils, which are very deep to bedrock and have many rock fragments in the soil that are larger than channers; on footslopes
- Blairton and Wharton soils, which are moderately well drained and have fewer rock fragments than the Weikert, Berks, and Rough soils; on similar landforms

- Ogles and Derroc soils, which are occasionally flooded; on narrow flood plains
- Soils that are moderately deep to very deep to bedrock and have more clay than the Weikert, Berks, and Rough soils; on similar landforms
- Soils that are very deep to shale bedrock; on landforms similar to those of the Weikert, Berks, and Rough soils
- Areas of rock outcrops; on landforms similar to those of the Weikert, Berks, and Rough soils

Similar components:
- Gilpin soils, which have fewer rock fragments in the subsoil than the Weikert, Berks, and Rough soils; on similar landforms
- Soils that have redder subsoils than the Weikert, Berks, and Rough soils; on similar landforms
- Soils that are deep to shale bedrock; on landforms similar to those of the Weikert, Berks, and Rough soils
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Weikert, Berks, and Rough soils

Soil Properties and Qualities

Available water capacity: Weikert—very low (about 1.6 inches); Berks—very low (about 2.7 inches); Rough—very low (about 0.3 inch)
Slowest saturated hydraulic conductivity: Weikert and Rough—high (about 2.0 in/hr); Berks—moderately high (about 0.6 in/hr)
Depth class: Weikert—shallow (10 to 20 inches); Berks—moderately deep (20 to 40 inches); Rough—very shallow (less than 10 inches)
Depth to root-restrictive feature: Weikert—10 to 20 inches to bedrock (lithic); Berks—20 to 40 inches to bedrock (lithic); Rough—4 to 10 inches to bedrock (lithic)
Drainage class: Weikert and Berks—well drained; Rough—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Weikert and Berks—high; Rough—very high
Surface fragments: None
Parent material: Residuum weathered from shale and siltstone

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.
- During the drier summer months, plants may suffer from moisture stress because of the limited available water capacity.
- The bedrock may restrict the rooting depth of plants.

Woodland

Suitability: Moderately suited to chestnut oak; poorly suited to eastern white pine
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.

- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 soil strength may create unsafe conditions for log trucks.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Weikert and Berks—6e; Rough—7e
Virginia soil management group: JJ
Hydric soils: No

57E—Weikert-Berks-Rough complex, 35 to 55 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Backslopes and, in some areas, summits and shoulders

Map Unit Composition

Note: These Weikert, Berks, and Rough soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Weikert and similar soils: Typically 40 percent, ranging from about 35 to 50 percent
Berks and similar soils: Typically 30 percent, ranging from about 25 to 35 percent
Rough and similar soils: Typically 15 percent, ranging from about 10 to 20 percent

Typical Profile

Weikert

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 16 inches—yellowish brown very channery silt loam

Hard bedrock:
16 inches—shale bedrock

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Rough

Surface layer:
0 to 1 inch—dark yellowish brown very channery silt loam

Subsoil:
1 to 5 inches—yellowish brown extremely channery silt loam

Substratum:
5 to 7 inches—yellowish brown extremely channery silt loam

Hard bedrock:
7 inches—olive brown shale bedrock

Minor Components

Dissimilar components:
- Shelocta soils, which are very deep to bedrock and have fewer rock fragments throughout than the Weikert, Berks, and Rough soils; on footslopes
- Oriskany and Macove soils, which are very deep to bedrock and have many rock fragments in the soil that are larger than channers; on footslopes
- Ogles and Derroc soils, which are occasionally flooded; on narrow flood plains
- Soils that are very deep to shale bedrock; on landforms similar to those of the Weikert, Berks, and Rough soils
- Areas of rock outcrops; on landforms similar to those of the Weikert, Berks, and Rough soils

Similar components:
- Gilpin soils, which have fewer rock fragments in the subsoil than the Weikert, Berks, and Rough soils; on similar landforms
- Soils that have redder subsoils than the Weikert, Berks, and Rough soils; on similar landforms
- Soils that are deep to shale bedrock; on landforms similar to those of the Weikert, Berks, and Rough soils
- Soils that are on slopes that range from 15 to 35 percent or from 55 to 65 percent; on landforms similar to those of the Weikert, Berks, and Rough soils

Soil Properties and Qualities

Available water capacity: Weikert—very low (about 1.6 inches); Berks—very low (about 2.7 inches); Rough—very low (about 0.3 inch)
Slowest saturated hydraulic conductivity: Weikert and Rough—high (about 2.0 in/hr); Berks—moderately high (about 0.6 in/hr)
Depth class: Weikert—shallow (10 to 20 inches); Berks—moderately deep (20 to 40 inches); Rough—very shallow (less than 10 inches)
Depth to root-restrictive feature: Weikert—10 to 20 inches to bedrock (lithic); Berks—20 to 40 inches to bedrock (lithic); Rough—4 to 10 inches to bedrock (lithic)
Drainage class: Weikert and Berks—well drained; Rough—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Weikert and Berks—high; Rough—very high
Surface fragments: None
Parent material: Residuum weathered from shale and siltstone

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; poorly suited to eastern white pine
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength may create unsafe conditions for log trucks.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland

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

58F—Weikert-Berks-Rough complex, 55 to 80 percent slopes, very stony

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Backslopes and, in some areas, summits and shoulders

Map Unit Composition

Note: These Weikert, Berks, and Rough soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Weikert and similar soils: Typically 40 percent, ranging from about 30 to 50 percent
Berks and similar soils: Typically 30 percent, ranging from about 25 to 45 percent
Rough and similar soils: Typically 15 percent, ranging from about 10 to 25 percent

Typical Profile

Weikert

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 16 inches—yellowish brown very channery silt loam

Hard bedrock:
16 inches—shale bedrock

Berks

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 11 inches—brown channery silt loam
11 to 22 inches—strong brown very channery silt loam
22 to 27 inches—brown very channery loam

Hard bedrock:
27 inches—shale bedrock

Rough

Surface layer:
0 to 1 inch—dark yellowish brown very channery silt loam

Subsoil:
1 to 5 inches—yellowish brown extremely channery silt loam

Substratum:
5 to 7 inches—yellowish brown extremely channery silt loam

Hard bedrock:
7 inches—olive brown shale bedrock

Minor Components

Dissimilar components:
- Shelocta soils, which are very deep to bedrock and have fewer rock fragments throughout than the Weikert, Berks, and Rough soils; on footslopes
- Oriskany and Macove soils, which are very deep to bedrock; on footslopes
- Ogles and Derroc soils, which are occasionally flooded; on narrow flood plains
- Soils that are very deep to shale bedrock; on landforms similar to those of the Weikert, Berks, and Rough soils
- Areas of rock outcrops; on landforms similar to those of the Weikert, Berks, and Rough soils

Similar components:
- Gilpin soils, which are moderately deep to shale bedrock and have fewer rock fragments in the subsoil than the Weikert, Berks, and Rough soils; on similar landforms
- Dekalb and Lehew soils, which are moderately deep over hard sandstone bedrock and have sandier textures in the subsoil than the Weikert, Berks, and Rough soils; on similar landforms
- Soils that are deep to shale bedrock; on landforms similar to those of the Weikert, Berks, and Rough soils
- Soils that have nonstony or extremely stony surfaces; on landforms similar to those of the Weikert, Berks, and Rough soils
- Soils which are on slopes that range from 35 to 55 percent or that are more than 80 percent; on landforms similar to those of the Weikert, Berks, and Rough soils

Soil Properties and Qualities

Available water capacity: Weikert—very low (about 1.6 inches); Berks—very low (about 2.7 inches); Rough—very low (about 0.3 inch)
Slowest saturated hydraulic conductivity: Weikert and Rough—high (about 2.0 in/hr); Berks—moderately high (about 0.6 in/hr)
Depth class: Weikert—shallow (10 to 20 inches); Berks—moderately deep (20 to 40 inches); Rough—very shallow (less than 10 inches)
Depth to root-restrictive feature: Weikert—10 to 20 inches to bedrock (lithic); Berks—20 to 40 inches to bedrock (lithic); Rough—4 to 10 inches to bedrock (lithic)
Drainage class: Weikert and Berks—well drained; Rough—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Weikert and Berks—high; Rough—very high
Surface fragments: About 0.1 to 2.0 percent subangular stones and about 0 to 1.0 percent subangular flagstones
Parent material: Residuum weathered from shale and siltstone

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; poorly suited to northern red oak and eastern white pine

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- The low soil strength may create unsafe conditions for log trucks.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

59F—Weikert-Rock outcrop-Rough complex, 55 to 100 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Generally backslopes and some areas along rivers and streams; Weikert and Rough—backslopes; Rock outcrop—very steep to near-vertical cliffs

Map Unit Composition

Note: These Weikert and Rough soils and Rock outcrop occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Weikert and similar soils: Typically 40 percent, ranging from about 25 to 55 percent

Rock outcrop: Typically 25 percent, ranging from about 15 to 40 percent
Rough and similar soils: Typically 20 percent, ranging from about 10 to 35 percent

Typical Profile

Weikert

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 16 inches—yellowish brown very channery silt loam

Hard bedrock:
16 inches—shale bedrock

Rock outcrop

This part of the map unit consists of outcrops of sandstone and shale bedrock. The outcrops can be about 100 feet high; some occur as near-vertical cliffs.

Rough

Surface layer:
0 to 1 inch—dark yellowish brown very channery silt loam

Subsoil:
1 to 5 inches—yellowish brown extremely channery silt loam

Substratum:
5 to 7 inches—yellowish brown extremely channery silt loam

Hard bedrock:
7 inches—olive brown shale bedrock

Minor Components

Dissimilar components:
- Shelocta soils, which are very deep to bedrock and have fewer rock fragments throughout than the Weikert and Rough soils; on footslopes

Similar components:
- Berks soils, which are moderately deep to shale bedrock; on landforms similar to those of the Weikert and Rough soils
- Soils that have redder subsoils than the Weikert and Rough soils; on similar landforms
- Soils that are on slopes that range from 35 to 55 percent; on landforms similar to those of the Weikert and Rough soils

Properties and Qualities and the Weikert and Rough Soils

Available water capacity: Weikert—very low (about 1.6 inches); Rough—very low (about 0.3 inch)
Slowest saturated hydraulic conductivity: High (about 2.0 in/hr)
Depth class: Weikert—shallow (10 to 20 inches); Rough—very shallow (less than 10 inches)
Depth to root-restrictive feature: Weikert—10 to 20 inches to bedrock (lithic); Rough—4 to 10 inches to bedrock (lithic)
Drainage class: Weikert—well drained; Rough—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet

Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Weikert—high; Rough—very high
Surface fragments: None
Parent material: Residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

- Because of the proximity to steep bluffs, this map unit is not recommended for conventional timber management.

Building sites

- Because of the proximity to steep river bluffs, this map unit is not recommended for building sites.

Septic tank absorption fields

- Because of the proximity to steep river bluffs, this map unit is not recommended for septic tank absorption fields.

Local roads and streets

- Because of the proximity to steep river bluffs, this map unit is not recommended for local roads and streets.

Interpretive Groups

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

60F—Weikert-Rough complex, 55 to 80 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills and mountains
Position on the landform: Backslopes and, in some areas, summits and shoulders

Map Unit Composition

Note: These Weikert and Rough soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Weikert and similar soils: Typically 65 percent, ranging from about 55 to 75 percent
Rough and similar soils: Typically 25 percent, ranging from about 15 to 30 percent

Typical Profile

Weikert

Organic layer:
0 to 1 inch—slightly decomposed plant material

Surface layer:
1 to 4 inches—dark grayish brown channery silt loam

Subsoil:
4 to 16 inches—yellowish brown very channery silt loam

Hard bedrock:
16 inches—shale bedrock

Rough

Surface layer:
0 to 1 inch—dark yellowish brown very channery silt loam

Subsoil:
1 to 5 inches—yellowish brown extremely channery silt loam

Substratum:
5 to 7 inches—yellowish brown extremely channery silt loam

Hard bedrock:
7 inches—olive brown shale bedrock

Minor Components

Dissimilar components:
- Shelocta soils, which are very deep and have fewer rock fragments throughout than the Weikert and Rough soils; on footslopes
- Ogles soils, which are susceptible to flooding; on flood plains
- Soils that are deep or very deep to shale bedrock; on landforms similar to those of the Weikert and Rough soils
- Areas of rock outcrops; on landforms similar to those of the Weikert and Rough soils

Similar components:
- Berks soils, which are moderately deep to shale bedrock; on landforms similar to those of the Weikert and Rough soils
- Gilpin soils, which are moderately deep to shale bedrock and have fewer rock fragments in the subsoil than the Weikert and Rough soils; on similar landforms
- Soils that have redder subsoils than the Weikert and Rough soils; on similar landforms
- Soils which are on slopes that range from 35 to 55 percent; on landforms similar to those of the Weikert and Rough soils

Soil Properties and Qualities

Available water capacity: Weikert—very low (about 1.6 inches); Rough—very low (about 0.3 inch)
Slowest saturated hydraulic conductivity: High (about 2.0 in/hr)
Depth class: Weikert—shallow (10 to 20 inches); Rough—very shallow (less than 10 inches)
Depth to root-restrictive feature: Weikert—10 to 20 inches to bedrock (lithic); Rough—4 to 10 inches to bedrock (lithic)
Drainage class: Weikert—well drained; Rough—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None

Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Weikert—high; Rough—very high
Surface fragments: None
Parent material: Residuum weathered from shale and siltstone

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; poorly suited to eastern white pine
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength may create unsafe conditions for log trucks.

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 and the slope, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.

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.
- Frost action may damage local roads and streets.

Interpretive Groups

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

61C—Wharton-Blairton complex, 8 to 15 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits, shoulders, and footslopes and, in some areas, backslopes

Map Unit Composition

Note: These Wharton and Blairton soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Wharton and similar soils: Typically 55 percent, ranging from about 35 to 75 percent
Blairton and similar soils: Typically 40 percent, ranging from about 20 to 55 percent

Typical Profile

Wharton

Organic layer:
0 to 1 inch—moderately decomposed plant material

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

Subsoil:
3 to 8 inches—very dark grayish brown and yellowish brown silt loam
8 to 21 inches—yellowish brown silty clay loam
21 to 37 inches—yellowish brown silty clay loam; strong brown masses of oxidized iron and light brownish gray and light gray iron depletions
37 to 44 inches—yellowish brown silty clay loam; strong brown masses of oxidized iron and light brownish gray iron depletions
44 to 62 inches—gray silty clay loam; strong brown masses of oxidized iron

Blairton

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—very dark grayish brown silt loam

Subsoil:
4 to 9 inches—dark yellowish brown silt loam; dark yellowish brown mottles
9 to 18 inches—brown silty clay loam; dark yellowish brown masses of oxidized iron
18 to 27 inches—yellowish brown silty clay loam; dark yellowish brown masses of oxidized iron and gray iron depletions
27 to 31 inches—light brownish gray silty clay loam; yellowish red masses of oxidized iron
31 to 38 inches—dark grayish brown very channery silt loam; dark yellowish brown masses of oxidized iron and grayish brown iron depletions

Hard bedrock:
38 inches—shale bedrock

Minor Components

Dissimilar components:
- Shelocta soils, which are well drained and very deep to bedrock; on footslopes
- McClung and Lily soils, which are well drained and are very deep and moderately deep to sandstone bedrock, respectively; on landforms similar to those of the Wharton and Blairton soils
- Rough soils, which are somewhat excessively drained and very shallow to shale bedrock; on landforms similar to those of the Wharton and Blairton soils
- Dekalb soils, which are excessively drained, are moderately deep to sandstone bedrock, and have more rock fragments throughout than the Wharton and Blairton soils; on similar landforms

- Berks soils, which are well drained and have more rock fragments throughout than the Wharton and Blairton soils; on similar landforms
- Weikert soils, which are well drained and shallow to shale bedrock; on landforms similar to those of the Wharton and Blairton soils
- Gilpin soils, which are well drained; on landforms similar to those of the Wharton and Blairton soils

Similar components:
- Soils that have more clay in the upper part of the subsoil than the Wharton and Blairton soils; on similar landforms
- Soils that are on slopes that range from 3 to 8 percent or from 15 to 35 percent; on landforms similar to those of the Wharton and Blairton soils

Soil Properties and Qualities

Available water capacity: Wharton—moderate (about 8.9 inches); Blairton—low (about 5.9 inches)
Slowest saturated hydraulic conductivity: Wharton—moderately low (about 0.06 in/hr); Blairton—moderately high (about 0.2 in/hr)
Depth class: Wharton—deep or very deep (more than 40 inches); Blairton—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Wharton—40 to 72 inches to bedrock (paralithic); Blairton—20 to 40 inches to bedrock (lithic)
Drainage class: Moderately well drained
Depth to seasonal water saturation: Wharton—about 18 to 36 inches; Blairton—about 6 to 36 inches
Water table (kind): Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Wharton—moderate; Blairton—low
Runoff class: Wharton—medium; Blairton—high
Surface fragments: None
Parent material: Residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn and grass-legume hay; not 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 risk of compaction increases when the soil is wet.
- 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.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to northern red oak
- Because of the slope, operating equipment is unsafe, the operating efficiency of log trucks is reduced, and the use of some mechanical planting equipment may be restricted.

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

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.
- 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 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 these soils as base material for local roads and streets is restricted.
- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

61D—Wharton-Blairton complex, 15 to 35 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Hills
Position on the landform: Summits, shoulders, footslopes, and backslopes

Map Unit Composition

Note: These Wharton and Blairton soils occur as areas so closely intermingled that they could not be separated at the scale selected for mapping.

Wharton and similar soils: Typically 55 percent, ranging from about 35 to 75 percent
Blairton and similar soils: Typically 40 percent, ranging from about 20 to 55 percent

Typical Profile

Wharton

Organic layer:
0 to 1 inch—moderately decomposed plant material

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

Subsoil:
3 to 8 inches—very dark grayish brown and yellowish brown silt loam
8 to 21 inches—yellowish brown silty clay loam
21 to 37 inches—yellowish brown silty clay loam; strong brown masses of oxidized iron and light brownish gray and light gray iron depletions
37 to 44 inches—yellowish brown silty clay loam; strong brown masses of oxidized iron and light brownish gray iron depletions
44 to 62 inches—gray silty clay loam; strong brown masses of oxidized iron

Blairton

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—very dark grayish brown silt loam

Subsoil:
4 to 9 inches—dark yellowish brown silt loam; dark yellowish brown mottles
9 to 18 inches—brown silty clay loam; dark yellowish brown masses of oxidized iron
18 to 27 inches—yellowish brown silty clay loam; dark yellowish brown masses of oxidized iron and gray iron depletions
27 to 31 inches—light brownish gray silty clay loam; yellowish red masses of oxidized iron
31 to 38 inches—dark grayish brown very channery silt loam; dark yellowish brown masses of oxidized iron and grayish brown iron depletions

Hard bedrock:
38 inches—shale bedrock

Minor Components

Dissimilar components:
- Shelocta soils, which are well drained and very deep to bedrock; on footslopes
- McClung and Lily soils, which are well drained and are very deep and moderately deep to sandstone bedrock, respectively; on landforms similar to those of the Wharton and Blairton soils
- Rough soils, which are somewhat excessively drained and very shallow to shale bedrock; on landforms similar to those of the Wharton and Blairton soils
- Dekalb soils, which are excessively drained, are moderately deep to sandstone bedrock, and have more rock fragments throughout than the Wharton and Blairton soils; on similar landforms
- Berks soils, which are well drained and have more rock fragments throughout than the Wharton and Blairton soils; on similar landforms
- Weikert soils, which are well drained and shallow to shale bedrock; on landforms similar to those of the Wharton and Blairton soils
- Gilpin soils, which are well drained; on landforms similar to those of the Wharton and Blairton soils

Similar components:
- Soils that have more clay in the upper part of the subsoil than the Wharton and Blairton soils; on similar landforms
- Soils that are on slopes that range from 8 to 15 percent or from 35 to 55 percent; on landforms similar to those of the Wharton and Blairton soils

Soil Properties and Qualities

Available water capacity: Wharton—moderate (about 8.9 inches); Blairton—low (about 5.9 inches)

Slowest saturated hydraulic conductivity: Wharton—moderately low (about 0.06 in/hr); Blairton—moderately high (about 0.2 in/hr)
Depth class: Wharton—deep or very deep (more than 40 inches); Blairton—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Wharton—40 to 72 inches to bedrock (paralithic); Blairton—20 to 40 inches to bedrock (lithic)
Drainage class: Moderately well drained
Depth to seasonal water saturation: Wharton—about 18 to 36 inches; Blairton—about 6 to 36 inches
Water table (kind): Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Wharton—moderate; Blairton—low
Runoff class: Wharton—high; Blairton—very high
Surface fragments: None
Parent material: Residuum weathered from shale and siltstone

Use and Management Considerations

Cropland

- These soils are 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.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Well suited to chestnut oak; moderately suited to northern red oak
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, operating equipment is unsafe and the operating efficiency of log trucks and harvesting equipment is reduced.
- 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 soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

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.
- 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 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 these soils as base material for local roads and streets is restricted.
- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.
- Frost action may damage local roads and streets.

Interpretive Groups

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

62A—Wolfgap loam, 0 to 3 percent slopes, occasionally flooded

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: Low to intermediate level flood plains in a river valley
Position on the landform: Flood-plain steps

Map Unit Composition

Wolfgap and similar soils: Typically 95 percent, ranging from about 90 to 98 percent

Typical Profile

Surface layer:
0 to 13 inches—very dark grayish brown loam

Subsurface layer:
13 to 22 inches—dark brown loam

Subsoil:
22 to 52 inches—dark yellowish brown loam

Substratum:
52 to 65 inches—brown gravelly sandy loam

Minor Components

Dissimilar components:
- Atkins soils, which are poorly drained; on adjacent backswamps
- Feedstone soils, which are moderately well drained; on the higher flood plains
- Irongate soils, which are moderately well drained; on landforms similar to those of the Wolfgap soil
- Derroc and Ogles soils, which have more rock fragments in the soil than the Wolfgap soils and are more susceptible to flooding; on similar landforms
- Alonzville soils, which have thinner and lighter-colored surface layers and better developed subsoils than the Wolfgap soil; on adjacent low stream terraces
- Soils that are somewhat poorly drained; on adjacent backswamps

Similar components:
- Gladehill soils, which have more sand and less clay than the Wolfap soil; on the lower flood plains
- Soils that are less susceptible to flooding; on the higher flood plains
- Soils that have dark surface layers that are more than 24 inches thick; on landforms similar to those of the Wolfgap soil

Soil Properties and Qualities

Available water capacity: High (about 10.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: Occasional
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Alluvium derived from limestone, sandstone, and shale

Use and Management Considerations

Cropland

Suitability: Well suited to corn, grass-legume hay, and alfalfa hay
- Flooding may damage crops.

Pastureland

Suitability: Well suited
- Flooding may damage pastures.

Woodland

Suitability: Moderately suited to yellow-poplar
- Flooding may damage haul roads and restricts the safe use of roads by log trucks.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- Because of the flooding, this soil is unsuited to building site development.

Septic tank absorption fields

- Because of the flooding, this soil is unsuited to septic tank absorption fields.

Local roads and streets

- Flooding may damage local roads and streets.
- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 1
Virginia soil management group: A
Hydric soil: No

63A—Wolfgap loam, 0 to 3 percent slopes, rarely flooded

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: High level flood plains in a river valley
Position on the landform: Flood-plain steps

Map Unit Composition

Wolfgap and similar soils: Typically 95 percent, ranging from about 90 to 98 percent

Typical Profile

Surface layer:
0 to 13 inches—very dark grayish brown loam

Subsurface layer:
13 to 22 inches—dark brown loam

Subsoil:
22 to 52 inches—dark yellowish brown loam

Substratum:
52 to 65 inches—brown gravelly sandy loam

Minor Components

Dissimilar components:
- Atkins soils, which are poorly drained; in adjacent backswamps
- Feedstone soils, which are moderately well drained; on landforms similar to those of the Wolfgap soil
- Irongate soils, which are moderately well drained; on the lower flood plains
- Derroc soils, which have more rock fragments in the soil than the Wolfgap soil and are more susceptible to flooding; on the lower flood plains
- Alonzville soils, which have thinner and lighter-colored surface layers and better developed subsoils than the Wolfgap soil; on adjacent low stream terraces
- Gladehill soils, which have less clay in the soil than the Wolfgap soil and are more susceptible to flooding; on the lower flood plains
- Soils that are somewhat poorly drained; in adjacent backswamps

Similar components:
- Soils that have more sand and less clay than the Wolfgap soil; in similar landform positions
- Soils that are more susceptible to flooding; on the lower flood plains
- Soils that have dark surface layers that are more than 24 inches thick; on landforms similar to those of the Wolfgap soil

Soil Properties and Qualities

Available water capacity: High (about 10.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.6 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: Low

Surface fragments: None
Parent material: Alluvium derived from limestone, sandstone, and shale

Use and Management Considerations

Cropland

- This soil is well suited to cropland.

Pastureland

- This soil is well suited to pastureland.

Woodland

Suitability: Moderately suited to yellow-poplar
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- Because of the flooding, this soil is unsuited to building site development.

Septic tank absorption fields

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

Local roads and streets

- Frost action may damage local roads and streets.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 1
Virginia soil management group: A
Hydric soil: No

64B—Zoar silt loam, 3 to 8 percent slopes

Setting

Major land resource area: Southern Appalachian Ridges and Valleys (MLRA 128)
Landform: High stream terraces in a river valley
Position on the landform: Treads and risers

Map Unit Composition

Zoar and similar soils: Typically 85 percent, ranging from about 75 to 95 percent

Typical Profile

Surface layer:
0 to 8 inches—brown silt loam

Subsoil:
8 to 15 inches—light yellowish brown silt loam
15 to 29 inches—light yellowish brown silty clay loam
29 to 37 inches—pale brown and light yellowish brown silty clay loam; brownish yellow masses of oxidized iron and light brownish gray iron depletions
37 to 42 inches—brownish yellow silty clay loam; light brownish gray iron depletions
42 to 50 inches—light brownish gray silty clay loam; brownish yellow and yellowish brown masses of oxidized iron

Substratum:
50 to 60 inches—light yellowish brown and brownish yellow silty clay loam; light brownish gray iron depletions and yellowish brown masses of oxidized iron

Minor Components

Dissimilar components:
- Cottonbend and Sugarhol soils, which are well drained; on landforms similar to those of the Zoar soil
- Purdy soils, which are poorly drained; on landforms similar to those of the Zoar soil
- Soils that are poorly drained and have less clay than the Zoar soil; on similar landforms
- Soils that have 15 to 35 percent rock fragments in the upper part of the subsoil; on landforms similar to those of the Zoar soil

Similar components:
- Nicelytown soils, which have less clay in the upper part of the subsoil than the Zoar soil; on similar landforms
- Soils that have 3 to 15 percent rock fragments in the upper part of the subsoil; on landforms similar to those of the Zoar soil
- Soils that have more than 35 percent rock fragments in the lower part of the subsoil; on landforms similar to those of the Zoar soil
- Soils that have iron depletions between depths of 30 and 60 inches or between depths of 10 and 18 inches; on landforms similar to those of the Zoar soil
- Soils that are deep to shale bedrock; on landforms similar to those of the Zoar soil
- Soils that are on slopes that range from less than 3 percent or from 8 to 15 percent; on landforms similar to those of the Zoar soil

Soil Properties and Qualities

Available water capacity: High (about 9.5 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: Moderately well drained
Depth to seasonal water saturation: About 18 to 30 inches
Water table (kind): Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: High
Surface fragments: None
Parent material: Alluvium derived from sandstone and shale

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; not suited to 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 risk of compaction increases when the soil is wet.
- 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.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Moderately suited to eastern white pine
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings and may create unsafe conditions for log trucks.

Building sites

- 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

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

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 2e
Virginia soil management group: K
Hydric soil: No

W—Water

Setting

This map unit is in the Southern Appalachian Ridges and Valleys Major Land Resource Area. It includes ponds, lakes, creeks, rivers, or reservoirs.

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; and for agricultural waste management. 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

Roger Canfield, 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, the system of land capability classification used by the Natural Resources Conservation Service and the Virginia Agronomic Land Use System are explained, and prime farmland is discussed.

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.

Some general principles of management apply to all of the soils suitable for farm crops and pasture throughout Bath County, although individual soils or groups of soils require different kinds of management. The general principles of management are described in the following paragraphs.

Most of the soils in Bath County have a moderate or low supply of plant nutrients. As a result, applications of lime and fertilizer are necessary. The amounts to be applied depend on the type of soil, the cropping history, the type of crop grown, and the level of desired yields and should be determined by the results of soil tests and analyses.

The content of organic matter is low or moderate in most of the cultivated soils in the county, and increasing the content is not feasible. The content can be maintained, however, by adding farm manure, by returning crop residue to the soil, and by growing sod crops, cover crops, and green manure crops.

Tillage tends to break down soil structure and should be kept to the minimum necessary to prepare the seedbed and control weeds. Maintaining the content of organic matter in the plow layer helps to maintain soil structure.

No-till farming is becoming more common; it is used when some annual crops and new stands of grasses and legumes are established. Overseeding existing hay and pasture fields with grasses and clovers is also becoming more common. Winter cover crops are now included as part of no-till systems when row crops are grown. These practices help to maintain the soil structure and the content of organic matter.

Runoff and erosion occur mainly while a cultivated crop is growing or soon after it has been harvested. If cultivated, all of the gently sloping and steeper soils in the county are subject to erosion. A suitable cropping system that helps to control erosion is needed on the soils. In areas where such a system is applied, the main management needs are proper crop rotations, minimum tillage, crop residue management, cover crops and green manure crops, and applications of lime and fertilizer. The effectiveness of a particular combination of these measures differs from one soil to another. Different combinations can be equally effective on the same soil.

Erosion is a critical problem in the county on some of the soils commonly used for pasture. Additional management concerns that are very difficult to overcome include the slope, the large size of the individual pastured areas, low fertility, encroachment of brush, and a lack of adequate water sources in the proper locations.

A high level of pasture management, including applications of fertilizer, controlled grazing, and proper selection of forage species, is needed to prevent excessive erosion on some soils. The best controlled grazing system is rotating livestock from one pasture to another and thus allowing the regrowth of the pasture plants. Other means of controlling grazing are varying the stocking rate according to forage production at different times in the growing season, deferring grazing to provide extra time for plant growth in areas grazed in midsummer or fall, improving the grazing distribution in pastures by providing additional sources of water, and periodically moving the livestock salt to areas that are undergrazed.

Generally, the quality of plant species in pastured areas varies in direct proportion to the level of management. In some situations it may be necessary to provide a seed source for better quality forage plants as the overall management level is improved. This is sometimes accomplished by feeding hay in areas where the ground cover is sparse or the plant species are undesirable. Frost seeding on steeper pastures during late winter and early spring can also be used to introduce better quality forage.

The composition of the plant species also can be improved by increasing the level of available plant nutrients in areas of soils that have an adequate pH level. Applications of phosphate in pastured areas generally result in a higher percentage of legumes. Proper application of manure, such as poultry litter, according to a nutrient management plan can increase soil fertility and organic matter content and thus help improve the productivity and quality of the hay and/or pasture.

Yields per Acre

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

The yields are based 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 table 5 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or 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 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 used to rank soils for management and productivity *(20)*. 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, such as texture; available water capacity for plants; 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 Bath County.

Group A. The soils in this group formed in alluvial parent materials and are on gently sloping flood plains or stream terraces which have watersheds that originate west of the Blue Ridge. These soils are deep or very deep and are medium textured throughout. They have a high available water capacity and are well drained.

Group G. The soils of this group formed in locally transported, medium textured sediments of either colluvial or alluvial origin that overlie a wide range of residual materials. These soils are in landscape positions that include footslopes and toeslopes, the heads of drainageways, depressions, and narrow upland drainageways. These deep and very deep soils are silty to loamy in the upper part of the subsoil, which is underlain with clayey to stony materials. They have a moderately high available water capacity and are moderately well drained or somewhat poorly drained.

Group K. The soils of this group formed in mixed sediments on landscapes that range from stream terraces to broad, nearly level interfluves on uplands. They are deep or very deep, have loamy surface layers, and have clay loam or clayey subsurface layers. These soils have a moderate available water capacity and are somewhat poorly drained.

Group L. The soils of this group formed from old transported deposits of alluvium or colluvium. These soils are common on stream terraces, footslopes, and older, elevated, upland landscapes that were once stream terraces. They are deep or very deep, have medium textured surface layers, have more clayey subsurface layers, and commonly contain gravel and rounded stones. They have a moderate or high available water capacity and typically are well drained.

Group M. The soils of this group formed in material weathered from carbonate rocks. These soils are on upland summits and side slopes. These deep or very deep soils have reddish brown clayey subsurface layers that contain coarse fragments in some areas. They have a moderate available water capacity, unless the content of coarse fragments is significantly high, and they are well drained.

Group O. The soils of this group formed from transported materials ranging from mountain colluvium to old alluvium on dissected uplands and deposits on old elevated river terraces. These very deep to shallow soils have very dark red clayey subsurface layers, which have significant amounts of coarse fragments in some areas. They have a moderate available water capacity and are well drained.

Group U. The soils of this group formed from a variety of residual parent materials ranging from Triassic sediments to sandstone, shale, and limestone to colluvium from these materials. These moderately deep to shallow soils commonly have fine-loamy subsurface layers. They commonly have coarse fragments making up one-third of the soil volume and, as a result, have a moderate or moderately low available water capacity. They are well drained or moderately well drained.

Group Y. The soils of this group formed from the residuum of weathered limestone, shale, or other carbonate-influenced rocks. These shallow to moderately deep soils represent upland landscapes. They have clayey subsurface layers, which contain coarse fragments in some areas. They have a moderate or low available water capacity where they are shallow to bedrock. They are mostly well drained.

Group AA. The soils in this group formed in a variety of sediments. These soils are very deep to shallow and are on uplands. They have clayey subsurface layers, which contain coarse fragments in some areas, and therefore have a moderately low available water capacity. The soils are somewhat poorly drained or moderately well drained.

Group CC. The soils of this group formed in a range of parent materials that include alluvium and colluvium. These soils occur on a variety of landscapes, including uplands, stream terraces, colluvial areas, and bottomlands. They commonly have a moderately deep solum, are very deep to bedrock, have clayey-skeletal to coarse-loamy subsurface layers (which have have as much as 70 percent coarse fragments in some areas), and have a moderately low available water capacity. They are well drained.

Group FF. The soils of this group formed in sandstone and shale residual parent materials and mountain colluvium. These soils are on steeply dissected uplands and mountain side slopes. They are moderately shallow and mostly have loamy-skeletal subsurface layers, which may contain 80 percent, or more, coarse fragments. As a result, the available water capacity is low or very low. The soils are well drained or moderately well drained.

Group JJ. The soils of this group formed from a wide variety of residual parent materials, ranging from sandstone, shale, and limestone to phyllite or schist. These soils are shallow to moderately deep, are dominantly loamy-skeletal throughout, and contain 30 to 70 percent coarse fragments. This group includes some very deep soils where the natural soil porosity has been disturbed. The soils of this group have a very low available water capacity and are well drained.

Group NN. The soils of this group are undrained. These soils formed in alluvium along streams or on terraces. They are moderately deep to very deep, have silty to clay loam subsurface layers, have a moderately high available water capacity, and are somewhat poorly drained or poorly drained.

The management groups for the map units in the survey area are given in the section “Detailed Soil Map Units” and in table 5.

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.

About 15,645 acres in the survey area, or nearly 5 percent of the total acreage, meets the requirement for prime farmland. This land is mainly in valleys and on the flood plains and terraces of creeks and rivers.

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 table 6 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

This section lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site *(6, 8)*.

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” *(14)* and “Keys to Soil Taxonomy” *(16)* 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 definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This information can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site *(6, 8)*.

4A	Atkins silt loam, 0 to 3 percent slopes, occasionally flooded
36A	Maurertown silty clay loam, 0 to 3 percent slopes, rarely flooded
49A	Purdy silty clay loam, 0 to 3 percent slopes

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 hyric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

10B	Cottonbend silt loam, 3 to 8 percent slopes
11A	Coursey silt loam, 0 to 3 percent slopes, rarely flooded
18B	Escatawba loam, 3 to 8 percent slopes, very stony
18C	Escatawba loam, 8 to 15 percent slopes, very stony
19B	Escatawba silt loam, 3 to 8 percent slopes
19C	Escatawba silt loam, 8 to 15 percent slopes
21A	Feedstone silt loam, 0 to 3 percent slopes, rarely flooded
25A	Gladehill loam, 0 to 3 percent slopes, frequently flooded
26A	Irongate fine sandy loam, 0 to 3 percent slopes, occasionally flooded
41B	Nicelytown silt loam, 3 to 8 percent slopes
51B	Sugarhol silt loam, 3 to 8 percent slopes
51C	Sugarhol silt loam, 8 to 15 percent slopes
53	Udorthents, smoothed, 3 to 35 percent slopes
54	Udorthents-Rock outcrop complex, 15 to 100 percent slopes
62A	Wolfgap loam, 0 to 3 percent slopes, occasionally flooded
63A	Wolfgap loam, 0 to 3 percent slopes, rarely flooded
64B	Zoar silt loam, 3 to 8 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 permeability, 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 erodibility 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 permeability, 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 erodibility 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, permeability, 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, permeability, 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. Permeability 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, permeability, 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 erodibility 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

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

Forestland Productivity

In table 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” *(12)*, 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" *(12)*, 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 erodibility 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 erodibility 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.

Recreational Development

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 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, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

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

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

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.

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, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, 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 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

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

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

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if 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 permeability, 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, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, 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 table 13, part I, 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.

In table 13, part II, the rating class terms are *good, fair,* and *poor*. 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 permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

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

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

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

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. 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 index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Soil 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.

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, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute 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 refers to the ability of a soil to transmit water or air. The term “permeability,” as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in micrometers per second, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

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

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

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

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In 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 permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

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

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

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

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the “National Soil Survey Handbook” *(13)*, 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 Soil 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 a 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, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

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

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

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

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories *(14, 16)*. 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 Alfisol.

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

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

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

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. 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, mixed, active, mesic Typic Hapludalfs.

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

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” *(15)*. Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” *(14)* and in “Keys to Soil Taxonomy” *(16)*. 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.

Alonzville Series

Physiographic province: Valley and Ridge
Landform: Low to intermediate level stream terraces in river valleys
Parent material: Alluvium derived from sandstone and shale
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 8 percent

Associated Soils

- Coursey soils, which are moderately well drained; on landforms similar to those of Alonzville soils
- Gladehill soils, which have a coarse-loamy particle size and a mollic epipedon; on flood plains
- Ogles soils, which have a loamy-skeletal particle size; on flood plains
- Wolfgap soils, which have a mollic epipedon; on flood plains

Taxonomic Classification

Fine-loamy, siliceous, semiactive, mesic Typic Hapludults

Typical Pedon

Alonzville loam, 0 to 3 percent slopes, rarely flooded; Alleghany County, Virginia; in a pasture, approximately 9,350 feet south and 30 degrees west of the intersection of Highways VA-159 and VA-665, in the area of Peters Mountain; Callaghan, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 45 minutes 56 seconds N. and long. 80 degrees 7 minutes 4 seconds W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) loam; weak fine granular structure; very friable; common very fine and fine roots; 12 percent rounded sandstone gravel; strongly acid; clear smooth boundary.

BA—5 to 15 inches; brown (10YR 4/3) loam; weak fine subangular blocky structure; very friable; common very fine and fine roots; 12 percent rounded sandstone gravel; strongly acid; gradual smooth boundary.

Bt1—15 to 44 inches; dark yellowish brown (10YR 4/4) clay loam; strong medium subangular blocky structure; very friable; few very fine and fine roots; many distinct clay films on all faces of peds; 3 percent rounded sandstone gravel; strongly acid; diffuse smooth boundary.

Bt2—44 to 55 inches; dark yellowish brown (10YR 4/4) clay loam; moderate medium subangular blocky structure; very friable; few very fine and fine roots; common faint clay films on all faces of peds; 12 percent rounded sandstone gravel; strongly acid; gradual smooth boundary.

BC—55 to 65 inches; dark yellowish brown (10YR 4/4) gravelly loam; weak fine subangular blocky structure; very friable; few very fine and fine roots; 30 percent rounded sandstone gravel; strongly acid.

Range in Characteristics

Solum thickness: 30 to 60 inches or more
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 35 percent gravel and cobbles
Reaction: Very strongly acid or strongly acid (in unlimed areas)

Ap horizon:
Hue—10YR or 7.5YR
Value—3 or 4
Chroma—2 or 3
Texture (fine-earth fraction)—loam, silt loam, or fine sandy loam

AB, BA, or BE horizon (if it occurs):
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—loam, silt loam, or fine sandy loam

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 8
Texture (fine-earth fraction)—clay loam, silty clay loam, silt loam, or loam

BC horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture (fine-earth fraction)—loam, clay loam, or sandy clay loam

C horizon (if it occurs):
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 6
Texture (fine-earth fraction)—fine sandy loam, clay loam, or loam

Alticrest Series

Physiographic province: Valley and Ridge
Landform: Mountains
Parent material: Residuum weathered from sandstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 8 to 55 percent

Associated Soils

- Dekalb soils, which have a loamy-skeletal particle size; on landforms similar to those of the Alticrest soils
- Lily soils, which have a fine-loamy particle size; on landforms similar to those of the Alticrest soils

Taxonomic Classification

Coarse-loamy, siliceous, semiactive, mesic Typic Dystrudepts

Typical Pedon

Alticrest channery sandy loam in an area of Dekalb-Alticrest complex, 35 to 55 percent slopes, very stony; Alleghany County, Virginia; in woodland, approximately 2,900 feet south and 89 degrees west of the intersection of U.S. Forest Service Road 125 and U.S. Forest Service Road 125D, near the summit of Piney Ridge; Covington, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 49 minutes 58 seconds N. and long. 79 degrees 54 minutes 18 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material.

A1—1 to 2 inches; very dark grayish brown (10YR 3/2) channery sandy loam; weak fine granular structure; very friable; many very fine and fine and common medium roots; 15 percent sandstone channers; extremely acid; clear smooth boundary.

A2—2 to 4 inches; dark yellowish brown (10YR 4/4) channery sandy loam; weak fine granular structure; very friable; many very fine and fine and common medium roots; 15 percent sandstone channers; extremely acid; clear smooth boundary.

Bw1—4 to 12 inches; dark yellowish brown (10YR 4/6) channery sandy loam; weak fine subangular blocky structure; very friable; common very fine, fine, and medium roots; 17 percent sandstone channers; very strongly acid; gradual smooth boundary.

Bw2—12 to 26 inches; yellowish brown (10YR 5/6) channery sandy loam; weak fine subangular blocky structure; very friable; common very fine, fine, and medium roots; 25 percent sandstone channers; very strongly acid; gradual smooth boundary.

Bw3—26 to 30 inches; strong brown (7.5YR 5/6) channery sandy loam; common fine and medium red (2.5YR 4/6) mottles; weak fine subangular blocky structure; very friable; common very fine, fine, and medium roots; 28 percent sandstone channers; very strongly acid; abrupt smooth boundary.

R—30 inches; sandstone bedrock.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 15 to 35 percent channers
Reaction: Extremely acid to strongly acid (in unlimed areas)

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—sandy loam or fine sandy loam

E horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture (fine-earth fraction)—sandy loam or fine sandy loam

Bw horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Atkins Series

Physiographic province: Valley and Ridge
Landform: Low to intermediate level flood plains in river valleys
Parent material: Alluvium derived from sandstone and shale
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately low
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Coursey soils, which are moderately well drained; on terraces
- Feedstone and Irongate soils, which are moderately well drained; on flood plains

Taxonomic Classification

Fine-loamy, mixed, active, acid, mesic Fluvaquentic Endoaquepts

Typical Pedon

Atkins silt loam, 0 to 3 percent slopes, occasionally flooded; Greenbrier County, West Virginia; in an abandoned pasture, approximately 2.25 miles southwest of Alvon along Fleming Creek; Alvon, West Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 52 minutes 32 seconds N. and long. 80 degrees 13 minutes 41 seconds W.

A—0 to 4 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine granular structure; friable; many very fine, fine, and medium roots; few fine distinct strong brown (7.5YR 5/6) masses of oxidized iron and grayish brown (10YR 5/2) iron depletions; very strongly acid; gradual wavy boundary.

Bg1—4 to 8 inches; grayish brown (2.5Y 5/2) silt loam; weak fine subangular blocky structure; friable; common very fine, fine, and medium roots; common fine distinct dark yellowish brown (10YR 4/4) and many fine prominent strong brown (7.5YR 5/8) masses of oxidized iron; very strongly acid; clear wavy boundary.

Bg2—8 to 29 inches; gray (2.5Y 5/1) silt loam; weak fine and medium subangular blocky structure; friable; few fine and few very fine roots; common fine prominent yellowish red (5YR 5/8) and many fine prominent strong brown (7.5YR 5/8) masses of oxidized iron; 5 percent gravel; strongly acid; diffuse wavy boundary.

Cg1—29 to 47 inches; bluish gray (10B 5/1) silty clay loam; massive; firm; few very fine roots; many coarse prominent yellowish brown (10YR 5/8) masses of oxidized iron; 5 percent gravel; strongly acid; gradual wavy boundary.

2Cg2—47 to 65 inches; bluish gray (5PB 5/1) very gravelly silty clay loam; massive; firm; many coarse prominent yellowish brown (10YR 5/8) masses of oxidized iron; 45 percent gravel; strongly acid.

Range in Characteristics

Solum thickness: 25 to 50 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent gravel in the A horizon; 0 to 15 percent gravel and cobbles in the B horizon and the upper part of the C horizon; 0 to 60 percent gravel and cobbles in the lower part of the C horizon
Reaction: Very strongly acid or strongly acid above a depth of 40 inches; very strongly acid to moderately acid below a depth of 40 inches

A horizon:
Hue—10YR
Value—4 to 7

Chroma—1 to 4
Texture (fine-earth fraction)—silt loam or loam

Bg horizon:
Hue—7.5YR, 10YR, 2.5Y, 5Y, 10B, or 5PB
Value—4 to 7
Chroma—0 to 2
Texture (fine-earth fraction)—silt loam, loam, or silty clay loam
Redoximorphic features—hue of 5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 8

C or Cg horizon:
Hue—7.5YR, 10YR, 2.5Y, 5Y, 10B, or 5PB
Value—4 to 7
Chroma—0 to 8
Texture (fine-earth fraction)—silt loam, loam, or silty clay loam

Berks Series

Physiographic province: Valley and Ridge
Landform: Hills and mountains
Parent material: Residuum weathered from shale and siltstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 3 to 80 percent

Associated Soils

- Gilpin soils, which have a fine-loamy particle size and an argillic horizon; on hills
- Lehew soils, which have more sand in the soil than the Berks soils and which formed in sandstone residuum; on mountains
- Macove soils, which are very deep to bedrock and which formed in colluvium derived from shale, siltstone, and sandstone; at the base of slopes
- Rough soils, which are very shallow to bedrock and somewhat excessively drained; on mountains
- Shelocta soils, which are very deep to bedrock, have a fine-loamy particle size, and formed in colluvium derived from shale, siltstone, and sandstone; on footslopes, on toeslopes, and along drainageways in valleys
- Weikert soils, which are shallow to bedrock; on landforms similar to those of the Berks soils

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Berks channery silt loam in an area of Weikert-Berks-Rough complex, 35 to 55 percent slopes; Alleghany County, Virginia; in woodland, approximately 7,100 feet north and 12 degrees east of the intersection of Highways VA-629 and I-64 near Wilson Creek; Clifton Forge, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 50 minutes 43 seconds N. and long. 79 degrees 47 minutes 17 seconds W.

Oi—0 to 1 inch; slightly decomposed plant material.
A—1 to 4 inches; dark grayish brown (10YR 4/2) channery silt loam; weak fine granular structure; friable; many fine and medium and common coarse roots; 30 percent shale channers; strongly acid; clear smooth boundary.
Bw1—4 to 11 inches; brown (7.5YR 5/4) channery silt loam; weak fine subangular

blocky structure; friable; many fine, common medium, and few coarse roots; 30 percent shale channers; strongly acid; gradual wavy boundary.

Bw2—11 to 22 inches; strong brown (7.5YR 5/6) very channery silt loam; weak fine subangular blocky structure; friable; common fine and few medium and coarse roots; 40 percent shale channers; strongly acid; gradual wavy boundary.

BC—22 to 27 inches; brown (7.5YR 5/4) very channery loam; weak fine subangular blocky structure; friable; few fine roots; 50 percent shale channers; strongly acid; gradual wavy boundary.

R—27 inches; fissle shale bedrock.

Range in Characteristics

Solum thickness: 12 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 15 to 35 percent channers in the A horizon; 15 to 75 percent channers in the Bw horizon (the particle-size control section averages more than 35 percent); 35 to 90 percent channers in the C horizon
Reaction: Extremely acid to slightly acid (in unlimed areas)

A horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam or loam

Bw horizon:
Hue—5YR to 2.5Y
Value—4 to 6
Chroma—3 to 8
Texture (fine-earth fraction)—silt loam, loam, or silty clay loam

BC horizon and C horizon (if it occurs):
Hue—5YR to 2.5Y
Value—4 to 6
Chroma—2 to 8
Texture (fine-earth fraction)—loam or silt loam

Blairton Series

Physiographic province: Valley and Ridge
Landform: Hills
Parent material: Residuum weathered from shale and siltstone
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 3 to 35 percent

Associated Soils

- Berks soils, which are well drained and have a loamy-skeletal particle size; on landforms similar to those of the Blairton soils
- Gilpin soils, which are well drained; on landforms similar to those of the Blairton soils
- Shelocta soils, which are very deep to bedrock, are well drained, and formed in colluvium derived from shale, siltstone, and sandstone; on footslopes, on toeslopes, and along drainageways
- Wharton soils, which are deep or very deep to bedrock; on landforms similar to those of the Blairton soils

Taxonomic Classification

Fine-loamy, mixed, active, mesic Aquic Hapludults

Typical Pedon

Blairton silt loam in an area of Wharton-Blairton complex, 15 to 35 percent slopes; Alleghany County, Virginia; in woodland, approximately 3,800 feet south and 46 degrees west of the intersection of Highways US-220 and US-60, west of the Jackson River; Covington, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 46 minutes 31 seconds N. and long. 79 degrees 59 minutes 44 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material.

A—1 to 4 inches; very dark grayish brown (10YR 3/2) silt loam; strong medium granular structure; very friable; many fine and medium and few coarse roots; very strongly acid; clear smooth boundary.

BA—4 to 9 inches; dark yellowish brown (10YR 4/4) silt loam; many fine faint dark yellowish brown (10YR 4/6) mottles; moderate medium subangular blocky structure; very friable; common fine, medium, and coarse roots; streaks of pale brown (10YR 6/3) soft weathered shale; 2 percent shale channers; very strongly acid; clear wavy boundary.

Bt1—9 to 18 inches; brown (10YR 4/3) silty clay loam; streaks of pale brown (10YR 6/3) soft weathered shale; weak medium platy structure; very friable, slightly sticky, moderately plastic; common fine and medium and few coarse roots; common fine distinct dark yellowish brown (10YR 4/6) masses of oxidized iron; few faint clay films on all faces of peds; 2 percent shale channers; very strongly acid; clear smooth boundary.

Bt2—18 to 27 inches; yellowish brown (10YR 5/6) silty clay loam; streaks of dark grayish brown (10YR 4/2) soft weathered shale; moderate fine platy structure; very friable, slightly sticky, moderately plastic; common fine and medium roots; few faint clay films on all faces of peds; many fine and medium faint dark yellowish brown (10YR 4/6) masses of oxidized iron and many medium and coarse prominent gray (10YR 6/1) iron depletions; 5 percent shale channers; very strongly acid; gradual smooth boundary.

Btg—27 to 31 inches; light brownish gray (10YR 6/2) silty clay loam; streaks of light brown (7.5YR 6/4) soft weathered shale; weak fine platy structure; very friable, slightly sticky, moderately plastic; few very fine and fine roots; few faint clay films on all faces of peds; many medium prominent yellowish red (5YR 4/6) masses of oxidized iron; 5 percent shale channers; very strongly acid; clear smooth boundary.

BCg—31 to 38 inches; dark grayish brown (10YR 4/2) very channery silt loam; weak fine platy structure; friable; many fine prominent dark yellowish brown (10YR 4/6) masses of oxidized iron and many fine faint grayish brown (10YR 5/2) iron depletions; 40 percent shale channers; very strongly acid; abrupt smooth boundary.

R—38 inches; shale bedrock.

Range in Characteristics

Solum thickness: 20 to 40 inches

Depth to bedrock: 20 to 40 inches

Rock fragments: 0 to 35 percent channers in the A, E, BA, and BE horizons; 0 to 20 percent channers in the Bt horizon; 15 to 50 percent channers in the BC and C horizon

Reaction: Extremely acid or very strongly acid (in unlimed areas)

A or Ap horizon:

Hue—10YR

Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam

E, BE, or BA horizon (if it occurs):
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 or 4
Texture (fine-earth fraction)—silt loam

Bt or Btg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture (fine-earth fraction)—silt loam or silty clay loam

BC or C horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture (fine-earth fraction)—silt loam, silty clay loam, or silty clay

Caneyville Series

Physiographic province: Valley and Ridge
Landform: Hills
Parent material: Residuum weathered from limestone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low
Depth class: Moderately deep
Slope range: 8 to 55 percent

Associated Soils

- Faywood soils, which have browner colors than the Caneyville soils and formed in residuum weathered from limestone and shale; on similar landforms
- Frederick soils, which are very deep to bedrock; on landforms similar to those of the Caneyville soils
- Murrill soils, which are very deep to bedrock and which formed in colluvium over limestone residuum; on footslopes and toeslopes
- Poplimento soils, which are very deep to bedrock and which formed in residuum weathered from limestone and shale; on landforms similar to those of the Caneyville soils
- Watahala soils, which are very deep to bedrock, have a fine-loamy over clayey particle size, and formed in gravelly residuum over clayey residuum weathered from cherty limestone; on landforms similar to those of the Caneyville soils

Taxonomic Classification

Fine, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Caneyville silt loam, 15 to 35 percent slopes, very rocky; Alleghany County, Virginia; in pasture, approximately 8,300 feet north and 87 degrees east of the intersection of Highways US-220 and VA-640, west of Falling Spring Creek; Covington, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 52 minutes 7 seconds N. and long. 79 degrees 54 minutes 45 seconds W.

Ap1—0 to 4 inches; brown (10YR 4/3) silt loam; moderate medium granular structure; very friable; many very fine and fine roots; moderately acid; clear smooth boundary.

Ap2—4 to 10 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine subangular blocky structure; very friable; common very fine and fine roots; moderately acid; clear smooth boundary.

Bt1—10 to 16 inches; strong brown (7.5YR 4/6) silty clay; common fine distinct yellowish brown (10YR 5/6) mottles; strong medium subangular blocky structure; friable, very sticky, very plastic; few very fine and fine roots; many distinct clay films on all faces of peds; slightly acid; gradual smooth boundary.

Bt2—16 to 22 inches; yellowish red (5YR 4/6) clay; strong medium subangular blocky structure; firm, very sticky, very plastic; few very fine and fine roots; many distinct clay films on all faces of peds; few fine dark brown (7.5YR 3/2) iron-manganese masses on faces of peds; slightly acid; gradual smooth boundary.

Bt3—22 to 29 inches; yellowish red (5YR 4/6) clay; many fine and medium prominent yellowish brown (10YR 5/6) mottles; strong medium subangular blocky structure; firm, very sticky, very plastic; few very fine and fine roots; many distinct clay films on all faces of peds; 10 percent limestone gravel; neutral; abrupt irregular boundary.

R—29 inches; limestone bedrock.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 0 to 10 percent gravel and cobbles in the A and BA horizons; 0 to 15 percent gravel and cobbles in the Bt horizon
Reaction: Very strongly acid to neutral in the A and BE horizons and the upper part of the Bt horizon (in unlimed areas); moderately acid to neutral in the lower part of the Bt horizon

Ap horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam or loam

A horizon (if it occurs):
Hue—10YR or 7.5YR
Value—3 to 5
Chroma—2 or 3
Texture (fine-earth fraction)—silt loam or loam

BA horizon (if it occurs):
Hue—10YR or 7.5YR
Value—5 or 6
Chroma—4 to 6
Texture (fine-earth fraction)—silt loam, loam, or silty clay loam

Bt horizon:
Hue—10YR to 2.5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—clay, silty clay, or silty clay loam

Cottonbend Series

Physiographic province: Valley and Ridge
Landform: High stream terraces in river valleys
Parent material: Alluvium derived from sandstone and shale
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 3 to 8 percent

Associated Soils

- Nicelytown soils, which are moderately well drained; on landforms similar to those of the Cottonbend soils
- Purdy soils, which are poorly drained and have a fine particle size; on landforms similar to those of the Cottonbend soils
- Sugarhol soils, which have a fine particle size; on landforms similar to those of the Cottonbend soils
- Zoar soils, which are moderately well drained and have a fine particle size; on landforms similar to those of the Cottonbend soils

Taxonomic Classification

Fine-loamy, siliceous, semiactive, mesic Typic Paleudults

Typical Pedon

Cottonbend silt loam, 3 to 8 percent slopes; Alleghany County, Virginia; in a corn field, approximately 750 feet south and 62 degrees west of the intersection of Highways VA-18 and VA-616, northeast of Jordan Mines; Jordan Mines, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 39 minutes 59 seconds N. and long. 80 degrees 6 minutes 54 seconds W.

Ap—0 to 8 inches; brown (10YR 4/3) silt loam; weak fine granular structure; very friable; common very fine and fine roots; 2 percent cobbles and 10 percent gravel; strongly acid; clear smooth boundary.

BE—8 to 17 inches; yellowish brown (10YR 5/4) fine sandy loam; weak fine subangular blocky structure; very friable; common very fine and fine roots; 12 percent gravel; strongly acid; gradual smooth boundary.

Bt1—17 to 32 inches; brown (7.5YR 4/4) loam; moderate medium subangular blocky structure; friable; few very fine and fine roots; few faint clay films on all faces of peds; 3 percent gravel; strongly acid; diffuse smooth boundary.

Bt2—32 to 52 inches; strong brown (7.5YR 4/6) loam; moderate medium subangular blocky structure; friable; few very fine and fine roots; few faint clay films on all faces of peds; 5 percent gravel; strongly acid; diffuse smooth boundary.

BC—52 to 72 inches; strong brown (7.5YR 4/6) gravelly loam; weak medium subangular blocky structure; very friable; few very fine and fine roots; 8 percent cobbles and 25 percent gravel; very strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Depth to bedrock: More than 72 inches
Rock fragments: 0 to 15 percent gravel and cobbles in the A, E, EB, and BE horizons and in the upper part of the Bt horizon; 0 to 40 percent gravel and cobbles in the lower part of the Bt horizon and in the BC horizon
Reaction: Very strongly acid or strongly acid (in unlimed areas)

Ap horizon:
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—loam

A horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture (fine-earth fraction)—loam

E, EB, or BE horizon (if it occurs):
Hue—10YR or 7.5YR
Value—5 or 6
Chroma—4 to 6
Texture (fine-earth fraction)—fine sandy loam, loam, or silt loam

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—4 to 8
Texture (fine-earth fraction)—clay loam, loam, sandy clay loam, or silty clay loam above a depth of 40 inches; clay loam, loam, sandy clay loam, or clay below a depth of 40 inches

BC horizon:
Hue—10YR to 5YR
Value—4 or 5
Chroma—4 to 8
Texture (fine-earth fraction)—loam, clay loam, sandy clay loam, or clay

Coursey Series

Physiographic province: Valley and Ridge
Landform: Low stream terraces in river valleys
Parent material: Alluvium derived from sandstone and shale
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Alonzville soils, which are well drained; on landforms similar to those of the Coursey soils
- Gladehill soils, which are well drained, have a coarse-loamy particle size, and have a mollic epipedon; on flood plains
- Ogles soils, which are well drained and have a loamy-skeletal particle size; on flood plains
- Purdy soils, which are poorly drained and have a fine particle size; on landforms similar to those of the Cottonbend soils
- Shelocta soils, which are well drained and formed in colluvium derived from shale and siltstone; on footslopes, on toeslopes, and along drainageways
- Wolfgap soils, which are well drained and have a mollic epipedon; on flood plains

Taxonomic Classification

Fine-loamy, siliceous, semiactive, mesic Aquic Hapludults

Typical Pedon

Coursey silt loam, 0 to 3 percent slopes, rarely flooded; Alleghany County, Virginia; in woodland, approximately 4,300 feet north and 82 degrees east of the intersection of Highway VA-42 and U.S. Forest Service Road 100, along the Cowpasture River; Longdale Furnace, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 51 minutes 31 seconds N. and long. 79 degrees 43 minutes 56 seconds W.

A—0 to 5 inches; dark brown (10YR 3/3) silt loam; weak fine granular structure; very friable; many fine and medium and common coarse roots; strongly acid; gradual smooth boundary.

BA—5 to 12 inches; brown (10YR 4/3) loam; weak medium subangular blocky structure; friable; common fine and medium roots; common fine faint dark yellowish brown (10YR 4/4) masses of oxidized iron; strongly acid; clear smooth boundary.

Bt1—12 to 20 inches; brown (10YR 5/3) loam; moderate medium subangular blocky structure; friable; few very fine, fine, and medium roots; few faint clay films on all faces of peds; many fine distinct dark yellowish brown (10YR 4/6) and many fine distinct yellowish brown (10YR 5/6) masses of oxidized iron; strongly acid; gradual smooth boundary.

Bt2—20 to 25 inches; brown (10YR 5/3) loam; moderate medium subangular blocky structure; friable; few very fine, fine, and medium roots; few faint clay films on all faces of peds; common fine and medium faint brown (10YR 4/3) iron depletions and many fine distinct dark yellowish brown (10YR 4/6 and 5/6) masses of oxidized iron; strongly acid; gradual smooth boundary.

Bt3—25 to 50 inches; brown (10YR 5/3) loam; moderate medium subangular blocky structure; friable; few fine and medium roots; few faint clay films on all faces of peds; few fine faint grayish brown (10YR 5/2) iron depletions and many fine distinct yellowish brown (10YR 5/6 and 4/6) masses of oxidized iron; strongly acid; gradual smooth boundary.

Btg—50 to 60 inches; grayish brown (10YR 5/2) loam; weak fine subangular blocky structure; friable; few fine and medium roots; few faint clay films on all faces of peds; many fine and medium distinct yellowish brown (10YR 5/4 and 5/6) masses of oxidized iron; strongly acid.

Range in Characteristics

Solum thickness: More than 30 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent gravel and cobbles in the A horizon; 0 to 35 percent gravel and cobbles in the BA and Btg horizons
Reaction: Extremely acid to strongly acid (in unlimed areas)

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture (fine-earth fraction)—silt loam or loam

Ap horizon (if it occurs):
Hue—10YR
Value—4
Chroma—2 or 3
Texture (fine-earth fraction)—silt loam or loam

BA horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—loam

Bt horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—3 to 8
Texture (fine-earth fraction)—loam or clay loam

Btg horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2
Texture (fine-earth fraction)—loam or clay loam

Dekalb Series

Physiographic province: Valley and Ridge
Landform: Mountains and hills
Parent material: Residuum weathered from sandstone
Drainage class: Excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 8 to 80 percent

Associated Soils

- Alticrest soils, which have a coarse-loamy particle size; on landforms similar to those of the Dekalb soils
- Lehew soils, which have redder colors than the Dekalb soils; on landforms similar to those of the Dekalb soils
- Lily soils, which have a fine-loamy particle size and an argillic horizon; on landforms similar to those of the Dekalb soils
- McClung soils, which are very deep to bedrock, have a fine-loamy particle size, and have an argillic horizon; on landforms similar to those of the Dekalb soils
- Oriskany soils, which are very deep to bedrock and which formed in colluvium derived from sandstone; on toeslopes and footslopes
- Watahala soils, which are very deep to bedrock, have a fine-loamy over clayey particle size, and formed in gravelly residuum over clay residuum weathered from cherty limestone; on landforms similar to those of the Dekalb soils

Taxonomic Classification

Loamy-skeletal, siliceous, active, mesic Typic Dystrudepts

Typical Pedon

Dekalb channery sandy loam in an area of Dekalb-Alticrest complex, 35 to 55 percent slopes, very stony; Alleghany County, Virginia; in woodland, approximately 3,700 feet south and 87 degrees west of the intersection of U.S. Forest Service Road 125 and U.S. Forest Service Road 125D, near the summit of Piney Ridge; Covington, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 50 minutes 0 seconds N. and long. 79 degrees 54 minutes 31 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material.

A—1 to 2 inches; very dark grayish brown (10YR 3/2) channery sandy loam; weak fine granular structure; very friable; many fine and medium roots; 4 percent sandstone cobbles and 12 percent sandstone channers; extremely acid; clear smooth boundary.

Bw—2 to 18 inches; yellowish brown (10YR 5/6) very channery sandy loam; weak fine subangular blocky structure; very friable; many fine and medium roots; 9 percent sandstone cobbles and 26 percent sandstone channers; very strongly acid; gradual wavy boundary.

BC—18 to 30 inches; yellowish brown (10YR 5/6) very channery sandy loam; weak fine subangular blocky structure; very friable; common fine and medium roots; 11 percent sandstone cobbles and 34 percent sandstone channers; very strongly acid; clear wavy boundary.

R—30 inches; sandstone bedrock.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 15 to 35 percent channers and cobbles in the A, E, BA, and BE horizons; 35 to 60 percent gravel and cobbles in the Bw and BC horizons
Reaction: Extremely acid to strongly acid (in unlimed areas)

A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture (fine-earth fraction)—sandy loam or loam

E horizon (if it occurs):
Hue—10YR
Value—5 or 6
Chroma—2 to 4
Texture (fine-earth fraction)—sandy loam or loam

BA or BE horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Bw horizon:
Hue—10YR or 7.5YR
Value—5 or 6
Chroma—4 to 6
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

BC horizon:
Hue—10YR or 7.5YR
Value—5 to 8
Chroma—4 to 8
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Derroc Series

Physiographic province: Valley and Ridge
Landform: Low to intermediate level flood plains in river valleys
Parent material: Alluvium derived from limestone, sandstone, and shale

Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Alonzville soils, which have fewer rock fragments than the Derroc soils; on terraces
- Coursey soils, which are moderately well drained and have fewer rock fragments than the Derroc soils; on terraces
- Gladehill soils, which have fewer rock fragments than the Derroc soils; on the lower flood plains
- Wolfgap soils, which have fewer rock fragments than the Derroc soils; on similar landforms

Taxonomic Classification

Loamy-skeletal, siliceous, active, mesic Dystric Fluventic Eutrudepts

Typical Pedon

Derroc very cobbly loam, 0 to 3 percent slopes, occasionally flooded; Bath County, Virginia; in a wooded area, about 0.1 mile southeast of the junction of Highways VA-601 and VA-39, about 900 feet south of the Highway VA-39 bridge over Little Back Creek, 100 feet east of Little Back Creek; Mountain Grove, Virginia USGS 7.5 Minute Quadrangle; lat. 38 degrees 7 minutes 15 seconds N. and long. 79 degrees 55 minutes 1 second W.

A—0 to 4 inches; dark brown (10YR 3/3) very cobbly loam; weak fine granular structure; very friable, slightly sticky, nonplastic; many very fine, fine, medium, and coarse roots; 15 percent well rounded sandstone gravel and 25 percent well rounded sandstone cobbles; slightly acid; abrupt wavy boundary.

Bw1—4 to 17 inches; dark yellowish brown (10YR 4/4) very cobbly sandy loam; weak fine subangular blocky structure; very friable, slightly sticky, nonplastic; many very fine, fine, medium, and coarse roots; slightly acid; gradual wavy boundary.

Bw2—17 to 38 inches; dark yellowish brown (10YR 4/4) extremely cobbly sandy loam; weak medium subangular blocky structure; very friable, slightly sticky, nonplastic; common very fine, fine, medium, and coarse roots; 10 percent well rounded sandstone stones, 25 percent well rounded sandstone gravel, and 35 percent well rounded sandstone cobbles; slightly acid; gradual wavy boundary.

C1—38 to 48 inches; dark yellowish brown (10YR 4/4) extremely cobbly sandy loam; single grain; loose, slightly sticky, nonplastic; few very fine, fine, and medium roots; 5 percent well rounded sandstone stones, 30 percent well rounded sandstone gravel, and 35 percent well rounded sandstone cobbles; slightly acid; gradual wavy boundary.

C2—48 to 60 inches; yellowish brown (10YR 5/4) extremely cobbly loamy sand; single grain; loose, nonsticky, nonplastic; few prominent light brownish gray (10YR 6/2) iron depletions; 10 percent well rounded sandstone stones, 25 percent well rounded sandstone gravel, and 35 percent well rounded sandstone cobbles; slightly acid.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: More than 60 inches
Rock fragments: 35 to 60 percent pebbles, cobbles, and stones in the A horizon; 30 to 80 percent pebbles, cobbles, and stones in the Bw and C horizons
Reaction: Moderately acid to neutral

A horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—2 to 4
Texture (fine-earth fraction)—loam

Ap horizon (if it occurs):
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—2 to 4
Texture (fine-earth fraction)—sandy loam or loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture (fine-earth fraction)—sandy loam or loam

C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture (fine-earth fraction)—loamy sandy or sandy loam

Escatawba Series

Physiographic province: Valley and Ridge
Landform: Base of slopes on hills and mountains and areas in valleys
Parent material: Colluvium derived from sandstone and shale
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 3 to 35 percent

Associated Soils

- Oriskany soils, which have a loamy-skeletal particle size and do not have a seasonal high water table; on landforms similar to those of the Escatawba soils
- Shelocta soils, which do not have a seasonal high water table; on landforms similar to those of the Escatawba soils

Taxonomic Classification

Fine-loamy, siliceous, semiactive, mesic Oxyaquic Paleudults

Typical Pedon

Escatawba loam, 3 to 8 percent slopes, very stony; Alleghany County, Virginia; in planted pine, approximately 1,400 feet north and 84 degrees west of the intersection of Highway VA-613 and U.S. Forest Service Road 351, near Spice Run; Jordan Mines, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 39 minutes 44 seconds N. and long. 80 degrees 4 minutes 8 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material.
A—1 to 3 inches; very dark grayish brown (10YR 3/2) loam; weak fine granular structure; very friable, nonsticky, nonplastic; many very fine and fine and common medium roots; 5 percent gravel; very strongly acid; clear smooth boundary.
BE—3 to 17 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; very friable, slightly sticky, slightly plastic; common very fine and

fine and few medium roots; 2 percent gravel; very strongly acid; gradual smooth boundary.

Bt1—17 to 30 inches; yellowish brown (10YR 5/6) loam; moderate medium subangular blocky structure; very friable, slightly sticky, moderately plastic; few very fine, fine, and medium roots; few distinct strong brown (7.5YR 5/6) clay films on all faces of peds; 2 percent gravel; strongly acid; clear smooth boundary.

2Bt2—30 to 44 inches; strong brown (7.5YR 5/6) clay loam; strong medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very fine and fine roots; common distinct strong brown (7.5YR 5/6) clay films and many prominent light yellowish brown (10YR 6/4) silt coats on all faces of peds; common medium distinct yellowish red (5YR 5/6) masses of oxidized iron; 12 percent gravel; strongly acid; gradual smooth boundary.

2Bt3—44 to 50 inches; yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6) gravelly clay loam; strong medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very fine and fine roots; common distinct strong brown (7.5YR 5/6) clay films on all faces of peds; common fine distinct pale brown (10YR 6/3) iron depletions; 17 percent gravel; strongly acid; gradual smooth boundary.

2Bt4—50 to 65 inches; strong brown (7.5YR 5/6) cobbly clay loam; strong medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very fine roots; common distinct strong brown (7.5YR 5/6) clay films on all faces of peds; common medium prominent pinkish gray (7.5YR 6/2) iron depletions and many medium prominent yellowish red (5YR 5/8) masses of oxidized iron; 6 percent cobbles and 19 percent gravel; strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Depth to bedrock: More than 60 inches
Depth to 2Bt horizon: 15 to 40 inches
Rock fragments: 0 to 15 percent gravel and cobbles in the A horizon; 0 to 25 percent gravel and cobbles in the E and BE horizons; 0 to 35 percent gravel and cobbles in the Bt horizon; 10 to 35 percent gravel, cobbles, and stones in the upper part of the 2Bt horizon; 15 to 50 percent gravel, cobbles, and stones in the lower part of the 2Bt horizon; 15 to 50 percent gravel and cobbles in the 3Bt horizon
Reaction: Extremely acid to strongly acid in the A and E horizons (in unlimed areas); very strongly acid or strongly acid in the Bt and 2Bt horizons

A horizon:
Hue—10YR
Value—3 to 6
Chroma—1 to 3
Texture (fine-earth fraction)—loam or silt loam

E or BE horizon (if it occurs):
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2 to 6
Texture (fine-earth fraction)—loam, silt loam, or fine sandy loam

Bt horizon:
Hue—7.5YR to 2.5Y
Value—5 or 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam, silt loam, clay loam, or silty clay loam; the particle-size control section averages 18 to 35 percent clay

2Bt horizon:
Hue—2.5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—clay loam, silty clay loam, or clay

3Bt horizon (if it occurs):
Hue—2.5YR to 2.5Y
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—clay loam, silty clay loam, or clay

Faywood Series

Physiographic province: Valley and Ridge
Landform: Hills
Parent material: Residuum weathered from limestone and shale
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low
Depth class: Moderately deep
Slope range: 8 to 55 percent

Associated Soils

- Berks soils, which have a loamy-skeletal particle-size and formed in residuum weathered from shale; on landforms that are similar to those of the Faywood soils but are at higher elevations
- Caneyville soils, which have a fine particle size, have hues redder than 7.5YR in some part of the argillic horizon, and formed in residuum weathered from limestone; on landforms similar to those of the Faywood soils
- Murrill soils, which are very deep to bedrock; on footslopes and toeslopes
- Poplimento soils, which are very deep to bedrock; on landforms similar to those of the Faywood soils

Taxonomic Classification

Fine, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Faywood silty clay loam in an area of Faywood-Poplimento complex, 15 to 35 percent slopes; Bath County, Virginia; in pasture, approximately 6,500 feet south and 20 degrees east of the intersection of Highways US-220 and VA-647; Falling Spring, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 54 minutes 39 seconds N. and long. 79 degrees 52 minutes 41 seconds W.

Ap—0 to 6 inches; dark brown (10YR 3/3) silty clay loam; moderate fine and medium granular structure; friable, slightly sticky, slightly plastic; many very fine and fine roots; slightly acid; clear wavy boundary.

Bt1—6 to 15 inches; dark yellowish brown (10YR 4/6) clay; moderate coarse subangular blocky structure; firm, moderately sticky, moderately plastic; common very fine and fine roots; common prominent clay films on all faces of peds; neutral; gradual wavy boundary.

Bt2—15 to 24 inches; dark yellowish brown (10YR 4/6) clay; common medium prominent very dark gray (10YR 3/1) mottles; moderate coarse subangular blocky structure; firm, moderately sticky, moderately plastic; few very fine and fine roots;

common prominent clay films on all faces of peds; 10 percent shale channers; slightly alkaline; abrupt wavy boundary.
R—24 inches; limestone interbedded with shale bedrock.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 0 to 15 percent channers
Reaction: Slightly acid to slightly alkaline

Ap or A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam or silty clay loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—clay, silty clay, or silty clay loam

BC or C horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Texture (fine-earth fraction)—clay, silty clay, or silty clay loam

Feedstone Series

Physiographic province: Valley and Ridge
Landform: High level flood plains in river valleys
Parent material: Alluvium derived from limestone, sandstone, and shale
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Coursey soils, which have thinner and less dark surface layers than the Feedstone soils; on terraces
- Gladehill soils, which are well drained; on the lower flood plains
- Irongate soils, which have less clay than the Feedstone soils; on the lower flood plains
- Wolfgap soils, which are well drained; on landforms similar to those of the Feedstone soils

Taxonomic Classification

Fine-loamy, siliceous, active, mesic Cumulic Hapludolls

Typical Pedon

Feedstone silt loam, 0 to 3 percent slopes, rarely flooded; Bath County, Virginia; about 1.0 mile south of the junction of Highways VA-625 and VA-678 and 500 feet west of the Cowpasture River; Green Valley, Virginia USGS 7.5 Minute Quadrangle; lat. 38 degrees 6 minutes 47 seconds N. and long. 79 degrees 36 minutes 59 seconds W.

A1—0 to 9 inches; very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; strong fine and medium granular structure; friable, nonsticky, slightly plastic; many very fine and fine roots; common fine and medium tubular pores; slightly acid; gradual smooth boundary.
A2—9 to 21 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine and medium subangular blocky structure parting to moderate fine granular; friable, nonsticky, slightly plastic; many very fine and fine roots; common fine and medium tubular pores; slightly acid; gradual smooth boundary.
AB—21 to 26 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine and medium subangular blocky structure; friable, nonsticky, slightly plastic; few very fine and fine roots; common fine and medium tubular pores; slightly acid; gradual smooth boundary.
Bw1—26 to 36 inches; brown (10YR 4/3) loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable, slightly sticky, slightly plastic; few very fine and fine roots; many very fine and fine irregular pores; moderately acid; gradual smooth boundary.
Bw2—36 to 47 inches; brown (10YR 4/3) loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable, slightly sticky, slightly plastic; few very fine and fine roots; many very fine and fine irregular pores; common fine distinct dark gray (10YR 4/1) iron depletions and common fine prominent reddish brown (5YR 4/4) iron-manganese masses; moderately acid; clear smooth boundary.
BC—47 to 50 inches; brown (10YR 4/3) sandy loam; weak fine subangular blocky structure; friable, nonsticky, nonplastic; few very fine and fine roots; many very fine and fine irregular pores; common fine distinct dark gray (10YR 4/1) iron depletions and common fine prominent reddish brown (5YR 4/4) iron-manganese masses; 2 percent well rounded sandstone gravel; moderately acid; abrupt smooth boundary.
C—50 to 65 inches; brown (10YR 4/3) very gravelly sandy loam; single grain; loose, nonsticky, nonplastic; many very fine and fine interstitial pores; common fine prominent reddish brown (5YR 4/4) iron-manganese masses and common fine distinct dark gray (10YR 4/1) iron depletions; 10 percent well rounded sandstone cobbles and 35 percent well rounded sandstone gravel; moderately acid.

Range in Characteristics

Solum thickness: 30 to 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent gravel and cobbles in the A, AB, and BA horizons; 0 to 35 percent gravel and cobbles in the Bw and BC horizons; 10 to 60 percent gravel and cobbles in the C horizon
Reaction: Moderately acid to neutral

A horizon:
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—1 to 3
Texture (fine-earth fraction)—silt loam

Ap, AB, and BA horizons:
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—1 to 3
Texture (fine-earth fraction)—silt loam, loam, or fine sandy loam

Bw horizon:
Hue—7.5YR or 10YR

Value—3 to 5
Chroma—3 to 6
Texture (fine-earth fraction)—loam, silt loam, sandy clay loam, or clay loam

BC horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

C horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 6
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Frederick Series

Physiographic province: Valley and Ridge
Landform: Hills
Parent material: Residuum weathered from limestone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 8 to 55 percent

Associated Soils

- Caneyville soils, which are moderately deep to bedrock; on landforms similar to those of the Frederick soils
- McClung soils, which have a fine-loamy particle size and formed in residuum derived from sandstone; on summits, shoulders, and backslopes
- Murrill soils, which formed in colluvium derived from sandstone and shale; on footslopes and toeslopes
- Watahala soils, which have a fine-loamy over clayey particle size and have clay at a greater depth than the Frederick soils; on similar landforms

Taxonomic Classification

Fine, mixed, semiactive, mesic Typic Paleudults

Typical Pedon

Frederick silt loam, 8 to 15 percent slopes; Alleghany County, Virginia; in pasture, approximately 6,300 feet south and 32 degrees west of the intersection of Highways US-220 and VA-606, in the area of Sinking Spring; Falling Spring, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 53 minutes 25 seconds N. and long. 79 degrees 54 minutes 40 seconds W.

Ap—0 to 3 inches; brown (10YR 4/3) silt loam; moderate medium granular structure; very friable, slightly sticky, slightly plastic; common very fine and fine roots; 10 percent chert gravel; moderately acid; clear smooth boundary.
BA—3 to 8 inches; dark yellowish brown (10YR 4/4) and yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure; very friable, slightly sticky, slightly plastic; common very fine and fine roots; 10 percent chert gravel; moderately acid; clear smooth boundary.
Bt1—8 to 12 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very

fine and fine roots; many distinct clay films on all faces of peds; 2 percent chert gravel; moderately acid; clear smooth boundary.

Bt2—12 to 20 inches; strong brown (7.5YR 5/6) silty clay; strong medium subangular blocky structure; friable, moderately sticky, very plastic; few very fine and fine roots; many distinct clay films on all faces of peds; 2 percent chert gravel; strongly acid; gradual smooth boundary.

Bt3—20 to 46 inches; yellowish red (5YR 5/6) silty clay; many medium strong brown (7.5YR 5/6) mottles; strong medium subangular blocky structure; friable, moderately sticky, very plastic; few very fine and fine roots; few prominent dark yellowish brown (10YR 4/6) and very pale brown (10YR 7/3) silt coats and few prominent clay films on all faces of peds; 1 percent chert gravel; strongly acid; diffuse smooth boundary.

Bt4—46 to 72 inches; yellowish red (5YR 5/6) silty clay; strong medium subangular blocky structure; firm, moderately sticky, very plastic; few very fine and fine roots; common prominent dark yellowish brown (10YR 4/6) and very pale brown (10YR 7/3) silt coats and clay films on all faces of peds; 1 percent chert gravel; strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Depth to bedrock: More than 72 inches
Rock fragments: 0 to 30 percent gravel and 0 to 5 percent cobbles in the A and Bt horizons; 0 to 45 percent gravel and 0 to 3 percent cobbles in the BA and BE horizons
Reaction: Very strongly acid to moderately acid (in unlimed areas)

Ap horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 or 4
Texture (fine-earth fraction)—silt loam or loam

A horizon (if it occurs):
Hue—10YR or 7.5YR
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam or loam

BA or BE horizon (if it occurs):
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—silt loam, loam, clay loam, or silty clay loam

Bt horizon:
Hue—10YR to 5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—silty clay loam, clay loam, silty clay, or clay

Gilpin Series

Physiographic province: Valley and Ridge
Landform: Hills
Parent material: Residuum weathered from shale and siltstone
Drainage class: Well drained

Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 3 to 25 percent

Associated Soils

- Berks soils, which have a loamy-skeletal particle size and do not have an argillic horizon; on landforms similar to those of the Gilpin soils
- Blairton soils, which are moderately well drained; on landforms similar to those of the Gilpin soils
- Weikert soils, which are shallow to bedrock and have a loamy-skeletal particle size; on landforms similar to those of the Gilpin soils
- Wharton soils, which are deep or very deep to bedrock and are moderately well drained; on landforms similar to those of the Gilpin soils

Taxonomic Classification

Fine-loamy, mixed, active, mesic Typic Hapludults

Typical Pedon

Gilpin silt loam, 15 to 25 percent slopes; Bath County, Virginia; in woodland, approximately 0.25 mile northeast of the intersection of Forest Service Road 361 and Forest Service Road 361E, in the area of Little Mountain; Nimrod Hall, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 59 minutes 3 seconds N. and long. 79 degrees 42 minutes 34 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material.

A—1 to 2 inches; very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; very friable, nonsticky, nonplastic; many fine and medium and common coarse roots; 10 percent acid shale channers; very strongly acid; clear wavy boundary.

E—2 to 3 inches; yellowish brown (10YR 5/4) channery silt loam; weak fine subangular blocky structure; friable, nonsticky, nonplastic; many fine and medium and common coarse roots; 15 percent acid shale channers; very strongly acid; clear wavy boundary.

BE—3 to 7 inches; yellowish brown (10YR 5/4) channery silt loam; weak medium subangular blocky structure; friable, nonsticky, nonplastic; common very fine, fine, and medium roots; 15 percent acid shale channers; very strongly acid; gradual wavy boundary.

Bt—7 to 26 inches; strong brown (7.5YR 5/6) channery silty clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine and fine roots; many distinct continuous clay films on vertical faces of peds; 20 percent acid shale channers; very strongly acid; clear wavy boundary.

BC—26 to 32 inches; yellowish brown (10YR 5/6) very channery silty clay loam; common medium distinct strong brown (7.5YR 5/8) and common fine distinct pale brown (10YR 6/3) mottles; moderate coarse subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine and fine roots; few distinct discontinuous clay films on vertical faces of peds; 35 percent acid shale channers; very strongly acid; abrupt wavy boundary.

Cr—32 inches; pale olive (5Y 6/3) shale bedrock.

Range in Characteristics

Solum thickness: 18 to 36 inches
Depth to bedrock: 20 to 40 inches

Rock fragments: 5 to 15 percent gravel and channers in the A horizon; 5 to 35 percent gravel and channers in the E, BE, and Bt horizons; 30 to 50 percent channers in the BC and C horizons
Reaction: Extremely acid to strongly acid (in unlimed areas)

A horizon:
Hue—10YR
Value—2 to 4
Chroma—2 or 3
Texture (fine-earth fraction)—silt loam or loam

E and BE horizons:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 5
Texture (fine-earth fraction)—silt loam or loam

Bt horizon:
Hue—7.5YR to 2.5Y
Value—4 or 5
Chroma—4 to 8
Texture (fine-earth fraction)—silt loam, loam, clay loam, or silty clay loam

BC or C horizon:
Hue—10YR to 7.5YR
Value—4 or 5
Chroma—2 to 6
Texture (fine-earth fraction)—silt loam, loam, or silty clay loam

Cr layer:
Bedrock—soft to moderately hard shale, siltstone, or fine-grained sandstone

R layer:
Bedrock—moderately hard or hard shale, siltstone, or fine-grained sandstone

Gladehill Series

Physiographic province: Valley and Ridge
Landform: Low level flood plains in river valleys
Parent material: Alluvium derived from limestone, sandstone, and shale
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Alonzville soils, which have thinner and less dark surface layers than the Gladehill soils; on terraces
- Atkins soils, which are poorly drained; on the higher flood plains
- Derroc soils, which have more rock fragments than the Gladehill soils; on the higher flood plains
- Feedstone and Irongate soils, which are moderately well drained; on the higher flood plains
- Wolfgap soils, which have more clay than the Gladehill soils; on the higher flood plains

Taxonomic Classification

Coarse-loamy, siliceous, superactive, mesic Fluventic Hapludolls

Typical Pedon

Gladehill loam, 0 to 3 percent slopes, frequently flooded; Bath County, Virginia; about 1.2 miles west of the junction of Highways VA-42 and VA-39, 0.3 mile southwest of Highway VA-39; Nimrod Hall, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 59 minutes 42 seconds N. and long. 79 degrees 37 minutes 58 seconds W.

A1—0 to 10 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak fine granular structure; friable, nonsticky, nonplastic; common very fine and fine roots; slightly acid; clear smooth boundary.

A2—10 to 20 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium granular structure; friable, nonsticky, nonplastic; common very fine and fine roots; slightly acid; abrupt smooth boundary.

Bw—20 to 33 inches; dark brown (10YR 3/3) loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure; friable, nonsticky, nonplastic; few very fine roots; slightly acid; gradual wavy boundary.

C1—33 to 43 inches; brown (10YR 4/3) fine sandy loam; massive; very friable, nonsticky, nonplastic; 2 percent well rounded sandstone gravel; slightly acid; gradual wavy boundary.

C2—43 to 60 inches; brown (10YR 4/3) fine sandy loam; single grain; very friable, nonsticky, nonplastic; slightly acid.

Range in Characteristics

Solum thickness: 30 to 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent gravel and cobbles in the A and Bw horizons; 0 to 35 percent gravel and cobbles in the C horizon
Reaction: Slightly acid or neutral

Ap horizon (if it occurs):
Hue—10YR
Value—2 or 3
Chroma—2 or 3
Texture (fine-earth fraction)—loam

A horizon:
Hue—10YR
Value—2 or 3
Chroma—2 or 3
Texture (fine-earth fraction)—loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Texture (fine-earth fraction)—sandy loam, loam, or fine sandy loam

C horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam; some pedons are commonly stratified with thin horizons of sandy clay loam

Irongate Series

Physiographic province: Valley and Ridge
Landform: Low to intermediate flood plains in river valleys
Parent material: Alluvium derived from limestone, sandstone, and shale
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Coursey soils, which have thinner and less dark surface layers than the Irongate soils; on terraces
- Feedstone soils, which have more clay than the Irongate soils; on the higher flood plains
- Gladehill soils, which are well drained; on the lower flood plains
- Wolfgap soils, which are well drained; on landforms similar to those of the Irongate soils and on the higher flood plains

Taxonomic Classification

Coarse-loamy, siliceous, active, mesic Fluvaquentic Hapludolls

Typical Pedon

Irongate fine sandy loam, 0 to 3 percent slopes, occasionally flooded; Bath County, Virginia; about 1.2 miles west of the junction of Highways VA-39 and VA-621 and 300 yards southwest of Highway VA-39; Warm Springs, Virginia USGS 7.5 Minute Quadrangle; lat. 38 degrees 4 minutes 31 seconds N. and long. 79 degrees 50 minutes 45 seconds W.

A1—0 to 10 inches; dark brown (10YR 3/3) fine sandy loam, brown (10YR 5/3) dry; weak fine granular structure; friable, nonsticky, nonplastic; common very fine and fine roots; moderately acid; clear smooth boundary.

A2—10 to 21 inches; very dark grayish brown (10YR 3/2) fine sandy loam, brown (10YR 4/3) dry; weak medium granular structure; friable, nonsticky, nonplastic; common very fine and fine roots; slightly acid; abrupt smooth boundary.

Bw1—21 to 30 inches; brown (10YR 4/3) sandy loam; weak medium subangular blocky structure; friable, nonsticky, nonplastic; few very fine and fine roots; slightly acid; gradual wavy boundary.

Bw2—30 to 42 inches; brown (10YR 4/3) sandy loam; weak medium subangular blocky structure; friable, nonsticky, nonplastic; few very fine roots; common medium faint dark grayish brown (10YR 4/2) iron depletions and common fine prominent strong brown (7.5YR 5/8) iron-manganese masses; slightly acid; gradual wavy boundary.

C1—42 to 55 inches; brown (10YR 5/3) sandy loam; massive; friable, nonsticky, nonplastic; common medium faint dark grayish brown (10YR 4/2) iron depletions and common fine prominent strong brown (7.5YR 5/8) iron-manganese masses; 2 percent well rounded sandstone gravel; slightly acid; abrupt wavy boundary.

C2—55 to 62 inches; brown (10YR 4/3) gravelly sandy loam; single grain; very friable, nonsticky, nonplastic; common fine prominent strong brown (7.5YR 5/8) iron-manganese masses and common fine faint dark grayish brown (10YR 4/2) iron depletions; 35 percent well rounded sandstone gravel; slightly acid.

Range in Characteristics

Solum thickness: 30 to 50 inches
Depth to bedrock: More than 60 inches

Rock fragments: 0 to 15 percent gravel and cobbles in the A and Bw horizons; 0 to 35 percent gravel and cobbles in the C horizon
Reaction: Moderately acid to neutral

A horizon:
Hue—10YR
Value—2 or 3
Chroma—2 or 3
Texture (fine-earth fraction)—fine sandy loam

Ap horizon (if it occurs):
Hue—10YR
Value—2 or 3
Chroma—2 or 3
Texture (fine-earth fraction)—fine sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Texture (fine-earth fraction)—sandy loam, loam, or fine sandy loam

C horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 6
Texture (fine-earth fraction)—loam, fine sandy loam, or sandy loam; some pedons are stratified with thin horizons of loamy sand

Lehew Series

Physiographic province: Valley and Ridge
Landform: Mountains
Parent material: Red residuum weathered from sandstone
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 8 to 80 percent

Associated Soils

- Berks soils, which have more silt, less sand, and browner colors than Lehew soils and which formed in residuum weathered from shale and siltstone; on similar landforms
- Dekalb soils, which have browner colors than the Lehew soils; on similar landforms
- Oriskany soils, which are very deep to bedrock; at the base of slopes

Taxonomic Classification

Loamy-skeletal, siliceous, semiactive, mesic Typic Dystrudepts

Typical Pedon

Lehew channery sandy loam in an area of Lehew-Berks complex, 15 to 35 percent slopes, very stony; Alleghany County, Virginia; in a road cut, approximately 1,300 feet north and 17 degrees east of the intersection of Highway VA-602 and U.S. Forest Service Road 613, west of Big Branch; Glace, West Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 41 minutes 25 seconds N. and long. 80 degrees 17 minutes 27 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material.
A—1 to 2 inches; brown (7.5YR 4/2) channery sandy loam; weak fine granular structure; friable; common very fine, fine, and medium roots; 20 percent sandstone channers; extremely acid; clear smooth boundary.
Bw—2 to 15 inches; reddish brown (5YR 4/3) very channery loam; weak fine subangular blocky structure; friable; few very fine, fine, and medium roots; 40 percent sandstone channers; strongly acid; gradual wavy boundary.
BC—15 to 21 inches; reddish brown (5YR 4/3) very channery loam; weak fine subangular blocky structure; friable; few very fine, fine, and medium roots; 50 percent sandstone channers; strongly acid; clear wavy boundary.
C—21 to 27 inches; reddish brown (5YR 4/4) extremely channery sandy loam; massive; friable; few very fine and fine roots; lenses of soft, weathered bedrock; 65 percent sandstone channers; very strongly acid; clear wavy boundary.
R—27 inches; fractured, reddish brown, fine-grained sandstone bedrock.

Range in Characteristics

Solum thickness: 15 to 30 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 15 to 35 percent channers in the A horizon; 20 to 40 percent channers in the Bw horizon; 35 to 70 percent channers in the BC and C horizons
Reaction: Extremely acid to strongly acid (in unlimed areas)

A horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—1 or 2
Texture (fine-earth fraction)—loam, sandy loam, or fine sandy loam

Bw horizon:
Hue—5YR or 2.5YR
Value—3 to 5
Chroma—3 to 6
Texture (fine-earth fraction)—loam, sandy loam, or fine sandy loam

BC or C horizon:
Hue—5YR or 2.5YR
Value—3 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—sandy loam, loam, or fine sandy loam

Lily Series

Physiographic province: Valley and Ridge
Landform: Hills and mountains
Parent material: Residuum weathered from sandstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 3 to 55 percent

Associated Soils

- Dekalb soils, which have a loamy-skeletal particle size and do not have an argillic horizon; on landforms similar to those of the Lily soils
- McClung soils, which are very deep to bedrock; on landforms similar to those of the Lily soils

- Oriskany soils, which are very deep to bedrock and have a loamy-skeletal particle size; on footslopes and toeslopes

Taxonomic Classification

Fine-loamy, siliceous, semiactive, mesic Typic Hapludults

Typical Pedon

Lily sandy loam in an area of Dekalb-Lily-McClung complex, 15 to 35 percent slopes; Alleghany County, Virginia; in woodland, approximately 300 feet north and 8 degrees west of the intersection of Highway VA-658 and U.S. Forest Service Road 175, in the area of Peters Mountain; Callaghan, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 46 minutes 39 seconds N. and long. 80 degrees 5 minutes 5 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material.
A—1 to 3 inches; black (10YR 2/1) sandy loam; weak fine granular structure; very friable; many fine and medium roots; 14 percent sandstone channers; extremely acid; abrupt smooth boundary.
BE—3 to 17 inches; yellowish brown (10YR 5/4) loam; weak fine subangular blocky structure; very friable; common fine and medium roots; 8 percent sandstone gravel; very strongly acid; clear smooth boundary.
Bt1—17 to 27 inches; yellowish brown (10YR 5/6) clay loam; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very fine and fine roots; common faint clay films on all faces of peds; 5 percent sandstone gravel; very strongly acid; gradual smooth boundary.
Bt2—27 to 32 inches; strong brown (7.5YR 5/6) gravelly clay loam; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very fine and fine roots; common faint clay films on all faces of peds; 30 percent sandstone gravel; very strongly acid; abrupt irregular boundary.
R—32 inches; sandstone bedrock.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 5 to 15 percent gravel and channers in the A horizon; 5 to 30 percent gravel in the BA or BE horizon; 5 to 35 percent gravel in the Bt, BC, and C horizons
Reaction: Extremely acid to strongly acid (in unlimed areas)

A horizon:
Hue—10YR or 7.5YR
Value—2 to 5
Chroma—1 to 3
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

BA or BE horizon (if it occurs):
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—2 to 8
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Bt horizon:
Hue—10YR to 5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam, sandy clay loam, or clay loam

BC or C horizon (if it occurs):
Hue—10YR to 5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam, sandy loam, sandy clay loam, or clay loam

Macove Series

Physiographic province: Valley and Ridge
Landform: Base of slopes on hills and mountains and areas in valleys
Parent material: Colluvium derived from shale, siltstone, and sandstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 3 to 60 percent

Associated Soils

- Berks soils, which are moderately deep to bedrock and which formed in residuum derived from shale; on summits, shoulders, and backslopes
- Ogles soils, which formed in alluvium that was susceptible to flooding; on adjacent flood plains
- Shelocta soils, which have a fine-loamy particle size; on landforms similar to those of the Macove soils

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Typic Hapludults

Typical Pedon

Macove channery silt loam, 3 to 15 percent slopes, very stony; Pocahontas County, West Virginia; in woodland, approximately 6,300 feet due west of the intersection of Highway WV-28 and Thorny Creek Road; Clover Lick, West Virginia USGS 7.5 Minute Quadrangle; lat. 38 degrees 16 minutes 1 second N. and long. 79 degrees 59 minutes 22 seconds W.

A—0 to 1 inch; dark brown (10YR 3/3) channery silt loam; weak fine granular structure; very friable; many very fine, fine, medium, and coarse roots; 5 percent stones and 15 percent channers; very strongly acid; abrupt wavy boundary.
E—1 to 4 inches; brown (10YR 5/3) channery loam; weak fine subangular blocky structure parting to weak fine granular; friable; many very fine, fine, medium, and coarse roots; 5 percent stones, 5 percent cobbles, and 20 percent channers; very strongly acid; clear wavy boundary.
BE—4 to 7 inches; yellowish brown (10YR 5/6) channery silt loam; weak fine and medium subangular blocky structure; friable; many very fine, fine, medium, and coarse roots; 5 percent cobbles and 25 percent channers; very strongly acid; clear wavy boundary.
Bt1—7 to 14 inches; yellowish brown (10YR 5/8) very channery silt loam; weak medium subangular blocky structure; friable; common fine, medium, and coarse roots; few distinct clay films on surfaces along pores; 5 percent cobbles and 30 percent channers; very strongly acid; clear wavy boundary.
Bt2—14 to 23 inches; yellowish brown (10YR 5/8) very channery silty clay loam; moderate fine and medium subangular blocky structure; friable; common fine, medium, and coarse roots; few distinct clay films on surfaces along pores and root channels and on all faces of peds and rock fragments; 5 percent stones, 10

percent cobbles, and 30 percent channers; very strongly acid; clear wavy boundary.

Bt3—23 to 37 inches; strong brown (7.5YR 5/6) very channery silty clay loam; weak fine and medium subangular blocky structure; friable; few fine and medium roots; few distinct clay films on rock fragments, on all faces of peds, and on surfaces along root channels and pores; 10 percent cobbles, 10 percent boulders, and 25 percent channers; very strongly acid; gradual wavy boundary.

Bt4—37 to 65 inches; brown (7.5YR 5/4) extremely channery silty clay loam; weak medium and coarse subangular blocky structure; friable; few fine and medium roots; few distinct clay films on rock fragments, on all faces of peds, and on surfaces along root channels and pores; common medium black (10YR 2/1) iron-manganese concretions; 10 percent cobbles, 10 percent stones, 10 percent boulders, and 35 percent channers; very strongly acid.

Range in Characteristics

Solum thickness: 30 to 60 inches or more
Depth to bedrock: More than 60 inches
Rock fragments: 15 to 75 percent channers, cobbles, and stones in the A horizon; 10 to 75 percent channers, cobbles, and stones in the E horizon; 15 to 55 percent channers, cobbles, and stones in the Bt horizon; 15 to 65 percent channers, cobbles, stones, and boulders in the C horizon (average of more than 35 percent in the control section)
Reaction: Very strongly acid or strongly acid (in unlimed areas)

A horizon:
Hue—10YR
Value—2 to 4
Chroma—2 or 3
Texture (fine-earth fraction)—loam or silt loam

E horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture (fine-earth fraction)—loam or silt loam

BE horizon:
Hue—10YR
Value—4 to 6
Chroma—4 to 6
Texture (fine-earth fraction)—loam or silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam, silt loam, or silty clay loam

Madsheep Series

Physiographic province: Valley and Ridge
Landform: Mountains
Parent material: Residuum weathered from red shale, siltstone, and sandstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High

Depth class: Moderately deep
Slope range: 8 to 55 percent

Associated Soils

- Mandy soils, which have yellower colors than the Madsheep soils; on similar landforms
- Paddyknob soils, which have yellower colors and more sand than the Madsheep soils; on similar landforms

Taxonomic Classification

Loamy-skeletal, siliceous, active, frigid Typic Dystrudepts

Typical Pedon

Madsheep channery loam in an area of Paddyknob-Madsheep complex, 15 to 35 percent slopes, very stony; Bath County, Virginia; in a wooded area, about 1,600 feet southeast of the intersection of National Forest Service Roads 55 and 141, about 5,400 feet southwest of the intersection of National Forest Service Roads 55 and 636; Paddy Knob, West Virginia USGS 7.5 Minute Quadrangle; lat. 38 degrees 15 minutes 26 seconds N. and long. 79 degrees 48 minutes 28 seconds W.

Oi—0 to 1 inch; slightly decomposed plant material.
A—1 to 4 inches; dark brown (7.5YR 3/2) channery loam; weak fine granular structure; friable, nonsticky, nonplastic; 20 percent angular sandstone channers; extremely acid; clear smooth boundary.
Bw1—4 to 17 inches; reddish brown (5YR 4/4) channery loam; weak medium subangular blocky structure; friable, slightly sticky, nonplastic; 30 percent angular sandstone channers; very strongly acid; gradual smooth boundary.
Bw2—17 to 30 inches; dark reddish brown (5YR 3/4) very channery loam; weak medium subangular blocky structure; friable, slightly sticky, nonplastic; 10 percent angular sandstone flagstones and 30 percent angular sandstone channers; very strongly acid; abrupt wavy boundary.
R—30 inches; sandstone bedrock.

Range in Characteristics

Solum thickness: 20 to 35 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 15 to 35 percent channers, flagstones, and cobbles in the A horizon; 20 to 55 percent channers, flagstones, and cobbles in the BA and Bw horizons; as much as 80 percent channers, flagstones, and cobbles in the C horizon
Reaction: Extremely acid to strongly acid
Other characteristics: Bedrock is brown to reddish brown and typically consists of hard sandstone; in some places the bedrock is shale or siltstone

A horizon:
Hue—5YR or 7.5YR
Value—2 to 4
Chroma—1 to 4
Texture (fine-earth fraction)—loam

BA horizon (if it occurs):
Hue—2.5YR or 5YR
Value—4 or 5
Chroma—3 or 4
Texture (fine-earth fraction)—loam or silt loam

Bw horizon:
Hue—2.5YR or 5YR
Value—3 to 5
Chroma—3 to 6
Texture (fine-earth fraction)—loam or silt loam

BC or C horizon (if it occurs):
Hue—2.5YR or 5YR
Value—3 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—loam or silt loam

Mandy Series

Physiographic province: Valley and Ridge
Landform: Mountains
Parent material: Residuum weathered from interbedded siltstone, shale, and fine-grained sandstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 8 to 55 percent

Associated Soils

- Madsheep soils, which have redder colors than the Mandy soils; on similar landforms
- Paddyknob soils, which have less silt and more sand than the Mandy soils; on similar landforms

Taxonomic Classification

Loamy-skeletal, mixed, active, frigid Typic Dystrudepts

Typical Pedon

Mandy channery silt loam, 35 to 55 percent slopes, very stony; Pocahontas County, West Virginia; in a wooded area, approximately 1.1 miles south and 60 degrees east of the confluence of Abes Run and the East Fork of the Greenbrier River; Thornwood, West Virginia USGS 7.5 Minute Quadrangle; lat. 38 degrees 36 minutes 33 seconds N. and long. 79 degrees 39 minutes 35 seconds W.

Oi—0 to 1 inch; slightly decomposed plant material.
A—1 to 4 inches; very dark brown (10YR 2/2) channery silt loam; moderate fine granular structure; very friable; many very fine, fine, medium, and coarse roots; 15 percent channers; extremely acid; abrupt wavy boundary.
E—4 to 6 inches; dark brown (7.5YR 3/4) channery silt loam; moderate fine and medium granular structure; very friable; many very fine, fine, medium, and coarse roots; 15 percent channers; very strongly acid; abrupt wavy boundary.
BE—6 to 10 inches; dark yellowish brown (10YR 4/6) channery silt loam; weak fine subangular blocky structure; very friable; many very fine, fine, medium, and coarse roots; 25 percent channers; very strongly acid; clear wavy boundary.
Bw1—10 to 17 inches; yellowish brown (10YR 5/6) very channery silt loam; weak fine subangular blocky structure; friable; common very fine, fine, and medium roots; 35 percent channers; very strongly acid; clear wavy boundary.
Bw2—17 to 29 inches; yellowish brown (10YR 5/4) very channery silt loam; weak fine

and medium subangular blocky structure; friable; few very fine, fine, and medium roots; 45 percent channers; very strongly acid; clear wavy boundary.

C—29 to 37 inches; yellowish brown (10YR 5/4) extremely channery silt loam; massive; friable; few fine roots; 65 percent channers; very strongly acid; clear wavy boundary.

Cr—37 inches; highly weathered siltstone bedrock.

Range in Characteristics

Solum thickness: 20 to 33 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 10 to 15 percent channers in the A horizon; 10 to 20 percent channers in the E horizon; 25 to 50 percent channers in the BE and Bw horizons (average of more than 35 percent in the control section); 60 to 90 percent channers in the C horizon
Reaction: Extremely acid to strongly acid

A horizon:
Hue—10YR
Value—2 to 4
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam or loam

E horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—3 or 4
Texture (fine-earth fraction)—silt loam or loam

BE horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—4 to 6
Texture (fine-earth fraction)—silt loam or loam

Bw horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 6
Texture (fine-earth fraction)—silt loam or loam

C horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—4 to 8
Texture (fine-earth fraction)—silt loam or loam

Maurertown Series

Physiographic province: Valley and Ridge
Landform: Low stream terraces in river valleys
Parent material: Alluvium derived from sandstone and shale and small amounts of limestone
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Low
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Alonzville soils, which are well drained; on landforms similar to those of the Maurertown soils
- Coursey soils, which are moderately well drained; on landforms similar to those of the Maurertown soils
- Gladehill soils, which are well drained and have a coarse-loamy particle size; on flood plains
- Nicelytown soils, which are moderately well drained; on the higher terraces

Taxonomic Classification

Fine, mixed, semiactive, mesic Typic Endoaqualfs

Typical Pedon

Maurertown silty clay loam, 0 to 3 percent slopes, rarely flooded; Bath County, Virginia; in a grassed area, about 1 mile northeast of the intersection of Highway VA-625 and the Cowpasture River, 0.7 mile south of the intersection of Highways VA-625 and VA-624, about 150 yards east of Highway VA-625; Green Valley, Virginia USGS 7.5 Minute Quadrangle; lat. 38 degrees 6 minutes 39 seconds N. and long. 79 degrees 37 minutes 27 seconds W.

Ap1—0 to 5 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 6/1) dry; moderate fine granular structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; strongly acid; abrupt smooth boundary.

Ap2—5 to 8 inches; gray (10YR 5/1) silty clay loam; moderate fine and medium granular structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; strongly acid; abrupt smooth boundary.

Btg1—8 to 11 inches; gray (10YR 5/1) silty clay; strong medium subangular blocky structure; firm, moderately sticky, moderately plastic; few very fine and fine roots; common distinct clay films on all faces of peds; many fine prominent strong brown (7.5YR 5/6) iron-manganese masses throughout; strongly acid; abrupt wavy boundary.

Btg2—11 to 15 inches; grayish brown (2.5Y 5/2) silty clay; strong medium prismatic structure; firm, moderately sticky, moderately plastic; few very fine and fine roots; many prominent clay films on all faces of peds; common fine prominent black (10YR 2/1) iron-manganese concretions, many fine prominent brownish yellow (10YR 6/8) iron-manganese masses, and common medium prominent white (10YR 8/1) iron depletions; strongly acid; clear wavy boundary.

Btg3—15 to 26 inches; light brownish gray (2.5Y 6/2) silty clay; strong very coarse prismatic structure; firm, moderately sticky, moderately plastic; few very fine and fine roots; many prominent clay films on all faces of peds; common medium prominent white (10YR 8/1) iron depletions and many medium prominent brownish yellow (10YR 6/8) iron-manganese masses; strongly acid; clear wavy boundary.

Btg4—26 to 36 inches; light gray (10YR 7/1) silty clay; strong extremely coarse prismatic structure; very firm, moderately sticky, moderately plastic; few very fine roots; common distinct clay films on all faces of peds; common medium prominent brownish yellow (10YR 6/6) iron-manganese masses; moderately acid; clear wavy boundary.

BC—36 to 44 inches; yellowish brown (10YR 5/4) and brownish yellow (10YR 6/6) silty clay loam; weak medium subangular blocky structure; firm, moderately sticky, moderately plastic; few faint gray (10YR 5/1) clay films on all faces of peds; many medium prominent gray (10YR 6/1) iron depletions; moderately acid; gradual wavy boundary.

C1—44 to 58 inches; strong brown (7.5YR 5/6) and yellowish brown (10YR 5/6) silty clay loam; massive; friable, slightly sticky, slightly plastic; common medium prominent grayish brown (10YR 5/2) and gray (10YR 6/1) iron depletions; slightly acid; abrupt wavy boundary.

2C2—58 to 63 inches; yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6) gravelly silty clay loam; massive; firm, slightly sticky, slightly plastic; common medium prominent grayish brown (10YR 5/2) and gray (10YR 6/1) iron depletions; 5 percent well rounded sandstone gravel and 25 percent well rounded sandstone cobbles; slightly acid.

Range in Characteristics

Solum thickness: 40 to more than 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent gravel and cobbles in the upper part of the C horizon and 0 to 35 percent gravel and cobbles in the lower part of the C horizon
Reaction: Strongly acid to neutral in the A, Ap, and BAg horizons and in the upper part of the Btg horizon; moderately acid to neutral in the lower part of the Btg horizon and in the BC and C horizons

A or Ap horizon:
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—1 or 2
Texture (fine-earth fraction)—silty clay loam

BAg horizon (if it occurs):
Hue—10YR to 5Y
Value—4 to 6
Chroma—0 to 2
Texture (fine-earth fraction)—loam, silt loam, silty clay loam, or clay loam

Btg horizon:
Hue—10YR to 5Y
Value—4 to 6
Chroma—0 to 2
Texture (fine-earth fraction)—silty clay loam, silty clay, or clay

BC horizon:
Hue—10YR to 5Y
Value—4 to 6
Chroma—1 to 6
Texture (fine-earth fraction)—silty clay loam, silty clay, or clay

C horizon:
Hue—7.5YR to 5Y
Value—4 to 6
Chroma—1 to 6
Texture (fine-earth fraction)—silty clay loam, silty clay, or clay

McClung Series

Physiographic province: Valley and Ridge
Landform: Hills and mountains
Parent material: Residuum weathered from sandstone with interbeds of limestone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high

Depth class: Very deep
Slope range: 3 to 55 percent

Associated Soils

- Dekalb soils, which are moderately deep to bedrock and have a loamy-skeletal particle-size; on landforms similar to those of the McClung soils
- Frederick soils, which have a fine particle size; on hills
- Lily soils, which are moderately deep to bedrock; on landforms similar to those of the McClung soils
- Oriskany soils, which have a loamy-skeletal particle size and formed in colluvium derived from sandstone; at the base of slopes
- Watahala soils, which have a fine-loamy over clayey particle size; on landforms similar to those of the McClung soils

Taxonomic Classification

Fine-loamy, siliceous, semiactive, mesic Typic Paleudults

Typical Pedon

McClung sandy loam in an area of McClung-Watahala-Dekalb complex, 8 to 15 percent slopes; Bath County, Virginia; in a wooded area on a northwest-facing aspect, 1.1 miles northeast of the intersection of Highways VA-609 and VA-624, about 180 yards southeast of Highway VA-624; Bath Alum, Virginia USGS 7.5 Minute Quadrangle; lat. 38 degrees 5 minutes 15 seconds N. and long. 79 degrees 40 minutes 10 seconds W.

Oe—0 to 2 inches; moderately decomposed plant material.

E—2 to 3 inches; light gray (10YR 7/2) sandy loam; weak coarse granular structure; very friable, nonsticky, nonplastic; many fine, medium, and coarse roots; few fine tubular pores; extremely acid; abrupt smooth boundary.

BE—3 to 11 inches; yellowish brown (10YR 5/4) sandy loam; weak medium subangular blocky structure; very friable, nonsticky, nonplastic; few very fine and fine roots; few fine dendritic tubular pores; very strongly acid; clear smooth boundary.

Bt1—11 to 19 inches; yellowish brown (10YR 5/8) sandy loam; weak coarse subangular blocky structure; friable, slightly sticky, nonplastic; few very fine and fine roots; common fine dendritic tubular pores; very few faint clay films on surfaces along pores and few faint clay films on all faces of peds; very strongly acid; gradual wavy boundary.

Bt2—19 to 28 inches; strong brown (7.5YR 5/8) sandy clay loam; weak coarse subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine and fine roots; common fine dendritic tubular pores; very few faint clay films on surfaces along pores and few faint clay films on all faces of peds; very strongly acid; clear wavy boundary.

Bt3—28 to 38 inches; strong brown (7.5YR 5/8) sandy clay loam; common coarse red (2.5YR 4/6) mottles; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine and fine roots; many fine dendritic tubular pores; very few prominent clay films on surfaces along pores and common prominent clay films on all faces of peds; very strongly acid; abrupt wavy boundary.

Bt4—38 to 51 inches; yellowish red (5YR 5/6) sandy clay loam; common medium red (2.5YR 4/6) and common medium brownish yellow (10YR 6/8) mottles; strong coarse subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine roots; common very fine dendritic tubular pores; very few prominent clay films on surfaces along pores and common prominent clay films on all faces of peds; very strongly acid; gradual wavy boundary.

Bt5—51 to 65 inches; reddish yellow (7.5YR 6/8) sandy clay loam; common fine yellow (10YR 7/6) mottles; weak coarse subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine roots; few distinct clay films on all faces of peds; few fine prominent clay bodies; very strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent gravel in the A horizon; 0 to 35 percent gravel in the BE, Bt, and BC horizons
Reaction: Extremely acid to strongly acid (in unlimed areas)

A horizon (if it occurs):
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Ap horizon (if it occurs):
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

E horizon:
Hue—10YR
Value—4 to 7
Chroma—2 or 3
Texture (fine-earth fraction)—sandy loam, fine sandy loam, loamy sand, or loamy fine sand

BE horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—4 to 6
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Bt horizon:
Hue—10YR to 2.5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam or sandy loam in the upper part of the horizon and sandy clay loam, clay loam, or sandy clay in the lower part

BC horizon (if it occurs):
Hue—10YR to 2.5YR
Value—5 or 6
Chroma—4 to 8
Texture (fine-earth fraction)—sandy clay loam, clay loam, or sandy clay

Murrill Series

Physiographic province: Valley and Ridge
Landform: Base of slopes on hills and areas in valleys
Parent material: Colluvium derived from sandstone and shale over residuum weathered from limestone
Drainage class: Well drained

Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 3 to 55 percent

Associated Soils

- Frederick soils, which have a fine particle size and which formed in residuum weathered from limestone; on summits, shoulders, and backslopes
- Oriskany soils, which have a loamy-skeletal particle size; on landforms similar to those of the Murrill soils
- Poplimento soils, which have a fine particle size and which formed in residuum weathered from interbedded shale and limestone; on summits, shoulders, and backslopes
- Watahala soils, which have a fine-loamy over clayey particle size and which formed in residuum weathered from chert limestone; on summits, shoulders, and backslopes

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Murrill cobbly loam, 15 to 35 percent slopes, very stony; Alleghany County, Virginia; in a road cut adjacent to an area of pasture, approximately 4,100 feet north and 58 degrees east of the intersection of Highways VA-600 and VA-604, in the area of Peters Mountain; Alleghany, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 40 minutes 23 seconds N. and long. 80 degrees 12 minutes 4 seconds W.

Ap—0 to 4 inches; brown (10YR 4/3) cobbly loam; weak fine granular structure; very friable; many very fine, fine, medium, and coarse roots; 25 percent sandstone cobbles; very strongly acid; gradual smooth boundary.

BE—4 to 10 inches; yellowish brown (10YR 5/6) channery silt loam; weak fine granular structure; very friable; many very fine, fine, medium, and coarse roots; 20 percent sandstone channers; very strongly acid; gradual smooth boundary.

Bt1—10 to 15 inches; strong brown (7.5YR 5/6) channery silt loam; weak fine subangular blocky structure; very friable; common fine, medium, and coarse roots; few faint clay films on all faces of peds; 20 percent sandstone channers; very strongly acid; clear smooth boundary.

Bt2—15 to 23 inches; strong brown (7.5YR 5/6) channery silty clay loam; moderate medium subangular blocky structure; friable, moderately sticky, slightly plastic; many fine and medium and common coarse roots; common distinct clay films on rock fragments and on all faces of peds; 2 percent sandstone cobbles and 30 percent sandstone channers; very strongly acid; gradual smooth boundary.

Bt3—23 to 31 inches; yellowish red (5YR 5/8) channery silty clay loam; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; common fine and medium and few coarse roots; common distinct clay films on all faces of peds and on rock fragments; 15 percent sandstone channers; very strongly acid; gradual smooth boundary.

Bt4—31 to 40 inches; yellowish red (5YR 5/8) silty clay loam; few fine distinct brownish yellow (10YR 6/8) lithochromic mottles; strong medium subangular blocky structure; friable, very sticky, very plastic; common very fine and fine roots; many distinct clay films on all faces of peds; few fine black (10YR 2/1) iron-manganese masses; 10 percent sandstone channers; very strongly acid; gradual smooth boundary.

2Bt5—40 to 65 inches; yellowish red (5YR 5/8) silty clay; strong medium subangular blocky structure; firm, very sticky, very plastic; few very fine and fine roots; many distinct clay films on all faces of peds; many fine black (10YR 2/1) iron-manganese masses; very strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 10 to 30 percent gravel, channers, and cobbles in the A, E, BE, and Bt horizons; 0 to 25 percent gravel, channers, and cobbles in the 2Bt horizon
Reaction: Very strongly acid to moderately acid (in unlimed areas)
Other characteristics: The Murrill soils in Bath County typically have an increase in clay content with increasing depth

A or Ap horizon:
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—loam, silt loam, or sandy loam

E or BE horizon:
Hue—10YR
Value—5 or 6
Chroma—3 to 6
Texture (fine-earth fraction)—loam, silt loam, or sandy loam

Bt horizon:
Hue—10YR to 5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam, silt loam, clay loam, or silty clay loam

2Bt horizon:
Hue—10YR to 5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—clay loam, silty clay loam, or silty clay

Nicelytown Series

Physiographic province: Valley and Ridge
Landform: High stream terraces in river valleys
Parent material: Alluvium derived from sandstone and shale
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 3 to 8 percent

Associated Soils

- Cottonbend soils, which are well drained; on landforms similar to those of the Nicelytown soils
- Purdy soils, which are poorly drained and have a fine particle size; on landforms similar to those of the Nicelytown soils
- Sugarhol soils, which are well drained and have a fine particle size; on landforms similar to those of the Nicelytown soils
- Zoar soils, which are moderately well drained and have a fine particle size; on landforms similar to those of the Nicelytown soils

Taxonomic Classification

Fine-loamy, siliceous, semiactive, mesic Aquic Paleudults

Typical Pedon

Nicelytown silt loam, 3 to 8 percent slopes; Alleghany County, Virginia; approximately 1,850 feet south and 15 degrees west of the northern intersection of Highways VA-311 and VA-650, along Dunlap Creek; Alleghany, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 42 minutes 4 seconds N. and long. 80 degrees 12 minutes 47 seconds W.

Ap—0 to 5 inches; brown (10YR 4/3) silt loam; moderate medium granular structure; very friable, nonsticky, nonplastic; many very fine and fine roots; strongly acid; gradual smooth boundary.

AB—5 to 8 inches; brown (10YR 4/3) silt loam; weak fine subangular blocky structure; very friable, nonsticky, nonplastic; common very fine and fine roots; common fine faint dark grayish brown (10YR 4/2) and common medium faint brown (10YR 5/3) iron depletions; strongly acid; clear smooth boundary.

Bt1—8 to 17 inches; pale brown (10YR 6/3) silty clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine and fine roots; few fine vesicular pores; faint patchy clay films on all faces of peds; common fine faint yellowish brown (10YR 5/4) masses of oxidized iron and brown (10YR 5/3) iron depletions; strongly acid; diffuse smooth boundary.

Bt2—17 to 26 inches; pale brown (10YR 6/3) clay loam; moderate medium subangular blocky structure; friable; few very fine and fine roots; few fine vesicular pores; faint patchy clay films on all faces of peds; many fine distinct yellowish brown (10YR 5/6) masses of oxidized iron; strongly acid; clear smooth boundary.

Bt3—26 to 34 inches; light yellowish brown (2.5Y 6/3) clay loam; weak medium subangular blocky structure; friable; few very fine roots; few fine vesicular pores; faint patchy clay films on all faces of peds; many fine distinct gray (10YR 6/1) iron depletions and many fine prominent strong brown (7.5YR 5/6) and distinct brown (7.5YR 5/4) masses of oxidized iron; 5 percent rounded sandstone gravel; strongly acid; diffuse smooth boundary.

Btg—34 to 48 inches; light brownish gray (10YR 6/2) silty clay loam; weak fine subangular blocky structure; very friable; few very fine roots; faint patchy clay films on all faces of peds; many fine distinct yellowish brown (10YR 5/4) and prominent strong brown (7.5YR 5/6) masses of oxidized iron; 5 percent rounded sandstone gravel; strongly acid; diffuse smooth boundary.

BCg—48 to 65 inches; light brownish gray (10YR 6/2) gravelly silty clay loam; weak fine subangular blocky structure; very friable; few very fine roots; many fine distinct yellowish brown (10YR 5/4) masses of oxidized iron; 16 percent rounded sandstone gravel; strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent gravel and cobbles in the A, E, EB, and BE horizons; 0 to 35 percent gravel and cobbles in the Bt horizon; 0 to 50 percent gravel in the Btg, BC, and BCg horizons
Reaction: Very strongly acid or strongly acid (in unlimed areas)

Ap horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—3 or 4
Texture (fine-earth fraction)—silt loam, loam, or fine sandy loam

A horizon (if it occurs):
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture (fine-earth fraction)—silt loam, loam, or fine sandy loam

AB, EB, or BE horizon (if it occurs):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—loam, fine sandy loam, or silt loam

Bt horizon:
Hue—2.5Y to 7.5YR
Value—5 or 6
Chroma—3 to 8
Texture (fine-earth fraction)—loam, silt loam, clay loam, or silty clay loam

Btg horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Texture (fine-earth fraction)—loam, clay loam, or silty clay loam

BC horizon (if it occurs):
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—3 to 6
Texture (fine-earth fraction)—loam, clay loam, or silty clay loam

BCg horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—1 or 2
Texture (fine-earth fraction)—loam, clay loam, or silty clay loam

Ogles Series

Physiographic province: Valley and Ridge
Landform: Low to intermediate level flood plains in river valleys
Parent material: Alluvium derived from sandstone and shale
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Coursey soils, which are moderately well drained and have a fine-loamy particle size; on low stream terraces
- Gladehill soils, which have a coarse-loamy particle size and a mollic epipedon; on landforms similar to those of the Ogles soils
- Macove soils, which are not susceptible to flooding; on footslopes and toeslopes
- Shelocta soils, which have a fine-loamy particle size and which formed in colluvium; on footslopes and toeslopes

- Wolfgap soils, which have a fine-loamy particle size and a mollic epipedon; on landforms similar to those of the Ogles soils

Taxonomic Classification

Loamy-skeletal, siliceous, active, mesic Fluventic Dystrudepts

Typical Pedon

Ogles very cobbly loam, 0 to 3 percent slopes, occasionally flooded; Alleghany County, Virginia; in woodland, approximately 0.5 mile north-northwest of the intersection of Highways VA-661 and I-64, on the bank of Ogle Creek; Callaghan, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 49 minutes 34 seconds N. and long. 80 degrees 7 minutes 2 seconds W.

A—0 to 5 inches; very dark grayish brown (10YR 3/2) very cobbly loam; weak fine granular structure; very friable, nonsticky, nonplastic; many very fine, fine, and medium and few coarse roots; 23 percent sandstone gravel and 35 percent sandstone cobbles; strongly acid; clear smooth boundary.

Bw—5 to 28 inches; yellowish brown (10YR 5/4) extremely cobbly sandy loam; weak fine granular structure; very friable, nonsticky, nonplastic; many very fine, fine, and medium roots; 30 percent sandstone gravel and 37 percent sandstone cobbles; strongly acid; gradual smooth boundary.

C1—28 to 47 inches; yellowish brown (10YR 5/4) extremely cobbly sandy loam; weak coarse granular structure; very friable, nonsticky, nonplastic; common very fine and fine roots; 30 percent sandstone cobbles and 41 percent sandstone gravel; strongly acid; gradual smooth boundary.

C2—47 to 60 inches; yellowish brown (10YR 5/4) very cobbly sandy loam; weak coarse granular structure; very friable, slightly sticky, nonplastic; few very fine and fine roots; 25 percent sandstone gravel and 30 percent sandstone cobbles; strongly acid.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: More than 60 inches
Reaction: Very strongly acid to moderately acid (in unlimed areas)
Rock fragments: 35 to 60 percent gravel and cobbles in the A horizon; 35 to 70 percent gravel and cobbles in the Bw horizon; 35 to 80 percent gravel in the C horizon
Other characteristics: Redoximorphic features occur below a depth of 42 inches

A horizon:
Hue—10YR or 7.5YR
Value—2 to 4
Chroma—2 to 4
Texture (fine-earth fraction)—loam or sandy loam

Bw horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture (fine-earth fraction)—loam or sandy loam

C horizon:
Hue—7.5YR to 10YR
Value—4 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—sandy loam or loamy sand

Oriskany Series

Physiographic province: Valley and Ridge
Landform: Base of slopes on hills and mountains, areas in valleys, and areas on old alluvial terraces
Parent material: Colluvium derived from sandstone and shale
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 3 to 55 percent

Associated Soils

- Dekalb soils, which are moderately deep to bedrock, do not have an argillic horizon, and formed in residuum weathered from sandstone; on mountains
- Escatawba soils, which have a fine-loamy particle size and a perched seasonal high water table above a clay discontinuity; on landforms similar to those of the Oriskany soils
- Lehew soils, which are moderately deep to bedrock, do not have an argillic horizon, and formed in residuum weathered from sandstone; on mountains
- Lily soils, which are moderately deep to bedrock, have a fine-loamy particle size, and formed in residuum weathered from sandstone; on mountains
- Murrill soils, which have a fine-loamy particle size; on landforms similar to those of the Oriskany soils

Taxonomic Classification

Loamy-skeletal, siliceous, semiactive, mesic Typic Hapludults

Typical Pedon

Oriskany cobbly sandy loam, 35 to 55 percent slopes, extremely stony; Alleghany County, Virginia; in woodland, approximately 7,900 feet north and 73 degrees east of the intersection of Highways VA-18 and VA-657, near Horse Mountain; Covington, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 45 minutes 31 seconds N. and long. 79 degrees 57 minutes 49 seconds W.

Oi—0 to 2 inches; slightly decomposed plant material.
A—2 to 6 inches; very dark grayish brown (10YR 3/2) cobbly sandy loam; weak fine granular structure; very friable; many fine, medium, and coarse and few very fine roots; 5 percent sandstone stones, 10 percent sandstone gravel, and 15 percent sandstone cobbles; strongly acid; abrupt smooth boundary.
E—6 to 11 inches; brown (10YR 5/3) cobbly sandy loam; weak fine granular structure; very friable; many very fine and fine, common medium, and few coarse roots; 10 percent sandstone gravel and 20 percent sandstone cobbles; strongly acid; clear smooth boundary.
Bt1—11 to 29 inches; brown (7.5YR 4/4) very cobbly loam; weak fine subangular blocky structure; friable; common very fine and fine and few medium and coarse roots; few distinct clay bridges between sand grains; 5 percent sandstone stones, 15 percent sandstone gravel, and 25 percent sandstone cobbles; strongly acid; gradual wavy boundary.
Bt2—29 to 40 inches; brown (7.5YR 4/4) very cobbly loam; moderate fine subangular blocky structure; friable; common very fine and fine and few medium and coarse roots; few distinct clay bridges between sand grains; 5 percent sandstone stones, 20 percent sandstone gravel, and 30 percent sandstone cobbles; very strongly acid; clear wavy boundary.
Bt3—40 to 65 inches; brown (7.5YR 4/4) extremely cobbly loam; moderate fine subangular blocky structure; friable; few fine and medium roots; few distinct clay

bridges between sand grains; 10 percent sandstone stones, 20 percent sandstone gravel, and 30 percent sandstone cobbles; very strongly acid.

Range in Characteristics

Solum thickness: 40 to 60 inches or more
Depth to bedrock: More than 60 inches
Rock fragments: 15 to 65 percent gravel, cobbles, stones, and boulders in the A and E horizons; 35 to 75 percent gravel, cobbles, and stones in the Bt and C horizons
Reaction: Very strongly acid or strongly acid (in unlimed areas)

A horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—2 or 3
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

E horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 or 4
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Bt horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam, sandy clay loam, or clay loam

C horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—sandy loam, loam, or sandy clay loam

Paddyknob Series

Physiographic province: Valley and Ridge
Landform: Mountains
Parent material: Residuum weathered from sandstone interbedded with shale and siltstone
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 8 to 55 percent

Associated Soils

- Madsheep soils, which have redder colors and more silt than the Paddyknob soils; on similar landforms
- Mandy soils, which have more silt and less sand than the Paddyknob soils; on similar landforms

Taxonomic Classification

Loamy-skeletal, siliceous, superactive, frigid Typic Dystrudepts

Typical Pedon

Paddyknob very channery loam in an area of Paddyknob-Madsheep complex, 15 to 35 percent slopes, very stony; Bath County, Virginia; in a wooded area, about 1,800 feet west of the intersection of National Forest Service Roads 55 and 636, about 4,000 feet northeast of the intersection of National Forest Service Roads 55 and 141; Paddy Knob, West Virginia USGS 7.5 Minute Quadrangle; lat. 38 degrees 15 minutes 59 seconds N. and long. 79 degrees 47 minutes 55.20 seconds W.

Oi—0 to 1 inch; slightly decomposed plant material.
A—1 to 3 inches; very dark grayish brown (10YR 3/2) very channery loam; weak fine granular structure; friable, nonsticky, nonplastic; 35 percent angular sandstone channers; extremely acid; clear smooth boundary.
BA—3 to 6 inches; dark yellowish brown (10YR 4/4) very channery loam; weak fine subangular blocky structure; friable, nonsticky, nonplastic; 35 percent angular sandstone channers; extremely acid; clear smooth boundary.
Bw—6 to 26 inches; dark yellowish brown (10YR 4/6) very channery sandy loam; weak fine subangular blocky structure; friable, slightly sticky, nonplastic; 45 percent angular sandstone channers; very strongly acid; abrupt wavy boundary.
R—26 inches; sandstone bedrock.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 35 to 55 percent channers, gravel, cobbles, and flagstones in the A horizon; 15 to 55 percent channers, gravel, cobbles, and flagstones in the E horizon; 20 to 60 percent channers, gravel, cobbles, and flagstones in the BA, BE, and Bw horizons; 40 to 90 percent channers, gravel, cobbles, and flagstones in the C horizon
Reaction: Extremely acid to strongly acid
Other characteristics: Bedrock is typically hard sandstone but is interbedded with shale or siltstone in some places

A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 4
Texture (fine-earth fraction)—loam, fine sandy loam, or loam

E horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

BE or BA horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 7
Chroma—4 to 8
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

BC or C horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6

Chroma—4 to 6
Texture (fine-earth fraction)—loamy sandy, sandy loam, fine sandy loam, or loam

Poplimento Series

Physiographic province: Valley and Ridge
Landform: Hills
Parent material: Residuum weathered from limestone and shale
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 8 to 55 percent

Associated Soils

- Berks soils, which are moderately deep to bedrock, have a loamy-skeletal particle size, and formed in residuum weathered from shale; on summits, shoulders, and backslopes
- Caneyville soils, which are moderately deep to bedrock and which formed in residuum weathered from limestone; on landforms similar to those of the Poplimento soils
- Faywood soils, which are moderately deep to bedrock and which formed in residuum weathered from limestone and shale; on landforms similar to those of the Poplimento soils
- Murrill soils, which are very deep to bedrock, have a fine-loamy particle size, and formed in colluvium; on footslopes, on toeslopes, and in drainageways

Taxonomic Classification

Fine, mixed, subactive, mesic Ultic Hapludalfs

Typical Pedon

Poplimento silty clay loam in an area of Faywood-Poplimento complex, 8 to 15 percent slopes; Alleghany County, Virginia; in a road cut, approximately 5,650 feet south and 16 degrees west of the intersection of Highways VA-618 and VA-616, near Blue Spring Creek; Strom, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 40 minutes 25 seconds N. and long. 79 degrees 59 minutes 51 seconds W.

Ap—0 to 5 inches; dark yellowish brown (10YR 4/4) silty clay loam; strong fine granular structure; very friable, moderately sticky, slightly plastic; many very fine and fine and common medium roots; 1 percent shale channers; moderately acid; abrupt smooth boundary.

Bt1—5 to 20 inches; yellowish red (5YR 5/8) silty clay; strong medium subangular blocky structure; friable, very sticky, very plastic; common very fine, fine, and medium roots; common distinct clay films on all faces of peds; 1 percent shale channers; strongly acid; gradual smooth boundary.

Bt2—20 to 35 inches; yellowish red (5YR 5/8) silty clay; many fine yellow (10YR 7/8) mottles; moderate medium subangular blocky structure; friable, very sticky, very plastic; few very fine, fine, and medium roots; common distinct clay films on all faces of peds; 2 percent shale channers; very strongly acid; gradual smooth boundary.

BC1—35 to 50 inches; brownish yellow (10YR 6/8) and yellowish red (5YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very fine and fine roots; 10 percent shale channers; very strongly acid; diffuse smooth boundary.

BC2—50 to 60 inches; yellowish red (5YR 5/6) and brownish yellow (10YR 6/8) channery silty clay loam; weak medium subangular blocky structure; firm, moderately sticky, moderately plastic; few very fine and fine roots; 20 percent shale channers; moderately acid.

Range in Characteristics

Solum thickness: More than 40 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent channers in the A, Ap, and BA horizons and the upper part of the Bt horizon; 0 to 55 percent channers in the lower part of the Bt horizon and in the BC and C horizons
Reaction: Very strongly acid to slightly acid (in unlimed areas)

A or Ap horizon:
Hue—10YR or 7.5YR
Value—3 to 5
Chroma—2 to 6
Texture (fine-earth fraction)—silt loam, silty clay loam, or loam

BA horizon (if it occurs):
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 8
Texture (fine-earth fraction)—silt loam, silty clay loam, or loam

Bt horizon:
Hue—10YR to 5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—silty clay loam, silty clay, or clay

BC or C horizon:
Hue—10YR to 5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—silty clay loam or silty clay

Purdy Series

Physiographic province: Valley and Ridge
Landform: Intermediate to high level stream terraces in river valleys
Parent material: Alluvium derived from sandstone and shale
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Low
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Cottonbend soils, which are well drained and have less clay than the Purdy soils; on similar landforms
- Nicelytown soils, which are moderately well drained and have less clay than the Purdy soils; on similar landforms
- Sugarhol soils, which are well drained; on landforms similar to those of the Purdy soils
- Zoar soils, which are moderately well drained; on landforms similar to those of the Purdy soils

Taxonomic Classification

Fine, mixed, semiactive, mesic Typic Endoaquults

Typical Pedon

Purdy silty clay loam, 0 to 3 percent slopes; Bath County, Virginia; in a grassed area, about 0.4 mile east-northeast of the southernmost intersection of Highways VA-678 and VA-614, about 0.5 mile west of the intersection of the Cowpasture River and the Bath-Highland County line; Williamsville, Virginia USGS 7.5 Minute Quadrangle; lat. 38 degrees 11 minutes 48 seconds N. and long. 79 degrees 33 minutes 52 seconds W.

Ap—0 to 5 inches; dark grayish brown (2.5Y 4/2) silty clay loam; moderate coarse granular structure; friable, nonsticky, slightly plastic; few fine roots; very strongly acid; abrupt smooth boundary.

BAg—5 to 12 inches; olive gray (5Y 4/2) silty clay; moderate fine and medium subangular blocky structure; friable, slightly sticky, moderately plastic; few very fine roots; many medium prominent strong brown (7.5YR 5/8) iron-manganese masses in matrix; very strongly acid; abrupt wavy boundary.

Btg1—12 to 23 inches; gray (10YR 5/1) clay; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; few very fine roots; common distinct clay films on all faces of peds; many medium prominent strong brown (7.5YR 5/8) iron-manganese masses in matrix; very strongly acid; clear wavy boundary.

Btg2—23 to 32 inches; dark gray (5Y 4/1) clay; moderate fine subangular blocky structure; firm, moderately sticky, moderately plastic; common distinct clay films on all faces of peds; many medium prominent strong brown (7.5YR 5/8) iron-manganese masses in matrix; very strongly acid; clear wavy boundary.

Btg3—32 to 48 inches; dark gray (N 4/0) clay; moderate medium and coarse subangular blocky structure; firm, moderately sticky, moderately plastic; common distinct clay films on all faces of peds; common medium prominent strong brown (7.5YR 5/8) iron-manganese masses in matrix; 1 percent well rounded sandstone gravel and 1 percent well rounded sandstone cobbles; very strongly acid; abrupt wavy boundary.

Cg—48 to 62 inches; dark gray (N 4/0) clay; massive; firm, moderately sticky, moderately plastic; common medium prominent strong brown (7.5YR 5/8) iron-manganese masses in matrix; 4 percent well rounded sandstone cobbles and 10 percent well rounded sandstone gravel; very strongly acid.

Range in Characteristics

Solum thickness: 28 to 50 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 10 percent gravel and cobbles in the A, Ap, Bag, and Btg horizons; 0 to 35 percent gravel and cobbles in the Cg horizon
Reaction: Strongly acid to extremely acid

Ap horizon:
Hue—10YR, 2.5Y, or neutral
Value—4 or 5
Chroma—0 to 2
Texture (fine-earth fraction)—silty clay loam

A horizon (if it occurs):
Hue—10YR, 2.5Y, or neutral
Value—2 or 3
Chroma—2 or 3
Texture (fine-earth fraction)—silt loam

BAg horizon:
Hue—10YR, 2.5Y, 5Y, or neutral
Value—4 or 5
Chroma—0 to 2
Texture (fine-earth fraction)—silt loam, silty clay loam, or silty clay

Btg horizon:
Hue—10YR, 2.5Y, 5Y, or neutral
Value—4 or 5
Chroma—0 to 2
Texture (fine-earth fraction)—silty clay loam, silty clay, or clay

Cg horizon:
Hue—10YR, 2.5Y, 5Y, or neutral
Value—4 to 6
Chroma—0 to 2
Texture (fine-earth fraction)—silty clay loam, silty clay, clay loam, or clay

The Purdy soils in Bath County are considered taxadjuncts to the series because they have a cation-exchange activity class of semiactive instead of active. This difference, however, does not significantly affect the use and management of the soils.

Rough Series

Physiographic province: Valley and Ridge
Landform: Hills and mountains
Parent material: Residuum weathered from shale and siltstone
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Very shallow
Slope range: 15 to 100 percent

Associated Soils

- Berks soils, which are moderately deep to bedrock, are well drained, and have a loamy-skeletal particle size; on landforms similar to those of the Rough soils
- Shelocta soils, which are very deep to bedrock, have a fine-loamy particle size, and formed in colluvium; on footslopes and toeslopes
- Weikert soils, which are shallow to bedrock and have a loamy-skeletal particle size; on landforms similar to those of the Rough soils

Taxonomic Classification

Loamy, mixed, active, acid, mesic Lithic Udorthents

Typical Pedon

Rough very channery silt loam in an area of Weikert-Rough complex, 55 to 80 percent slopes; Bath County, Virginia; in a wooded area, approximately 2.3 miles northeast of the intersection of Highway VA-629 and the Bath-Alleghany Couny line, 1.8 miles south-southeast of the intersection of Highway VA-629 and Forest Service Road 125; Healing Springs, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 54 minutes 37 seconds N. and long. 79 degrees 47 minutes 28 seconds W.

A—0 to 1 inch; dark yellowish brown (10YR 4/4) very channery silt loam; weak coarse granular structure; very friable, nonsticky, nonplastic; few very fine and fine roots; 55 percent shale channers; very strongly acid; abrupt smooth boundary.
Bw—1 to 5 inches; yellowish brown (10YR 5/6) extremely channery silt loam; weak medium subangular blocky structure; friable, nonsticky, nonplastic; common fine

and medium and few coarse roots; 70 percent shale channers; very strongly acid; clear wavy boundary.
C—5 to 7 inches; yellowish brown (10YR 5/4) extremely channery silt loam; massive; friable, nonsticky, nonplastic; common fine and medium and few coarse roots; 80 percent shale channers; very strongly acid; abrupt wavy boundary.
R—7 inches; olive brown (2.5Y 4/4) shale bedrock.

Range in Characteristics

Solum thickness: 0 to 8 inches
Depth to bedrock: 4 to 10 inches
Rock fragments: 35 to 60 percent channers in the A horizon; 35 to 75 percent channers in the Bw horizon; 35 to 75 percent channers in the C horizon
Reaction: Extremely acid to strongly acid (in unlimed areas)

A horizon:
Hue—10YR
Value—2 to 4
Chroma—1 to 4
Texture (fine-earth fraction)—silt loam or loam

Bw horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—silt loam or loam

C horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—silt loam or loam

R layer:
Bedrock—hard or moderately hard shale, siltstone, or fine-grained sandstone

Shelocta Series

Physiographic province: Valley and Ridge
Landform: Base of slopes on hills and mountains and areas in valleys
Parent material: Colluvium derived from shale, siltstone, and some fine-grained sandstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 8 to 55 percent

Associated Soils

- Berks soils, which are moderately deep to bedrock and have a loamy-skeletal particle size; on adjacent hills and mountains
- Coursey soils, which are moderately well drained and are susceptible to flooding; on low stream terraces
- Macove soils, which have a loamy-skeletal particle size; on landforms similar to those of the Shelocta soils
- Ogles soils, which have a loamy-skeletal particle-size and are susceptible to flooding; on flood plains

- Rough soils, which are very shallow to bedrock, are somewhat excessively drained, and have a loamy-skeletal particle size; on adjacent mountains
- Weikert soils, which are shallow to bedrock and have a loamy-skeletal particle size; on adjacent hills and mountains

Taxonomic Classification

Fine-loamy, mixed, active, mesic Typic Hapludults

Typical Pedon

Shelocata silt loam in an area of Shelocta-Berks complex, 15 to 35 percent slopes; Alleghany County, Virginia; in woodland, approximately 5,450 feet north and 34 degrees east of the intersection of Highways VA-600 and VA-614, near Peters Mountain; Jordan Mines, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 44 minutes 43 seconds N. and long. 80 degrees 5 minutes 1 second W.

A—0 to 2 inches; dark brown (10YR 3/3) silt loam; weak fine granular structure; very friable; many very fine and fine and common medium roots; 10 percent shale channers; very strongly acid; clear smooth boundary.

BE—2 to 7 inches; brown (7.5YR 5/4) channery silt loam; weak fine subangular blocky structure; very friable; common very fine, fine, and medium roots; 15 percent shale channers; very strongly acid; gradual smooth boundary.

Bt1—7 to 18 inches; brown (7.5YR 5/4) channery silt loam; weak fine subangular blocky structure; very friable; common very fine and fine roots; few faint clay films on all faces of peds; 19 percent shale channers; strongly acid; gradual smooth boundary.

Bt2—18 to 38 inches; strong brown (7.5YR 5/6) channery silt loam; weak fine subangular blocky structure; very friable; few very fine and fine roots; few distinct clay films on all faces of peds and rock fragments; 19 percent shale channers; strongly acid; diffuse smooth boundary.

Bt3—38 to 50 inches; 40 percent brown (7.5YR 5/4) channery silt loam; weak fine subangular blocky structure; very friable; few very fine and fine roots; few distinct clay films on all faces of peds and rock fragments; 20 percent shale channers; strongly acid; diffuse smooth boundary.

Bt4—50 to 60 inches; brown (7.5YR 5/4) channery silt loam; weak fine subangular blocky structure; very friable; few very fine and fine roots; few distinct clay films on rock fragments and all faces of peds; 25 percent shale channers; strongly acid; diffuse smooth boundary.

BC—60 to 65 inches; brown (7.5YR 5/4) channery silt loam; weak fine subangular blocky structure; very friable; few very fine and fine roots; many fine faint pale brown (10YR 6/3) and many medium distinct light brownish gray (10YR 6/2) iron depletions; 25 percent shale channers; strongly acid.

Range in Characteristics

Solum thickness: 40 to 60 inches or more
Depth to bedrock: More than 60 inches
Rock fragments: 2 to 15 percent channers or cobbles in the A horizon; 5 to 35 percent channers or cobbles in the BE and Bt horizons; 15 to 70 percent channers or cobbles in the BC horizon
Reaction: Very strongly acid or strongly acid (unless limed)

A horizon:
Hue—10YR
Value—3 or 4
Chroma—1 to 3
Texture (fine-earth fraction)—loam or silt loam

BE horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—4 to 6
Texture (fine-earth fraction)—loam or silt loam

Bt horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam, silt loam, or silty clay loam

BC horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—2 to 6
Texture (fine-earth fraction)—silt loam, loam, or silty clay loam

Sugarhol Series

Physiographic province: Valley and Ridge
Landform: High stream terraces in river valleys
Parent material: Alluvium derived from sandstone and shale
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 3 to 15 percent

Associated Soils

- Cottonbend soils, which have a fine-loamy particle size; on landforms similar to those of the Sugarhol soils
- Nicelytown soils, which are moderately well drained and have a fine-loamy particle size; on landforms similar to those of the Sugarhol soils
- Purdy soils, which are poorly drained; on landforms similar to those of the Sugarhol soils
- Zoar soils, which are moderately well drained; on landforms similar to those of the Sugarhol soils

Taxonomic Classification

Fine, mixed, semiactive, mesic Typic Paleudults

Typical Pedon

Sugarhol silt loam, 3 to 8 percent slopes; Bath County, Virginia; in woodland, approximately 3,300 feet south and 40 degrees west of the southern intersection of Highways VA-600 and VA-603; Falling Spring, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 59 minutes 10 seconds N. and long. 79 degrees 58 minutes 15 seconds W.

Oa—0 to 1 inch; highly decomposed plant material.
A—1 to 2 inches; dark grayish brown (10YR 4/2) silt loam; weak medium granular structure; very friable, slightly sticky, slightly plastic; many very fine, fine, and medium roots; extremely acid; abrupt smooth boundary.
E—2 to 3 inches; grayish brown (10YR 5/2) silt loam; weak medium granular structure; very friable, slightly sticky, slightly plastic; many very fine, fine, and medium roots; very strongly acid; abrupt smooth boundary.

BE—3 to 11 inches; light yellowish brown (10YR 6/4) silt loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine, fine, medium, and coarse roots; 2 percent rounded gravel; very strongly acid; abrupt wavy boundary.

Bt1—11 to 34 inches; yellowish brown (10YR 5/6) silty clay; moderate fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; few very fine and fine roots; common distinct clay films on all faces of peds; 2 percent rounded gravel; very strongly acid; clear wavy boundary.

Bt2—34 to 53 inches; strong brown (7.5YR 5/8) silty clay; many prominent light yellowish brown (2.5Y 6/4) and many faint yellowish red (5YR 5/8) mottles; strong fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; common distinct clay films on all faces of peds; 2 percent rounded gravel; very strongly acid; gradual wavy boundary.

Bt3—53 to 61 inches; yellowish brown (10YR 5/6) clay; common distinct strong brown (7.5YR 5/8) and light yellowish brown (2.5Y 6/4) mottles; strong fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; common distinct clay films on all faces of peds; 2 percent rounded gravel; very strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent gravel and cobbles in the A, Ap, E, EB, BE, and BA horizons; 0 to 35 percent gravel and cobbles in the Bt horizon
Reaction: Extremely acid to strongly acid (in unlimed areas)
Other characteristics: Lithochromic mottles in shades of red, reddish brown, and light yellowish brown occur below a depth of 30 inches in some pedons

A horizon:
Hue—10YR
Value—2 to 4
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam, loam, or silty clay loam

Ap horizon (if it occurs):
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam, loam, or silty clay loam

E or EB horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam or loam

BE horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—4 to 6
Texture (fine-earth fraction)—silt loam, loam, or clay loam

BA horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture (fine-earth fraction)—silt loam, loam, or clay loam

Bt horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—clay, silty clay, silty clay loam, or clay loam

Udorthents

Physiographic province: Valley and Ridge
Landform: Areas along highways, construction zones, urban areas, or other areas where surface excavations or other land disturbances occur
Parent material: Fill material from a variety of sources
Drainage class: Variable
Slowest saturated hydraulic conductivity: Variable
Depth class: Variable
Slope range: 0 to 100 percent

Associated Soils

Udorthents are associated with many soils. Included are any soils that are adjacent to the areas excavated or filled. Associated soils generally have not been covered by more than 20 inches of fill material or have not been deeply mixed by earthmoving equipment.

Typical Pedon

Because of the variability of Udorthents, a typical pedon is not given. 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. Generally, Udorthents are along highways, rail yards and tracks, and other areas that have been excavated or filled.

Watahala Series

Physiographic province: Valley and Ridge
Landform: Hills and mountains
Parent material: Gravelly residuum over clayey residuum weathered from cherty limestone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 8 to 55 percent

Associated Soils

- Caneyville soils, which are moderately deep to bedrock and have a fine particle size; on hills
- Frederick soils, which have a fine particle size; on hills
- McClung soils, which have a fine-loamy particle size; on mountains
- Murrill soils, which have a fine-loamy particle size; on footslopes and toeslopes

Taxonomic Classification

Fine-loamy over clayey, siliceous over mixed, subactive, mesic Typic Paleudults

Typical Pedon

Watahala very gravelly sandy loam in an area of Frederick-Watahala complex, 8 to 15 percent slopes; Alleghany County, Virginia; in woodland, approximately 3,900 feet south and 11 degrees west of the intersection of Highways US-220 and VA-606, near Warm Springs Mountain; Falling Spring, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 53 minutes 42 seconds N. and long. 79 degrees 54 minutes 3 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material.

A—1 to 3 inches; very dark grayish brown (10YR 3/2) very gravelly sandy loam; moderate fine granular structure; very friable; many very fine, fine, and medium roots; 2 percent chert cobbles and 38 percent chert gravel; extremely acid; clear smooth boundary.

E—3 to 12 inches; yellowish brown (10YR 5/4) gravelly silt loam; weak fine subangular blocky structure; very friable; common fine and medium roots; 5 percent chert cobbles and 20 percent chert gravel; very strongly acid; gradual smooth boundary.

BE—12 to 27 inches; yellowish brown (10YR 5/6) gravelly silt loam; weak medium subangular blocky structure; friable; few fine and medium roots; common fine prominent light yellowish brown (2.5Y 6/4) strippings on faces of peds; 10 percent chert cobbles and 20 percent chert gravel; very strongly acid; gradual smooth boundary.

Bt1—27 to 37 inches; yellowish brown (10YR 5/6) gravelly loam; moderate medium subangular blocky structure; friable; few fine and medium roots; many distinct clay films on all faces of peds; 10 percent chert cobbles and 20 percent chert gravel; very strongly acid; abrupt smooth boundary.

2Bt2—37 to 54 inches; strong brown (7.5YR 5/6) gravelly clay; common fine distinct light brown (7.5YR 6/4) mottles; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very fine and fine roots; common distinct clay films on all faces of peds; 15 percent chert gravel; very strongly acid; clear smooth boundary.

2Bt3—54 to 61 inches; strong brown (7.5YR 5/6) silty clay; common fine distinct light brown (7.5YR 6/4) mottles; 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; 3 percent chert gravel; very strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Depth to bedrock: More than 60 inches
Depth to 2Bt horizon: 20 to 50 inches
Rock fragments: 35 to 45 percent gravel and cobbles in the A horizon; 15 to 45 percent gravel and cobbles in the Ap, E, and BE horizons; 15 to 35 percent gravel and cobbles in the Bt horizon; 0 to 35 percent gravel and cobbles in the 2Bt horizon
Reaction: Extremely acid to strongly acid in the A, Ap, E, BE, and Bt horizons (in unlimed areas); very strongly acid or strongly acid in the 2Bt horizon

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—sandy loam, loam, or silt loam

Ap horizon (if it occurs):
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture (fine-earth fraction)—sandy loam, loam, or silt loam

E horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2 to 4
Texture (fine-earth fraction)—loam or silt loam

BE horizon:
Hue—10YR
Value—5 or 6
Chroma—4 to 6
Texture (fine-earth fraction)—loam or silt loam

Bt horizon:
Hue—10YR or 7.5YR
Value—5 or 6
Chroma—6 to 8
Texture (fine-earth fraction)—silty clay loam, clay loam, loam, or silt loam

2Bt horizon:
Hue—5YR or 7.5YR
Value—4 to 6
Chroma—6 to 8
Texture (fine-earth fraction)—clay or silty clay with 25 percent (absolute) more clay than the overlying horizon

Weikert Series

Physiographic province: Valley and Ridge
Landform: Hills and mountains
Parent material: Residuum weathered from shale and siltstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Shallow
Slope range: 3 to 90 percent

Associated Soils

- Berks soils, which are moderately deep to bedrock; on landforms similar to those of the Weikert soils
- Gilpin soils, which are moderately deep to bedrock and have a fine-loamy particle size; on landforms similar to those of the Weikert soils
- Rough soils, which are very shallow to bedrock; on landforms similar to those of the Weikert soils
- Shelocta soils, which are very deep to bedrock and have a fine-loamy particle size; on footslopes and toeslopes

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Typical Pedon

Weikert channery silt loam in an area of Weikert-Berks-Rough complex, 35 to 55 percent slopes; Alleghany County, Virginia; in woodland, approximately 7,500 feet north and 14 degrees east of the intersection of Highways VA-629 and I-64, near Wilson Creek; Clifton Forge, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 50 minutes 49 seconds N. and long. 79 degrees 47 minutes 9 seconds W.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 4 inches; dark grayish brown (10YR 4/2) channery silt loam; weak fine granular structure; very friable; many very fine and fine roots; 20 percent shale channers; strongly acid; gradual wavy boundary.
Bw1—4 to 7 inches; yellowish brown (10YR 5/6) very channery silt loam; weak fine subangular blocky structure; friable; many very fine, fine, and medium roots; 35 percent shale channers; strongly acid; gradual wavy boundary.
Bw2—7 to 16 inches; yellowish brown (10YR 5/6) very channery silt loam; weak fine subangular blocky structure; friable; common fine and medium roots; 55 percent shale channers; strongly acid; gradual wavy boundary.
R—16 inches; fissle shale bedrock.

Range in Characteristics

Solum thickness: 8 to 20 inches
Depth to bedrock: 10 to 20 inches
Rock fragments: 15 to 35 percent channers in the A horizon; 35 to 60 percent channers in the Bw horizon; 60 to 80 percent channers or flagstones in the C horizon
Reaction: Extremely acid to strongly acid (in unlimed areas)

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—loam or silt loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture (fine-earth fraction)—loam or silt loam

C horizon (if it occurs):
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—4 to 6
Texture (fine-earth fraction)—loam or silt loam

Wharton Series

Physiographic province: Valley and Ridge
Landform: Hills
Parent material: Residuum weathered from shale and siltstone
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately low
Depth class: Deep or very deep
Slope range: 3 to 35 percent

Associated Soils

- Blairton soils, which are moderately deep to bedrock; on landforms similar to those of the Wharton soils
- Gilpin soils, which are well drained and moderately deep to bedrock; on landforms similar to those of the Wharton soils

Taxonomic Classification

Fine-loamy, mixed, active, mesic Aquic Hapludults

Typical Pedon

Wharton silt loam in an area of Wharton-Blairton complex, 15 to 35 percent slopes; Alleghany County, Virginia; in woodland, approximately 1,900 feet south and 56 degrees east of the intersection of Highways US-220 and VA-18, in the Fairlawn area; Covington, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 46 minutes 29 seconds N. and long. 79 degrees 58 minutes 48 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material.

A—1 to 3 inches; very dark grayish brown (10YR 3/2) silt loam; moderate medium granular structure; very friable; many very fine and fine roots; 2 percent shale channers; very strongly acid; clear smooth boundary.

BE—3 to 8 inches; 25 percent very dark grayish brown (10YR 3/2) and 75 percent yellowish brown (10YR 5/4) silt loam; weak fine subangular blocky structure; very friable; many very fine and fine roots; 2 percent shale channers; very strongly acid; clear smooth boundary.

Bt1—8 to 21 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; very friable, slightly sticky, moderately plastic; common very fine and fine roots; few faint clay films on all faces of peds; 2 percent shale channers; very strongly acid; clear smooth boundary.

Bt2—21 to 37 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; very friable, slightly sticky, moderately plastic; common very fine and fine roots; few faint clay films on all faces of peds; common fine distinct strong brown (7.5YR 5/8) masses of oxidized iron and many fine prominent light brownish gray (2.5Y 6/2) and light gray (2.5Y 7/2) iron depletions; 2 percent shale channers; very strongly acid; gradual smooth boundary.

Bt3—37 to 44 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; very friable, slightly sticky, moderately plastic; few very fine and fine roots; few faint clay films on all faces of peds; many fine prominent strong brown (7.5YR 5/8) masses of oxidized iron and many fine distinct light brownish gray (10YR 6/2) iron depletions; 2 percent shale channers; very strongly acid; gradual smooth boundary.

BCg—44 to 62 inches; gray (10YR 6/1) silty clay loam; weak fine subangular blocky structure; very friable, slightly sticky, slightly plastic; few very fine and fine roots; many fine prominent strong brown (7.5YR 5/6) masses of oxidized iron; 5 percent shale channers; very strongly acid.

Range in Characteristics

Solum thickness: 30 to 60 inches or more

Depth to bedrock: 40 to 72 inches or more

Rock fragments: 0 to 15 percent channers in the A and Ap horizons; 0 to 20 percent channers in the BE and Bt horizons; 5 to 50 percent channers in the BC and BCg horizons; 20 to 50 percent channers in the C and Cg horizons

Reaction: Extremely acid to strongly acid (in unlimed areas)

A horizon:

Hue—10YR
Value—3 to 5
Chroma—2 or 3
Texture (fine-earth fraction)—silty clay loam or silt loam

Ap horizon (if it occurs):

Hue—10YR
Value—3 to 5
Chroma—3 or 4
Texture (fine-earth fraction)—silty clay loam or silt loam

BE horizon:
Hue—10YR or 7.5YR
Value—3 to 6
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam or silty clay loam

Bt horizon:
Hue—7.5YR to 10YR
Value—5 or 6
Chroma—2 to 6
Texture (fine-earth fraction)—silty clay loam; some pedons have subhorizons of silty clay or clay

BC horizon (if it occurs):
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—silt loam, silty clay loam, or clay loam

BCg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 or 2
Texture (fine-earth fraction)—silt loam, silty clay loam, or clay loam

C or Cg horizon (if it occurs):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam or silty clay loam

Wolfgap Series

Physiographic province: Valley and Ridge
Landform: Low to intermediate level and high level flood plains in river valleys
Parent material: Alluvium derived from limestone, sandstone, and shale
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Alonzville soils, which have thinner and less dark surface layers and have a more developed subsoil than the Wolfgap soils; on terraces
- Atkins soils, which are poorly drained; on landforms similar to those of the Wolfgap soils
- Feedstone and Irongate soils, which are moderately well drained; on landforms similar to those of the Wolfgap soils
- Gladehill soils, which have a coarse-loamy particle size; on the lower flood plains

Taxonomic Classification

Fine-loamy, siliceous, active, mesic Fluventic Hapludolls

Typical Pedon

Wolfgap loam, 0 to 3 percent slopes, rarely flooded; Bath County, Virginia; in pasture, about 0.7 mile northeast of the junction of Highways VA-42 and VA-655, about 2.9

miles southwest of the junction of Highways VA-39 and VA-42; Nimrod Hall, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 58 minutes 23 seconds N. and long. 79 degrees 39 minutes 58 seconds W.

A1—0 to 13 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 5/3) dry; weak coarse granular structure; friable, nonsticky, nonplastic; common very fine and fine roots; neutral; clear smooth boundary.
A2—13 to 22 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak medium granular structure; friable, nonsticky, nonplastic; common very fine and fine roots; neutral; gradual wavy boundary.
Bw—22 to 52 inches; dark yellowish brown (10YR 4/4) loam; weak medium subangular blocky structure; friable, nonsticky, nonplastic; few very fine roots; slightly acid; gradual wavy boundary.
C—52 to 65 inches; brown (10YR 4/3) gravelly sandy loam; massive; very friable, nonsticky, nonplastic; 15 percent well rounded sandstone gravel; slightly acid.

Range in Characteristics

Solum thickness: 45 to 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent gravel and cobbles in the A, Ap, and Bw horizons; 15 to 60 percent gravel and cobbles in the C horizon
Reaction: Slightly acid to neutral

Ap horizon (if it occurs):
Hue—10YR
Value—2 or 3
Chroma—2 or 3
Texture (fine-earth fraction)—loam

A horizon:
Hue—10YR
Value—2 or 3
Chroma—2 or 3
Texture (fine-earth fraction)—loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Texture (fine-earth fraction)—loam, silt loam, sandy clay loam, or clay loam

C horizon:
Hue—10YR
Value—3 to 5
Chroma—3 to 6
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam; horizon is commonly stratified

Zoar Series

Physiographic province: Valley and Ridge
Landform: High stream terraces in river valleys
Parent material: Alluvium derived from sandstone and shale
Drainage class: Moderately well drained

Slowest saturated hydraulic conductivity: Moderately low
Depth class: Very deep
Slope range: 3 to 8 percent

Associated Soils

- Cottonbend soils, which are well drained and have a fine-loamy particle size; on landforms similar to those of the Zoar soils
- Coursey soils, which have a fine-loamy particle size; on low stream terraces
- Sugarhol soils, which are well drained; on landforms similar to those of the Zoar soils
- Nicelytown soils, which are moderately well drained and have a fine-loamy particle size; on landforms similar to those of the Zoar soils
- Purdy soils, which are poorly drained; on high stream terraces

Taxonomic Classification

Fine, mixed, semiactive, mesic Aquic Hapludults

Typical Pedon

Zoar silt loam, 3 to 8 percent slopes; Alleghany County, Virginia; in a corn field, approximately 5,800 feet south and 25 degrees west of the intersection of Highways VA-159 and VA-665, near Peters Mountain; Callaghan, Virginia USGS 7.5 Minute Quadrangle; lat. 37 degrees 46 minutes 26 seconds N. and long. 80 degrees 6 minutes 41 seconds W.

Ap—0 to 8 inches; brown (10YR 4/3) silt loam; moderate medium granular structure; very friable; common very fine and fine roots; 2 percent rounded sandstone gravel; moderately acid; clear smooth boundary.

BE—8 to 15 inches; light yellowish brown (10YR 6/4) silt loam; moderate medium subangular blocky structure; very friable; few very fine and fine roots; 2 percent rounded sandstone gravel; 10 percent krotovinas (volume percent); moderately acid; gradual smooth boundary.

Bt1—15 to 29 inches; light yellowish brown (10YR 6/4) silty clay loam; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very fine and fine roots; common distinct silt coats on all faces of peds and many distinct clay films on all faces of peds; 2 percent rounded sandstone gravel; very strongly acid; gradual smooth boundary.

Bt2—29 to 37 inches; light yellowish brown (10YR 6/4) and pale brown (10YR 6/3) silty clay loam; strong medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very fine and fine roots; many distinct clay films on all faces of peds; common fine prominent brownish yellow (10YR 6/8) masses of oxidized iron and common fine distinct light brownish gray (10YR 6/2) iron depletions; 2 percent rounded sandstone gravel; very strongly acid; clear smooth boundary.

Bt3—37 to 42 inches; brownish yellow (10YR 6/6) silty clay loam; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very fine and fine roots; many distinct clay films on all faces of peds; many fine prominent light brownish gray (10YR 6/2) iron depletions; 2 percent rounded sandstone gravel; strongly acid; gradual smooth boundary.

BCg—42 to 50 inches; light brownish gray (10YR 6/2) silty clay loam; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very fine and fine roots; many medium prominent brownish yellow (10YR 6/6) and yellowish brown (10YR 5/6) masses of oxidized iron; 2 percent rounded sandstone gravel; very strongly acid; clear smooth boundary.

C—50 to 60 inches; light yellowish brown (10YR 6/4) and brownish yellow (10YR 6/6) silty clay loam; massive; friable, moderately sticky, moderately plastic; few very fine and fine roots; many medium distinct light brownish gray (10YR 6/2) iron depletions and yellowish brown (10YR 5/6) masses of oxidized iron; 2 percent rounded sandstone gravel; very strongly acid.

Range in Characteristics

Solum thickness: 30 to 50 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 10 percent gravel and cobbles in the Ap, BE, and Bt horizons; 0 to 35 percent gravel and cobbles in the BCg and Cg horizons
Reaction: Very strongly acid or strongly acid (in unlimed areas)

Ap horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam or silty clay loam

BE horizon:
Hue—10YR
Value—5 or 6
Chroma—3 or 4
Texture (fine-earth fraction)—silt loam or silty clay loam

Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Texture (fine-earth fraction)—silty clay loam, silty clay, or clay

BCg horizon:
Hue—10YR
Value—5 or 6
Chroma—1 or 2
Texture (fine-earth fraction)—silty clay loam, silty clay, or clay

C horizon:
Hue—10YR
Value—4 to 6
Chroma—1 to 6
Texture (fine-earth fraction)—silty clay loam, silty clay, or clay

Formation of the Soils

In this section, the factors and processes that have affected the formation and morphology of the soils in Bath County are described. The geology of the survey area is also discussed.

Factors of Soil Formation

Soils are intimate mixtures of broken and partly or completely weathered rock, minerals, organic matter, living plants and animals, water, and air. They occur as part of the natural landscape and differ from place to place. They differ in occurrence, in degree of development of various horizons, in mineral content, in depth over bedrock, and in texture, color, and slope. The characteristics of the soils in any given area depend upon the interaction of the five soil-forming factors—parent material, climate, living organisms, topography, and time. Topography over time modifies the effect of climate and living organisms on parent material *(7)*.

In theory, if all of the soil-forming factors were identical at different sites, the soils at these sites would be identical. These factors influence the genesis of every soil, but their relative importance varies from place to place. One factor may outweigh others in the formation of a soil and may determine most of its properties. For example, a very young flood-plain soil may have only faint soil horizonation because of the short time the soil-forming factors have had to work. In contrast, a soil formed in residuum from bedrock on a stable landscape may have distinct horizons. The horizons of this soil are distinct because the soil material has remained largely in place and all soil-forming factors have been active for a long time. In general, however, the combined action of the five factors determines the character of each soil. The interaction of the five factors of soil formation is more complex for some soils than for others.

Parent Material

Parent material is the unconsolidated mass in which a soil forms. It is a product of weathering, or decomposition, of underlying bedrock or transported materials. Parent material influences the chemical, mineral, and textural composition of the soil. In the early stages of soil formation, a soil has properties similar to those of the parent material. As weathering takes place, the soil properties are modified and each soil develops its own characteristics. In Gilpin and Alticrest soils, parent material determines the mineral and textural composition. Gilpin soils formed in material weathered mainly from shale. Alticrest soils formed in material weathered mainly from coarse-grained sandstone. Gilpin soils have more weatherable minerals and more clay than Alticrest soils. Gilpin soils have a mixed mineralogy and are fine-loamy; Alticrest soils have a siliceous mineralogy and are coarse-loamy.

The three general types of parent material in Bath County are residuum, colluvium, and alluvium. Residual material weathered in place from the underlying bedrock. Colluvial material was moved by gravity from ridges and the upper slopes and was deposited on the lower slopes. Alluvial material was deposited on flood plains and terraces by streams.

Residuum

Most of the soils in the county have formed in residual material weathered from sandstone, shale, siltstone, or limestone bedrock. This residuum is some of the oldest parent material in the county. Some of the soils that have formed in this residuum, such as Frederick soils, show a high degree of development. In other soils, however, the effects of the soil-forming processes have been limited by rock that is resistant to weathering or by slope. Dekalb soils have formed in residuum from hard sandstone and show a very limited degree of development.

Colluvium

Some material has moved downslope from the residual soils. This colluvial material is on the lower backslopes, on footslopes, on toeslopes, at the head of drainageways, and along drainageways. In general, the material is younger than the residuum but the soil-forming processes have had a considerable amount of time to work. The resulting soils, such as Oriskany soils, have an accumulation of clay in the subsoil. There are other colluvial soils, such as Escatawba soils, which geomorphically are in younger landscape positions but formed in parent material which is actually very old. Escatawba soils are very strongly leached and have a clay pan. This clay pan is dense and mottled and has moderately slow permeability. A seasonal high water table is perched over the clay pan.

Alluvium

The alluvial material on terraces and flood plains has been washed from soils that formed in residual and colluvial material. Although small in acreage, these soils are agriculturally and residentially significant. The soils on the terraces, such as Cottonbend soils, are much older than the soils on the flood plains, are strongly leached, and have a moderately well developed profile. The soils on the flood plains, such as Wolfgap soils, are the youngest soils in the county and exhibit a weakly developed profile.

Climate

Climate affects the physical, chemical, and biological relationships in soils, mainly through the influence of precipitation and temperature. Water dissolves minerals, supports biological activity, and transports minerals and organic residue through the soil. Temperature determines the type and rate of physical, chemical, and biological activities occurring in the soil. Weathering is more rapid in a warm, humid climate than in a cold or dry climate.

Because precipitation in Bath County exceeds evapotranspiration, the soils have been intensively leached. Much of the soluble materials that originally were present or were released through weathering have been removed, except in alluvial areas, which were recharged with eroded sediments from surrounding uplands. Although the bedrock in some areas contains calcium, free carbonates of lime have not accumulated in the soils because of leaching. Most of the soils in the survey area are acid.

Precipitation is the main factor in the formation of the subsoil that characterizes most of the soils in Bath County. In addition to leaching soluble materials, water that percolates through the soil moved clay from the surface layer to the subsoil. Except for soils that formed in recent alluvium or sand or on very steep slopes, all the soils in the county typically are more clayey in the subsoil than in the surface layer.

The formation of blocky structure in the subsoil of well developed soils, such as Frederick soils, is also influenced by climate. The development of peds, or aggregates, in the subsoil is caused partly by changes in volume of the soil mass resulting mainly from alternating periods of wetting and drying. Plentiful moisture also supports a productive forest. A moderate content of humus in the surface layer develops after large amounts of organic material have been returned to the soil.

Climate varies locally with differences in the degree and direction of slope and elevation. Generally, soils on steep uplands facing south are drier than soils on similar landscapes facing north. Soils that form in these areas may differ even if they both have the same parent material. At the higher elevations in mountainous areas, the climate may be cooler; the precipitation, particularly snowfall, greater; and fogs more common. In these higher, cooler areas, soils may be slightly darker and contain slightly more organic matter than soils at the lower elevations. In the higher areas, the weathering of parent materials is slower and the soils generally are thinner than the soils at the lower elevations.

Precipitation and temperature are relatively uniform throughout most of the county. However, small areas located at the highest elevations, such as Paddy Knob, in the western part of the survey area, have a lower mean temperature than the rest of the county. Areas of frigid soils, or those that have a mean annual soil temperature of below 47 degrees F, are located there. Mesic soils, or those that have a mean annual soil temperature of 47 to 59 degrees F, are mapped throughout the county. A detailed description of the climate is given in the section “General Nature of the Survey Area.”

Living Organisms

Biologic forces are important in the formation of soils in Bath County. Trees, shrubs, grasses, and other herbaceous plants, as well as microorganisms, earthworms, and other plant and animal life, are active agents in the soil-forming process. Climate, parent material, relief, age of the soil, and other environmental factors determine the kinds of plants and animals that live on and in the soil. Where climate or vegetation varies significantly, the soils vary accordingly.

Plants supply organic matter and transfer moisture and plant nutrients from the lower horizons to the upper horizons. Organic matter decomposes and is mixed into the soil by microorganisms and earthworms or by chemical reactions. In Bath County, the rate of decomposition is fairly rapid because of favorable temperatures, the generally abundant soil moisture, and the kinds of microorganisms in the soil. Organic matter content in the soil is low or moderate and generally ranges from 1 to 3 percent, by volume, in the surface layer.

Originally, the vegetation in the survey area was dense forest of hardwoods or mixed hardwoods and pine. The density of the stands, the proportion of different species, and the kinds of ground cover varied to some extent. The forests are not likely the reason for all differences in soil properties throughout the county. The leaves of deep-rooted deciduous trees vary in content of plant nutrients, but they generally return more bases and phosphorus to the soils than coniferous trees. The litter of conifers, rhododendron, and mountain laurel produces more organic acids than that of maple and oak. Soils that form under layers of acid-forming leaf litter tend to be more highly leached than other soils, and they commonly have a very low base saturation. The layer of leaf litter also helps to recycle nutrients, reduces the depth of frost penetration, increases moisture retention, and reduces the hazard of erosion on steep slopes.

As agriculture developed in Bath County, human activities, such as the clearing of forests and the introduction of new kinds of plants, influenced soil formation. Cultivation, artificial drainage, and liming and fertilizing changed some soil characteristics. Human activities have also caused accelerated erosion. Because of this erosion, the soil in many areas is thinner and vegetation is difficult to establish. Some soil material has been washed from sloping areas down to depressions and flood plains. Young, or immature, soils, such as Wolfgap soils, formed in this washed material.

Topography

Topography, or lay of the land, affects the formation of soils by causing differences in internal drainage, surface runoff, soil temperature, and geologic erosion. Topography also affects the rate at which the soils absorb radiant energy. This absorption rate, in turn, affects native vegetation. Topography alters the effect of parent material on soil formation. Several different kinds of soils can form from the same kind of parent material.

Slopes in Bath County range from nearly level to very steep. In the steeper areas, runoff is rapid, little water percolates through the soil, the movement of clay and the translocation of bases are slight, and soil material erodes as rapidly as it forms. Aspect varies greatly in these areas, affecting vegetation and soil formation. South-facing slopes are generally drier than north-facing slopes, and soils on these slopes retain less moisture. Berks, Weikert, and Alticrest soils formed in the steeper areas.

In the gently sloping and strongly sloping areas, the soils are generally well drained and slightly eroded. The soils in such areas are mature, having well defined horizons. Frederick and Poplimento soils are examples. Low-lying, flat areas or depressions are wetter and often ponded because of restricted drainage. Soils on colluvial slopes or within drainageways often receive runoff from nearby uplands. Lateral underground seepage from the higher areas is fairly common. Carbonates or other bases in the ground water may influence the soils. The soils on convex slopes are generally better drained. The soils on concave slopes tend to accumulate both runoff and water from internal drainage. Shelocta soils are an example of well drained soils on convex, colluvial slopes. Escatawba soils are an example of well drained soils on concave, colluvial slopes.

Time

The length of time that the parent material has been exposed to soil-forming processes influences the kind of soil that forms. The youngest soils in Bath County, such as Purdy and Wolfgap soils, formed in recent alluvium on flood plains. These soils may be stratified and have weakly expressed horizons because the soil-forming processes are interrupted by each new deposition during flooding.

Old, strongly developed soils show well defined genetic horizons. Young, less developed soils show only faint or weakly developed horizons. The soils of Bath County range from young soils on flood plains to old soils on smooth uplands.

In steep and very steep areas, either creep and washing move soil material or solifluction mixes soil material before it has had sufficient time to develop a deep soil profile. As a result, shallow and weakly developed soils, such as Rough and Weikert soils, are common on steep slopes.

Morphology of the Soils

The interaction of soil-forming factors results in distinguishable layers, or horizons, in a soil profile. The soil profile extends from the surface of the soil down to materials that are little altered by the soil-forming processes. The five major horizons that occur in the soils in the survey area are the O, A, E, B, and C horizons.

The *O horizon* is a very dark, organic horizon that forms above the mineral soil. In Bath County, O horizons are almost found exclusively on forested soils. They result mainly from the decomposition of hardwood leaf litter and are quickly destroyed by activities such as land clearing and plowing.

The *A horizon* is a mineral surface layer which has been darkened by the accumulation of organic matter. Wolfgap and Gladehill soils have thick, dark A horizons.

The *E horizon* is an eluvial horizon which has been leached of clay, iron, and aluminum. Typically, it is a light-colored layer composed of resistant materials such as sand- and silt-sized quartz. While not present in all soils, this horizon is distinct in sandy or loamy forest soils. Alticrest and Dekalb soils typically have well expressed E horizons.

The *B horizon* is an illuvial horizon which has an accumulation of clay, iron, aluminum, and other compounds leached from the A and E horizons. In Bath County, soils with layers of clay accumulation, or Bt horizons, are common in the limestone valley and on old river terraces. Faywood and Sugarhol soils have well developed Bt horizons. On the steeper mountain side slopes, less developed layers, or Bw horizons, commonly form. These horizons generally have weak blocky structure and are brighter in color than the overlying horizons. Berks and Lehew soils have Bw horizons.

The *C horizon* is the parent material of the soil. It consists of material that has been modified by weathering but has been only slightly altered by the soil-forming processes. It generally lacks structure and contains few, if any, roots.

Many processes have been involved in the formation of soil horizons in the survey area. These include the accumulation of organic matter, the leaching of soluble salts, the reduction and transfer of iron, the formation and translocation of clay minerals, and the formation of soil structure. In most soils, these processes have been taking place for thousands of years.

Most of the well drained or moderately well drained soils on uplands have a yellowish brown to yellowish red B horizon. These colors are mainly caused by the presence of iron oxides. Zones of gray colors where iron has been reduced and transferred are present in the B horizons of moderately well drained soils. Reoxidized iron forms red, yellowish red, strong brown, or yellowish brown colors in areas that are oxygenated. Nicelytown soils exhibit this mottled pattern of color.

Somewhat poorly drained to very poorly drained soils commonly have layers of gray colors. These colors are the result of gleying, a process of intense reduction of iron during soil formation. Purdy soils exhibit these colors.

The weathering of primary minerals to form silicate clay minerals, largely through hydrolysis, commonly occurs in the soils of Bath County. Through this process, different clay minerals such as kaolinite, vermiculite, and, to a lesser extent, smectite form. These clay minerals are translocated through the soil profile, often resulting in heavy, clayey subsoils. Typically, in the soils of the survey area, no one type of clay mineral dominates. The soils are a mixture of clay minerals.

Processes of Horizon Differentiation

Soils formed as the result of the physical and chemical weathering of parent rocks and organic material, the transfer of materials, the transformation of materials, and the gains and losses of organic matter and minerals.

Soil formation begins with the physical weathering of rocks. Frost action, expansion, contraction, and other forces break large pieces of rock into smaller pieces. The rocks and rock fragments are further reduced to sand-, silt-, and clay-sized particles. These particles form the unconsolidated material in which plants can grow. When plants and animals die, organic matter is added to the mineral material.

It is common for materials to transfer from one part of the soil to another. Organic matter in suspension moves from the surface layer to the subsoil. Calcium and other elements are leached from the surface layer. To some extent, the clay in the subsoil or in the substratum hold these elements, but percolating ground water also leaches some elements from the soil. Also, percolating water transfers clay from the upper horizons to the lower horizons.

The roots of plants absorb bases and store them in stems, leaves, and twigs. When plants die and decay, they return to the soil the elements they had absorbed from it. In most soils in Bath County, the translocation and development in place of clay minerals have strongly influenced the development of soil horizons. As the soil develops, horizons gradually develop recognizable characteristics that make one horizon distinguishable from another.

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. Replacing lost organic matter normally takes a long time.

Some lime and soluble salts must be leached from soils before both the translocation of clay minerals and the formation of a distinct subsoil can occur. Factors that affect leaching include the kind of original salts present in the soils, the depth to which the soil solution percolates, and the texture of the soils.

One transformation is the reduction and solubilization of ferrous iron. This change takes place under wet, saturated conditions in which water replaces molecular oxygen. It mainly occurs in soils that are not well drained. Gleying, or the reduction of iron, is evident in Dunning and Purdy soils, which have a dominantly gray subsoil. The gray color indicates the transformation of iron to the ferrous form and implies wetness. Reduced iron, which is soluble and mobile, commonly has been moved short distances in the soils in Bath County. It has stopped either in the horizon where it originated or in an underlying horizon. It can be partly reoxidized and segregated in the form of stains, concretions, or bright yellow and red redoxiomorphic features.

Geology and Soil Relationships

Soils and geology in Bath County are directly related. The landforms clearly show the effects of uplift, folding, and geologic erosion. The relative resistance of various rocks to erosion and folding have affected the topography of the county. Mountain summits are anticlinal, synclinal, and monoclinal. Many are capped with harder more resistant sandstone and quartzite. Mountain valleys are anticlinal, synclinal, and monoclinal. Most are underlain by softer, less resistant shale and limestone.

The survey area is in the Valley and Ridge Physiographic Province. The bedrock is steeply folded into anticlines and synclines and is faulted. The ridges and valleys in the county are generally oriented from northeast to southwest. The rock is of the Mississipian, Devonian, Silurian, and Ordovician Systems. Younger surficial deposits from the Quaternary System also occur. The rock systems include numerous geologic formations ranging from the young Maccrady Shale and Pocono Formation of the lower Mississipian System to the older Beekmantown Formation of the lower Ordovician System.

The surficial deposits from the Quaternary System include the alluvial flood-plain and terrace sediments as well as the colluvial deposits. These transported materials are the youngest in the county, and they are the building blocks for a variety of soils that are both young and old.

The flood-plain soils include Feedstone, Irongate, Atkins, Derroc, Ogles, Wolfgap, and Gladehill soils which formed in alluvium derived from sandstone and shale materials and, in places, some limestone. These soils always form near present-day streams, such as the Jackson and Cowpasture Rivers or small creeks. All flood-plain soils are relatively young since fresh deposits occur regularly.

The alluvial terrace soils include the rarely flooded Alonzville, Maurertown, and Coursey soils on low stream terraces and Sugarhol, Cottonbend, Zoar, Purdy, and Nicelytown soils on mid to high stream terraces. These soils formed in alluvium adjacent to the rivers and creeks that once deposited them. The oldest alluvial soils occur at high elevations, above present-day flood plains.

The colluvial soils are scattered throughout the county along drainageways and on footslopes and toeslopes. Slightly concave backslopes may also have colluvial soils. Oriskany soils formed dominantly from sandstone materials and occur primarily in drainageways. Shelocta and Macove soils formed dominantly out of shale materials and also occur primarily in drainageways. Murrill soils formed over limestone and occur on footslopes, on toeslopes, and in drainageways. Escatawba soils formed from sandstone, shale, and some limestone materials and occur on footslopes and toeslopes. Colluvial soils vary in age according to the stability of their landform position.

The Maccrady Shale and the Pocono Formation occur in small areas in the western part of the county and consist of a red shale and a grayish brown sandstone conglomerate that occurs only on a few ridgetops near the West Virginia State line. Common residual soils found on the Maccrady Shale include Lehew and Berks soils. On the Pocono Formation, Alticrest, Dekalb, and Lily soils are common. Oriskany soils formed in colluvium from these formations.

The Hampshire Formation is an interbedded red and brown shale and brown sandstone that occurs on several side slopes and ridgetops in the western part of the county. Common residual soils include Berks, Lehew, and Dekalb soils. Oriskany soils formed in colluvium.

The Chemung Formation is an interbedded olive and olive brown shale, mudstone, and fine-grained sandstone. It contains many shell fossils. It occurs extensively on side slopes and ridgetops in the western part of the county, on Alleghany and Little Mountains. It also occurs on Shenandoah Mountian, which is in the eastern part of the county. Residual soils on this formation include Berks, Weikert, and Rough soils. Macove and Shelocta soils formed in the colluvial positions.

The Brallier Formation is a brown to olive brown interbedded shale, siltstone, and fine-grained sandstone. It covers large areas in valleys and on side slopes in the central and eastern portions of the county. Berks, Weikert, Rough, and Gilpin soils are common in the residual positions. Shelocta and Escatawba soils formed in colluvium.

The Millboro Shale is a black, brown, and reddish brown fissile shale that covers small areas of the central and eastern portions of the county. The Berks, Weikert, Rough, and Gilpin soils occur on residual side slopes and ridgetops, and Escatawba and Shelocta soils occur on colluvial footslopes, on toeslopes, and in drainageways.

The Needmore Shale is an olive green to gray shale that occurs in the central and eastern parts of the county. It is of limited extent due to relatively thin bedding. Common residual soils include Blairton, Wharton, Berks, and Gilpin soils. Shelocta and Escatawba soils formed in the colluvium.

The Oriskany (Ridgeley) Sandstone is a medium- to coarse-grained, thick-bedded, soft to hard, brown to reddish brown sandstone. It is nearly white on fresh fractures and is commonly calcareous if unweathered. It covers small areas scattered along the lower flanks of the large anticlinal ridges, such as Warm Springs, Jack, and Back Creek Mountains, as well as on the lower ridges, such as Tower Hill, McClung Ridge, and Chestnut Ridge. Alticrest, Lily, Dekalb, and McClung soils are the most common residual soils on this formation. Common colluvial soils are Oriskany and Murrill soils and, to a lesser extent, Escatawba soils.

The Helderberg Group, Tonoloway Formation, Wills Creek Formation, and McKenzie Formation are lumped together because they are interbedded limestone and sandstone. Some areas are cherty, and large fossils are common in the limestone. The soils on these formations are similar to those that formed on the Ridgeley Sandstone, except that there is a tendency toward more clayey textures and less acid conditions. Lily, Dekalb, McClung, Watahala, Frederick, and Caneyville soils are common in residual areas. Many times, however, these soils are buried by colluvium because the geology often occupies saddles and drainageways that are prone to collecting materials from higher positions upslope. Colluvial soils include Oriskany and Murrill soils.

The Keefer Sandstone is a tan to pinkish white, medium- and fine-grained, quartzose sandstone that resists weathering. It commonly forms cliffs or steep side slopes on the mid to upper flanks of all the sandstone mountains. Alticrest and Dekalb soils formed at the residual sites. Oriskany soils formed in the colluvium.

The Rose Hill Formation, an interbedded red sandstone and red and brown shale, commonly occupies the upper flanks of the sandstone mountains. Berks, Lehew, and Dekalb soils formed in residuum on this formation. Oriskany soils formed in the colluvium.

The Tuscarora (Clinch) Formation is a hard quartzose sandstone that is very resistant to weathering. It typically extends along the ridges of all the large sandstone mountains in the county. It is commonly pinkish white to gray and outcrops in many areas. Dekalb and Alticrest soils are residual soils on this formation. The very rubbly Oriskany soils are colluvial soils that formed downslope.

The Juniata Formation occurs on the upper flanks of the limestone valleys, such as Warm Springs valley. It is interbedded red and brown sandstones and shales. Berks, Lehew, and Dekalb soils are the common residual soils. Oriskany soils occur on the colluvial slopes and in the drainageways.

The Martinsburg Formation has a yellowish brown shale in the upper part and a yellowish-brown limey shale in the lower part. It occurs on the mid to lower flanks of the limestone valleys. Berks and Weikert soils formed on the upper residual slopes, and Poplimento and Faywood soils formed on residual slopes in positions lower in the valley. The common colluvial soils are Oriskany and Murrill soils.

The Edinburg and Lincolnshire Formations and the New Market limestones make up the Middle Ordovician limestones. They are lumped together either because individual members are too thin or because little variation in the soils was seen in the field. All formations in this group are light to dark gray limestones that are exposed in the bottom of the limestone valleys. The residual soils include Caneyville and Frederick soils. The common colluvial soils are Oriskany and Murrill soils.

The oldest formation in Bath County is the Beekmantown Formation. It occurs at the bottom the limestone valleys and has only limited exposure. It consists of cherty dolomite with minor limestone beds. The cherty character makes it resistant to weathering. Common residual soils on this formation are Watahala, Frederick, and Caneyville soils. Oriskany and Murrill soils formed in the colluvium.

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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.

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. An extensive, marshy or swampy, depressed area 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.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Bottom land. 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.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material 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, slowly permeable subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. 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.

Concretions. See Redoximorphic features.

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. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conglomerate. A coarse-grained, clastic 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.

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.

Crusts, soil. Relatively thin, somewhat continuous layers of the soil surface that often restrict water movement, air entry, and seedling emergence from the soil. They generally are less than 2 inches thick and are massive.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

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.

Draw. A small stream valley that generally is shallower and more open than a ravine or gulch and that has a broader bottom. The present stream channel may appear inadequate to have cut the drainageway that it occupies.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

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.

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.

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 (alluvial). A generic term for constructional landforms that are built of stratified alluvium with or without debris-flow deposits and that occur on the pediment slope, downslope from their source of alluvium.

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.

Flooding frequency class. Flooding frequency class indicates the number of times flooding can occur over a certain period of time. The classes of flooding are defined as follows:

None.—There is no reasonable possibility of flooding. There is a near 0 percent chance of flooding in any year, or flooding occurs less than 1 time in 500 years.

Very rare.—Flooding is very unlikely but possible under extremely unusual weather conditions. There is a less than 1 percent chance of flooding in any year, or flooding occurs less than 1 time in 100 years but at least 1 time in 500 years.

Rare.—Flooding unlikely but possible under unusual weather conditions. There is a 1 to 5 percent chance of flooding in any year, or flooding occurs nearly 1 to 5 times in 100 years.

Occasional.—Flooding is expected infrequently under usual weather conditions. There is a 5 to 50 percent chance of flooding in any year, or flooding occurs more than 5 times to 50 times in 100 years.

Frequent.—Flooding is likely to occur often under usual weather conditions. There is a more than a 50 percent chance of flooding in any year but a less than a 50 percent chance of flooding in all months in any year, or flooding occurs more than 50 times in 100 years.

Very frequent.—Flooding is likely to occur very often under usual weather conditions. There is a more than a 50 percent chance of flooding in all months of any year.

Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially. Flood plains can be subdivided into low level, low to intermediate level, and high level. A *low level flood plain* is susceptible to frequent flooding. A *low to intermediate level flood plain* is susceptible to occasional flooding. A *high level flood plain* is susceptible to rare flooding.

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 that forms 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.

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 are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

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.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. 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}. Saturated hydraulic conductivity. (See Permeability.)

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.

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.

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.

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.

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

Paleoterrace. An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment. A 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.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

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.

Plateau (geomorphology). A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower-lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

Plowpan. A compacted layer that 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.

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.

Saturated hydraulic conductivity (K_{sat}). The amount of water that would move vertically through a unit area of saturated soil in unit time under unit hydraulic gradient. Terms describing saturated hydraulic conductivity, measured in inches per hour *(micrometers per second)*, are as follows:

Very low	0.0 to 0.001417 *(0.0 to 0.01)*
Low	0.001417 to 0.01417 *(0.01 to 0.1)*
Moderately low	0.01417 to 0.1417 *(0.1 to 1.0)*
Moderately high	0.1417 to 1.417 *(1.0 to 10)*
High	1.417 to 14.7 *(10 to 100)*
Very high	more than 14.7 *(more than 100)*

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.

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 dominates 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 slopes are as follows:

Nearly level	0 to 3 percent
Gently sloping	3 to 8 percent
Strongly sloping	8 to 15 percent
Moderately steep	15 to 35 percent

Steep	35 to 55 percent
Very steep	55 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 permeability in the soil.

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.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace (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. Terraces can be subdivided into a *low stream terrace,* which is susceptible to flooding, and a *high stream terrace,* which is not susceptible to flooding.

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.

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.

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 1961-90 at Hot Springs, 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--	39.8	19.5	29.7	64	-7	26	2.96	1.57	4.19	6	8.7
February-	43.2	21.3	32.2	70	-1	41	2.92	1.61	4.07	6	9.0
March----	53.5	29.3	41.4	80	9	147	3.69	2.27	4.97	7	4.2
April----	63.8	37.7	50.8	86	19	340	3.43	1.95	4.75	7	1.2
May------	73.1	46.4	59.8	89	29	613	4.15	2.68	5.48	8	0.0
June-----	80.1	54.2	67.1	92	38	809	3.36	2.02	4.56	6	0.0
July-----	83.1	58.5	70.8	94	44	947	4.49	3.24	5.64	8	0.0
August---	82.2	57.7	70.0	94	42	928	3.70	2.39	4.89	6	0.0
September	75.5	51.0	63.3	89	32	697	3.37	1.21	5.16	5	0.0
October--	65.3	40.2	52.7	82	21	402	3.84	1.84	5.58	5	0.1
November-	54.2	32.2	43.2	75	12	168	3.48	1.82	4.93	6	2.0
December-	43.5	23.6	33.6	68	-1	50	2.96	1.41	4.30	6	7.1
Yearly:											
Average	63.1	39.3	51.2	---	---	---	---	---	---	---	---
Extreme	100	-20	---	96	-10	---	---	---	---	---	---
Total--	---	---	---	---	---	5,167	42.35	36.76	46.48	76	32.3

* 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 1961-90 at Hot Springs, 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. 17	May 1	May 17
2 years in 10 later than--	Apr. 13	Apr. 26	May 12
5 years in 10 later than--	Apr. 5	Apr. 18	May 3
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 18	Oct. 4	Sept. 23
2 years in 10 earlier than--	Oct. 25	Oct. 10	Sept. 28
5 years in 10 earlier than-	Nov. 6	Oct. 23	Oct. 7

Table 3.—Growing Season

(Recorded in the period 1961-90 at Hot Springs, 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	191	163	138
8 years in 10	199	171	144
5 years in 10	214	186	157
2 years in 10	228	202	169
1 year in 10	236	210	176

Table 4.—Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
1A	Alonzville loam, 0 to 3 percent slopes, rarely flooded	1,171	0.3
2B	Alonzville cobbly loam, 3 to 8 percent slopes	656	0.2
3C	Alticrest-Dekalb complex, 8 to 15 percent slopes, very stony	517	0.2
4A	Atkins silt loam, 0 to 3 percent slopes, occasionally flooded	618	0.2
5D	Berks channery silt loam, 15 to 35 percent slopes	552	0.2
5E	Berks channery silt loam, 35 to 55 percent slopes	3,169	0.9
6B	Berks-Weikert complex, 3 to 8 percent slopes	5	*
6C	Berks-Weikert complex, 8 to 15 percent slopes	981	0.3
7C	Berks-Weikert complex, 8 to 15 percent slopes, very stony	210	*
7D	Berks-Weikert complex, 15 to 35 percent slopes, very stony	1,199	0.3
8B	Blairton-Wharton complex, 3 to 8 percent slopes	255	*
9C	Caneyville silt loam, 8 to 15 percent slopes, very rocky	93	*
9D	Caneyville silt loam, 15 to 35 percent slopes, very rocky	1,130	0.3
9E	Caneyville silt loam, 35 to 55 percent slopes, very rocky	1,677	0.5
10B	Cottonbend silt loam, 3 to 8 percent slopes	1,938	0.6
11A	Coursey silt loam, 0 to 3 percent slopes, rarely flooded	2,572	0.7
12D	Dekalb-Alticrest complex, 15 to 35 percent slopes, very stony	2,570	0.7
12E	Dekalb-Alticrest complex, 35 to 55 percent slopes, very stony	5,270	1.5
13D	Dekalb-Lily-McClung complex, 15 to 35 percent slopes	7,258	2.1
14E	Dekalb-Lily complex, 35 to 55 percent slopes, very stony	4,251	1.2
15D	Dekalb-Rock outcrop complex, 15 to 35 percent slopes, extremely stony	817	0.2
15E	Dekalb-Rock outcrop complex, 35 to 80 percent slopes, extremely stony	7,228	2.1
16E	Dekalb-Watahala-McClung complex, 35 to 55 percent slopes	18,564	5.4
17A	Derroc very cobbly loam, 0 to 3 percent slopes, occasionally flooded	1,644	0.5
18B	Escatawba loam, 3 to 8 percent slopes, very stony	2,375	0.7
18C	Escatawba loam, 8 to 15 percent slopes, very stony	6,292	1.8
18D	Escatawba loam, 15 to 35 percent slopes, very stony	2,162	0.6
19B	Escatawba silt loam, 3 to 8 percent slopes	1,234	0.4
19C	Escatawba silt loam, 8 to 15 percent slopes	1,424	0.4
20C	Faywood-Poplimento complex, 8 to 15 percent slopes	57	*
20D	Faywood-Poplimento complex, 15 to 35 percent slopes	1,235	0.4
20E	Faywood-Poplimento complex, 35 to 55 percent slopes	1,076	0.3
21A	Feedstone silt loam, 0 to 3 percent slopes, rarely flooded	779	0.2
22C	Frederick silt loam, 8 to 15 percent slopes	34	*
22D	Frederick silt loam, 15 to 25 percent slopes	140	*
23C	Frederick-Watahala complex, 8 to 15 percent slopes	330	*
23D	Frederick-Watahala complex, 15 to 35 percent slopes	838	0.2
24B	Gilpin silt loam, 3 to 8 percent slopes	1,245	0.4
24C	Gilpin silt loam, 8 to 15 percent slopes	2,455	0.7
24D	Gilpin silt loam, 15 to 25 percent slopes	1,807	0.5
25A	Gladehill loam, 0 to 3 percent slopes, frequently flooded	1,108	0.3
26A	Irongate fine sandy loam, 0 to 3 percent slopes, occasionally flooded	753	0.2
27C	Lehew-Berks complex, 8 to 15 percent slopes, very stony	1,599	0.5
27D	Lehew-Berks complex, 15 to 35 percent slopes, very stony	5,057	1.5
27E	Lehew-Berks complex, 35 to 55 percent slopes, very stony	13,306	3.9
28F	Lehew-Berks-Rock outcrop complex, 55 to 80 percent slopes, extremely stony	7,157	2.1
29C	Lily sandy loam, 8 to 15 percent slopes	115	*
30D	Lily sandy loam, 15 to 35 percent slopes, very stony	84	*
31C	Lily-McClung-Dekalb complex, 8 to 15 percent slopes	4,795	1.4
32C	Macove channery silt loam, 3 to 15 percent slopes, very stony	2,591	0.8
32D	Macove channery silt loam, 15 to 35 percent slopes, very stony	562	0.2
33E	Macove extremely stony loam, 35 to 60 percent slopes, very rubbly	137	*
34D	Macove-Berks complex, 15 to 35 percent slopes, very stony	855	0.2
34E	Macove-Berks complex, 35 to 60 percent slopes, very stony	1,917	0.6
35C	Mandy channery silt loam, 8 to 15 percent slopes, very stony	53	*
35D	Mandy channery silt loam, 15 to 35 percent slopes, very stony	50	*
35E	Mandy channery silt loam, 35 to 55 percent slopes, very stony	80	*
36A	Maurertown silty clay loam, 0 to 3 percent slopes, rarely flooded	567	0.2
37B	McClung-Lily complex, 3 to 8 percent slopes	751	0.2
38C	McClung-Watahala-Dekalb complex, 8 to 15 percent slopes	2,525	0.7

See footnote at end of table.

Table 4.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Acres	Percent
38D	McClung-Watahala-Dekalb complex, 15 to 35 percent slopes	10,564	3.1
39B	Murrill loam, 3 to 8 percent slopes	137	*
39C	Murrill loam, 8 to 15 percent slopes	2,019	0.6
39D	Murrill loam, 15 to 25 percent slopes	879	0.3
40C	Murrill cobbly loam, 8 to 15 percent slopes, very stony	850	0.2
40D	Murrill cobbly loam, 15 to 35 percent slopes, very stony	4,225	1.2
40E	Murrill cobbly loam, 35 to 55 percent slopes, very stony	260	*
41B	Nicelytown silt loam, 3 to 8 percent slopes	2,544	0.7
42A	Ogles very cobbly loam, 0 to 3 percent slopes, occasionally flooded	2,529	0.7
43B	Oriskany cobbly sandy loam, 3 to 8 percent slopes, very stony	1,346	0.4
44C	Oriskany cobbly sandy loam, 8 to 15 percent slopes, extremely stony	6,167	1.8
44D	Oriskany cobbly sandy loam, 15 to 35 percent slopes, extremely stony	11,699	3.4
44E	Oriskany cobbly sandy loam, 35 to 55 percent slopes, extremely stony	9,505	2.8
45E	Oriskany extremely bouldery sandy loam, 25 to 55 percent slopes, very rubbly	4,759	1.4
46C	Oriskany-Murrill complex, 8 to 15 percent slopes, very stony	1,688	0.5
46D	Oriskany-Murrill complex, 15 to 35 percent slopes, very stony	8,978	2.6
47E	Oriskany-Murrill complex, 35 to 55 percent slopes, extremely stony	6,966	2.0
48C	Paddyknob-Madsheep complex, 8 to 15 percent slopes, very stony	288	*
48D	Paddyknob-Madsheep complex, 15 to 35 percent slopes, very stony	899	0.3
48E	Paddyknob-Madsheep complex, 35 to 55 percent slopes, very stony	581	0.2
49A	Purdy silty clay loam, 0 to 3 percent slopes	946	0.3
50C	Shelocta-Berks complex, 8 to 15 percent slopes	2,787	0.8
50D	Shelocta-Berks complex, 15 to 35 percent slopes	8,380	2.4
50E	Shelocta-Berks complex, 35 to 55 percent slopes	8,713	2.5
51B	Sugarhol silt loam, 3 to 8 percent slopes	1,048	0.3
51C	Sugarhol silt loam, 8 to 15 percent slopes	455	0.1
52	Udorthents, dams	30	*
53	Udorthents, smoothed, 3 to 35 percent slopes	331	*
54	Udorthents-Rock outcrop complex, 15 to 100 percent slopes	770	0.2
55E	Watahala-Frederick complex, 35 to 55 percent slopes, very rocky	806	0.2
56E	Weikert-Berks complex, 35 to 55 percent slopes, very stony	2,827	0.8
57D	Weikert-Berks-Rough complex, 15 to 35 percent slopes	11,678	3.4
57E	Weikert-Berks-Rough complex, 35 to 55 percent slopes	40,802	11.9
58F	Weikert-Berks-Rough complex, 55 to 80 percent slopes, very stony	12,526	3.6
59F	Weikert-Rock outcrop-Rough complex, 55 to 100 percent slopes	1,507	0.4
60F	Weikert-Rough complex, 55 to 80 percent slopes	30,525	8.9
61C	Wharton-Blairton complex, 8 to 15 percent slopes	524	0.2
61D	Wharton-Blairton complex, 15 to 35 percent slopes	486	0.1
62A	Wolfgap loam, 0 to 3 percent slopes, occasionally flooded	1,468	0.4
63A	Wolfgap loam, 0 to 3 percent slopes, rarely flooded	757	0.2
64B	Zoar silt loam, 3 to 8 percent slopes	4,169	1.2
W	Water	3,792	1.1
	Total	344,100	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	Corn silage	Grass-legume hay	Pasture
			Tons	Bu	Tons	Tons	AUM
1A:							
Alonzville--------	1	L	6.0	130	19.5	4.0	10.0
2B:							
Alonzville--------	3s	L	4.7	110	16.5	3.4	8.5
3C:							
Alticrest---------	7s	FF	---	---	---	---	---
Dekalb------------	7s	FF	---	---	---	---	---
4A:							
Atkins------------	4w	NN	---	65	9.8	---	7.0
5D:							
Berks-------------	6e	JJ	---	---	---	---	3.0
5E:							
Berks-------------	7e	JJ	---	---	---	---	---
6B:							
Berks-------------	2e	JJ	---	65	9.8	3.0	5.5
Weikert-----------	3s	JJ	---	60	9.0	2.5	3.5
6C:							
Berks-------------	3e	JJ	---	60	9.0	2.6	3.0
Weikert-----------	4s	JJ	---	55	8.2	2.0	2.0
7C:							
Berks-------------	6s	JJ	---	---	---	---	2.5
Weikert-----------	6s	JJ	---	---	---	---	1.5
7D:							
Berks-------------	7s	JJ	---	---	---	---	---
Weikert-----------	7s	JJ	---	---	---	---	---
8B:							
Blairton----------	2e	AA	---	95	14.2	3.0	6.5
Wharton-----------	2e	AA	---	100	15.0	3.5	7.5
9C:							
Caneyville--------	6s	Y	---	---	---	---	7.0
9D:							
Caneyville--------	6e	Y	---	---	---	---	6.0
9E:							
Caneyville--------	7e	Y	---	---	---	---	---

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	Corn silage	Grass-legume hay	Pasture
			Tons	Bu	Tons	Tons	AUM
10B:							
Cottonbend--------	2e	L	6.0	130	19.5	4.0	10.0
11A:							
Coursey-----------	2w	G	---	140	21.0	4.5	8.0
12D:							
Dekalb------------	7s	FF	---	---	---	---	---
Alticrest---------	7s	FF	---	---	---	---	---
12E:							
Dekalb------------	7e	FF	---	---	---	---	---
Alticrest---------	7e	FF	---	---	---	---	---
13D:							
Dekalb------------	7s	FF	---	---	---	---	---
Lily--------------	7s	U	---	---	---	---	---
McClung-----------	6e	M	---	---	---	---	---
14E:							
Dekalb------------	7e	FF	---	---	---	---	---
Lily--------------	7e	U	---	---	---	---	---
15D:							
Dekalb------------	7s	FF	---	---	---	---	---
Rock outcrop------	8s	---	---	---	---	---	---
15E:							
Dekalb------------	7s	FF	---	---	---	---	---
Rock outcrop------	8s	---	---	---	---	---	---
16E:							
Dekalb------------	7e	FF	---	---	---	---	---
Watahala----------	7e	M	---	---	---	---	---
McClung-----------	7e	M	---	---	---	---	---
17A:							
Derroc------------	4s	CC	---	65	9.8	2.5	3.5
18B:							
Escatawba---------	6s	L	---	---	---	---	6.0
18C:							
Escatawba---------	6s	L	---	---	---	---	5.0
18D:							
Escatawba---------	7s	L	---	---	---	---	---
19B:							
Escatawba---------	2e	L	6.0	130	19.5	4.0	9.0

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	Corn silage	Grass-legume hay	Pasture
			Tons	Bu	Tons	Tons	AUM
19C:							
Escatawba	3e	L	4.8	115	17.2	3.5	8.0
20C:							
Faywood	3e	U	3.5	95	14.2	3.1	7.0
Poplimento	3e	M	5.3	115	17.2	3.5	8.0
20D:							
Faywood	6e	U	---	---	---	---	6.0
Poplimento	6e	M	---	---	---	---	7.0
20E:							
Faywood	7e	U	---	---	---	---	---
Poplimento	7e	M	---	---	---	---	---
21A:							
Feedstone	2w	G	---	140	21.0	4.5	12.0
22C:							
Frederick	3e	M	5.3	115	17.2	3.5	8.0
22D:							
Frederick	4e	M	4.8	105	15.8	3.2	7.5
23C:							
Frederick	3e	M	4.8	105	15.8	3.2	8.0
Watahala	4s	M	4.0	85	12.8	2.6	6.0
23D:							
Frederick	6e	M	---	---	---	---	7.5
Watahala	6s	M	---	---	---	---	5.5
24B:							
Gilpin	2e	U	4.0	110	16.5	3.5	8.0
24C:							
Gilpin	3e	U	3.5	95	14.2	3.1	7.5
24D:							
Gilpin	4e	U	3.2	90	13.5	2.8	6.5
25A:							
Gladehill	3w	A	6.0	140	21.0	4.5	10.5
26A:							
Irongate	2w	G	---	140	21.0	4.5	11.0
27C:							
Lehew	6s	JJ	---	---	---	---	2.0
Berks	6s	JJ	---	---	---	---	3.0

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	Corn silage	Grass-legume hay	Pasture
			Tons	Bu	Tons	Tons	AUM
27D:							
Lehew	7s	JJ	---	---	---	---	---
Berks	7s	JJ	---	---	---	---	---
27E:							
Lehew	7e	JJ	---	---	---	---	---
Berks	7e	JJ	---	---	---	---	---
28F:							
Lehew	7s	JJ	---	---	---	---	---
Berks	7s	JJ	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---
29C:							
Lily	3e	U	3.5	95	14.0	3.1	6.5
30D:							
Lily	7s	U	---	---	---	---	---
31C:							
Lily	3e	U	3.5	95	14.0	3.1	6.5
McClung	3e	M	5.3	115	17.2	3.5	8.0
Dekalb	7s	FF	---	---	---	---	---
32C:							
Macove	6s	CC	---	---	---	---	6.0
32D:							
Macove	7s	CC	---	---	---	---	---
33E:							
Macove	7e	CC	---	---	---	---	---
34D:							
Macove	7s	CC	---	---	---	---	---
Berks	7s	JJ	---	---	---	---	---
34E:							
Macove	7e	CC	---	---	---	---	---
Berks	7e	JJ	---	---	---	---	---
35C:							
Mandy	6s	JJ	---	---	---	---	4.0
35D:							
Mandy	7s	JJ	---	---	---	---	---
35E:							
Mandy	7e	JJ	---	---	---	---	---
36A:							
Maurertown	4w	NN	---	65	9.8	---	4.0

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	Corn silage	Grass-legume hay	Pasture
			Tons	Bu	Tons	Tons	AUM
37B:							
McClung-----------	2e	M	6.0	130	19.5	4.0	8.5
Lily--------------	2e	U	4.0	110	16.5	3.5	7.0
38C:							
McClung-----------	3e	M	5.3	115	17.2	3.5	8.0
Watahala----------	6s	M	---	---	---	---	7.0
Dekalb------------	7s	FF	---	---	---	---	---
38D:							
McClung-----------	6e	M	---	---	---	---	6.5
Watahala----------	7s	M	---	---	---	---	---
Dekalb------------	7s	FF	---	---	---	---	---
39B:							
Murrill-----------	2e	L	6.0	130	19.5	4.0	9.0
39C:							
Murrill-----------	3e	L	4.8	115	17.2	3.5	8.0
39D:							
Murrill-----------	4e	L	4.4	105	15.8	3.2	6.5
40C:							
Murrill-----------	6s	L	---	---	---	---	7.0
40D:							
Murrill-----------	7s	L	---	---	---	---	---
40E:							
Murrill-----------	7e	L	---	---	---	---	---
41B:							
Nicelytown--------	2e	G	---	140	21.0	4.5	8.0
42A:							
Ogles-------------	4s	CC	---	60	9.0	2.5	3.0
43B:							
Oriskany----------	6s	CC	---	---	---	---	6.0
44C:							
Oriskany----------	7s	CC	---	---	---	---	---
44D:							
Oriskany----------	7s	CC	---	---	---	---	---
44E:							
Oriskany----------	7e	CC	---	---	---	---	---
45E:							
Oriskany----------	7e	CC	---	---	---	---	---

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	Corn silage	Grass-legume hay	Pasture
			Tons	Bu	Tons	Tons	AUM
46C:							
Oriskany----------	6s	CC	---	---	---	---	6.0
Murrill-----------	6s	L	---	---	---	---	7.0
46D:							
Oriskany----------	7s	CC	---	---	---	---	---
Murrill-----------	7s	L	---	---	---	---	---
47E:							
Oriskany----------	7e	CC	---	---	---	---	---
Murrill-----------	7e	L	---	---	---	---	---
48C:							
Paddyknob---------	6s	JJ	---	---	---	---	4.0
Madsheep----------	6s	JJ	---	---	---	---	4.0
48D:							
Paddyknob---------	7s	JJ	---	---	---	---	---
Madsheep----------	7s	JJ	---	---	---	---	---
48E:							
Paddyknob---------	7e	JJ	---	---	---	---	---
Madsheep----------	7e	JJ	---	---	---	---	---
49A:							
Purdy-------------	4w	NN	---	65	9.8	---	6.5
50C:							
Shelocta----------	3e	L	4.8	115	17.2	3.5	9.0
Berks-------------	3e	JJ	---	60	9.0	2.6	3.0
50D:							
Shelocta----------	6e	L	---	---	---	---	7.0
Berks-------------	6e	JJ	---	---	---	---	2.0
50E:							
Shelocta----------	7e	L	---	---	---	---	---
Berks-------------	7e	JJ	---	---	---	---	---
51B:							
Sugarhol----------	2e	O	5.5	130	19.5	4.0	10.0
51C:							
Sugarhol----------	3e	O	4.8	115	17.2	3.5	9.0
52. Udorthents, dams							
53. Udorthents, smoothed							

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	Corn silage	Grass-legume hay	Pasture
			Tons	Bu	Tons	Tons	AUM
54:							
Udorthents.							
Rock outcrop------	8s	---	---	---	---	---	---
55E:							
Watahala----------	7e	M	---	---	---	---	---
Frederick---------	7e	M	---	---	---	---	---
56E:							
Weikert-----------	7e	JJ	---	---	---	---	---
Berks-------------	7e	JJ	---	---	---	---	---
57D:							
Weikert-----------	6e	JJ	---	---	---	---	1.5
Berks-------------	6e	JJ	---	---	---	---	3.0
Rough-------------	7e	JJ	---	---	---	---	---
57E:							
Weikert-----------	7e	JJ	---	---	---	---	---
Berks-------------	7e	JJ	---	---	---	---	---
Rough-------------	7e	JJ	---	---	---	---	---
58F:							
Weikert-----------	7e	JJ	---	---	---	---	---
Berks-------------	7e	JJ	---	---	---	---	---
Rough-------------	7e	JJ	---	---	---	---	---
59F:							
Weikert-----------	7s	JJ	---	---	---	---	---
Rock outcrop------	8s	---	---	---	---	---	---
Rough-------------	7s	JJ	---	---	---	---	---
60F:							
Weikert-----------	7e	JJ	---	---	---	---	---
Rough-------------	7e	JJ	---	---	---	---	---
61C:							
Wharton-----------	3e	AA	---	90	13.5	3.0	7.5
Blairton----------	3e	AA	---	85	12.8	2.5	6.5
61D:							
Wharton-----------	6e	AA	---	---	---	---	6.5
Blairton----------	6e	AA	---	---	---	---	5.5
62A:							
Wolfgap-----------	1	A	6.0	160	24.0	4.5	12.0

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	Corn silage	Grass-legume hay	Pasture
			Tons	Bu	Tons	Tons	AUM
63A:							
Wolfgap-----------	1	A	6.0	160	24.0	4.5	12.0
64B:							
Zoar--------------	2e	K	---	130	19.5	4.0	8.0
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)

Map symbol	Map unit name
1A	Alonzville loam, 0 to 3 percent slopes, rarely flooded
10B	Cottonbend silt loam, 3 to 8 percent slopes
11A	Coursey silt loam, 0 to 3 percent slopes, rarely flooded
19B	Escatawba silt loam, 3 to 8 percent slopes
21A	Feedstone silt loam, 0 to 3 percent slopes, rarely flooded
24B	Gilpin silt loam, 3 to 8 percent slopes
26A	Irongate fine sandy loam, 0 to 3 percent slopes, occasionally flooded
39B	Murrill loam, 3 to 8 percent slopes
41B	Nicelytown silt loam, 3 to 8 percent slopes
51B	Sugarhol silt loam, 3 to 8 percent slopes
62A	Wolfgap loam, 0 to 3 percent slopes, occasionally flooded
63A	Wolfgap loam, 0 to 3 percent slopes, rarely flooded

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
1A:					
Alonzville----------	80	Somewhat limited		Somewhat limited	
		Too acid	0.37	Too acid	0.96
				Flooding	0.40
2B:					
Alonzville----------	85	Somewhat limited		Somewhat limited	
		Too acid	0.37	Too acid	0.96
3C:					
Alticrest-----------	50	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Too acid	0.82	Droughty	1.00
		Large stones content	0.76	Too acid	1.00
Dekalb--------------	30	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Droughty	1.00
				Too acid	1.00
		Too acid	0.89		
4A:					
Atkins--------------	75	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Flooding	1.00
		Flooding	0.60	Ponding	1.00
5D:					
Berks---------------	80	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
5E:					
Berks---------------	80	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
6B:					
Berks---------------	55	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
Weikert-------------	35	Very limited		Very limited	
		Depth to bedrock	1.00	Droughty	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Runoff	0.40	Low adsorption	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
6C:					
Berks	55	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	0.71	Droughty	1.00
		Slope	0.63	Too acid	0.96
Weikert	30	Very limited		Very limited	
		Depth to bedrock	1.00	Droughty	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Slope	0.63	Low adsorption	1.00
7C:					
Berks	50	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Large stones content	0.76	Droughty	1.00
				Too acid	0.96
		Depth to bedrock	0.71		
Weikert	40	Very limited		Very limited	
		Depth to bedrock	1.00	Droughty	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Large stones content	0.76	Low adsorption	1.00
7D:					
Berks	70	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Large stones content	0.76	Droughty	1.00
Weikert	25	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Low adsorption	1.00
8B:					
Blairton	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.62	Low adsorption	1.00
		Slow water movement	0.50	Too acid	1.00
Wharton	30	Somewhat limited		Very limited	
		Depth to saturated zone	0.95	Too acid	1.00
				Depth to saturated zone	0.95
		Slow water movement	0.81		
				Slow water movement	0.68
		Too acid	0.62		
9C:					
Caneyville	85	Very limited		Very limited	
		Slow water movement	1.00	Low adsorption	1.00
				Slow water movement	1.00
		Depth to bedrock	0.54		
		Slope	0.50	Depth to bedrock	0.54

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
9D:					
Caneyville----------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Slow water movement	1.00	Slope	1.00
		Depth to bedrock	0.54	Slow water movement	1.00
9E:					
Caneyville----------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Slow water movement	1.00	Slope	1.00
		Depth to bedrock	0.54	Slow water movement	1.00
10B:					
Cottonbend----------	85	Somewhat limited		Somewhat limited	
		Too acid	0.37	Too acid	0.96
11A:					
Coursey-------------	80	Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.37	Too acid	0.96
				Flooding	0.40
12D:					
Dekalb--------------	60	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
Alticrest-----------	25	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Too acid	0.82	Droughty	1.00
12E:					
Dekalb--------------	60	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
Alticrest-----------	25	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Too acid	0.82	Droughty	1.00
13D:					
Dekalb--------------	40	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
13D:					
Lily	30	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.89	Slope	1.00
		Large stones content	0.76	Too acid	1.00
McClung	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.92	Too acid	1.00
14E:					
Dekalb	65	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
Lily	20	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.89	Slope	1.00
		Large stones content	0.76	Too acid	1.00
15D:					
Dekalb	60	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	30	Not rated		Not rated	
15E:					
Dekalb	60	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	30	Not rated		Not rated	
16E:					
Dekalb	35	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
Watahala	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.89	Too acid	1.00
McClung	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.92	Too acid	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
17A:					
Derroc	80	Very limited		Very limited	
		Filtering capacity	0.99	Flooding	1.00
		Cobble content	0.98	Filtering capacity	0.99
		Droughty	0.84	Cobble content	0.98
18B:					
Escatawba	80	Somewhat limited		Very limited	
		Large stones content	0.94	Too acid	1.00
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Too acid	0.78	Slow water movement	0.37
18C:					
Escatawba	80	Somewhat limited		Very limited	
		Large stones content	0.94	Too acid	1.00
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Too acid	0.78	Slope	0.63
18D:					
Escatawba	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.94	Too acid	1.00
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
19B:					
Escatawba	80	Somewhat limited		Very limited	
		Depth to saturated zone	0.86	Too acid	1.00
		Too acid	0.78	Depth to saturated zone	0.86
		Slow water movement	0.50	Slow water movement	0.37
19C:					
Escatawba	80	Somewhat limited		Very limited	
		Depth to saturated zone	0.86	Too acid	1.00
		Too acid	0.78	Depth to saturated zone	0.86
		Slope	0.50	Slope	0.50
20C:					
Faywood	50	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	0.90	Droughty	1.00
		Slow water movement	0.81	Depth to bedrock	0.90
Poplimento	40	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Slow water movement	0.50	Too acid	0.42
		Too acid	0.11	Slow water movement	0.37

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
20D:					
Faywood	50	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.90	Droughty	1.00
Poplimento	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Too acid	0.42
		Too acid	0.11	Slow water movement	0.37
20E:					
Faywood	45	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.90	Droughty	1.00
Poplimento	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Too acid	0.42
		Too acid	0.11	Slow water movement	0.37
21A:					
Feedstone	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.02	Flooding	0.40
				Too acid	0.07
22C:					
Frederick	75	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Too acid	0.11	Too acid	0.42
22D:					
Frederick	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.11	Too acid	0.42
23C:					
Frederick	50	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Too acid	0.11	Too acid	0.42
Watahala	40	Somewhat limited		Very limited	
		Too acid	0.89	Too acid	1.00
		Slope	0.63	Slope	0.63
23D:					
Frederick	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.11	Too acid	0.42
Watahala	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.89	Too acid	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		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
24B:					
Gilpin	80	Somewhat limited		Very limited	
		Too acid	0.73	Low adsorption	1.00
		Droughty	0.37	Too acid	1.00
		Depth to bedrock	0.29	Droughty	0.37
24C:					
Gilpin	80	Somewhat limited		Very limited	
		Too acid	0.73	Low adsorption	1.00
		Slope	0.63	Too acid	1.00
		Droughty	0.37	Slope	0.63
24D:					
Gilpin	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.73	Slope	1.00
		Droughty	0.37	Too acid	1.00
25A:					
Gladehill	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Too acid	0.02	Too acid	0.07
26A:					
Irongate	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.60	Flooding	1.00
		Too acid	0.11	Too acid	0.42
27C:					
Lehew	50	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Too acid	0.89	Droughty	1.00
		Large stones content	0.76	Too acid	1.00
Berks	45	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Large stones content	0.76	Droughty	1.00
				Too acid	0.96
		Depth to bedrock	0.71		
27D:					
Lehew	50	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Too acid	0.89	Droughty	1.00
Berks	45	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Large stones content	0.76	Droughty	1.00
27E:					
Lehew	45	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Too acid	0.89	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		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
27E:					
Berks	40	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Large stones content	0.76	Droughty	1.00
28F:					
Lehew	45	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		
Berks	40	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	10	Not rated		Not rated	
29C:					
Lily	85	Somewhat limited		Very limited	
		Too acid	0.89	Low adsorption	1.00
		Droughty	0.74	Too acid	1.00
		Slope	0.63	Droughty	0.74
30D:					
Lily	80	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.89	Slope	1.00
		Large stones content	0.76	Too acid	1.00
31C:					
Lily	45	Somewhat limited		Very limited	
		Too acid	0.89	Low adsorption	1.00
		Droughty	0.74	Too acid	1.00
		Slope	0.63	Droughty	0.74
McClung	30	Somewhat limited		Very limited	
		Too acid	0.92	Too acid	1.00
		Slope	0.63	Slope	0.63
Dekalb	20	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Droughty	1.00
				Too acid	1.00
		Too acid	0.89		
32C:					
Macove	85	Somewhat limited		Very limited	
		Large stones content	0.94	Too acid	0.99
				Slope	0.63
		Slope	0.63	Droughty	0.20
		Too acid	0.50		

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
32D:					
Macove	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.94	Too acid	0.99
		Too acid	0.50	Droughty	0.20
33E:					
Macove	75	Very limited		Very limited	
		Slope	1.00	Large stones on the surface	1.00
		Large stones on the surface	1.00	Slope	1.00
		Large stones content	1.00	Too acid	0.99
34D:					
Macove	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.94	Too acid	0.99
		Too acid	0.50	Droughty	0.20
Berks	35	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
34E:					
Macove	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.94	Too acid	0.99
		Too acid	0.50	Droughty	0.20
Berks	35	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
35C:					
Mandy	75	Somewhat limited		Very limited	
		Too acid	0.89	Low adsorption	1.00
		Large stones content	0.76	Too acid	1.00
		Droughty	0.67	Droughty	0.67
35D:					
Mandy	75	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.89	Slope	1.00
		Large stones content	0.76	Too acid	1.00
35E:					
Mandy	75	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.89	Slope	1.00
		Large stones content	0.76	Too acid	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		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
36A:					
Maurertown----------	70	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
37B:					
McClung-------------	45	Somewhat limited		Very limited	
		Too acid	0.92	Too acid	1.00
Lily----------------	35	Somewhat limited		Very limited	
		Too acid	0.89	Low adsorption	1.00
		Droughty	0.74	Too acid	1.00
		Depth to bedrock	0.29	Droughty	0.74
38C:					
McClung-------------	45	Somewhat limited		Very limited	
		Too acid	0.92	Too acid	1.00
		Slope	0.50	Slope	0.50
Watahala------------	25	Somewhat limited		Very limited	
		Too acid	0.89	Too acid	1.00
		Slope	0.50	Slope	0.50
Dekalb--------------	20	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Droughty	1.00
		Too acid	0.89	Too acid	1.00
38D:					
McClung-------------	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.92	Too acid	1.00
Watahala------------	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.89	Too acid	1.00
Dekalb--------------	20	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
39B:					
Murrill-------------	85	Somewhat limited		Very limited	
		Too acid	0.62	Too acid	1.00
39C:					
Murrill-------------	85	Somewhat limited		Very limited	
		Slope	0.63	Too acid	1.00
		Too acid	0.62	Slope	0.63
39D:					
Murrill-------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.62	Too acid	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
40C:					
Murrill	95	Very limited		Very limited	
		Cobble content	1.00	Cobble content	1.00
		Large stones content	0.76	Too acid	1.00
		Slope	0.63	Slope	0.63
40D:					
Murrill	95	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Cobble content	1.00	Cobble content	1.00
		Large stones content	0.76	Too acid	1.00
40E:					
Murrill	95	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Cobble content	1.00	Cobble content	1.00
		Large stones content	0.76	Too acid	1.00
41B:					
Nicelytown	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.64	Too acid	0.96
		Too acid	0.37	Slow water movement	0.50
42A:					
Ogles	80	Very limited		Very limited	
		Cobble content	1.00	Flooding	1.00
		Droughty	1.00	Cobble content	1.00
		Flooding	0.60	Droughty	1.00
43B:					
Oriskany	85	Somewhat limited		Somewhat limited	
		Large stones content	0.76	Too acid	0.96
		Too acid	0.37	Cobble content	0.32
		Cobble content	0.32	Large stones on the surface	0.18
44C:					
Oriskany	75	Very limited		Somewhat limited	
		Large stones content	1.00	Too acid	0.96
		Slope	0.63	Slope	0.63
		Too acid	0.37	Cobble content	0.32
44D:					
Oriskany	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Too acid	0.96
		Too acid	0.37	Cobble content	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
44E:					
Oriskany	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Too acid	0.96
		Too acid	0.37	Cobble content	0.32
45E:					
Oriskany	85	Very limited		Very limited	
		Slope	1.00	Large stones on the surface	1.00
		Large stones on the surface	1.00	Slope	1.00
		Large stones content	1.00	Too acid	0.96
46C:					
Oriskany	55	Somewhat limited		Somewhat limited	
		Large stones content	0.76	Too acid	0.96
		Slope	0.63	Slope	0.63
		Too acid	0.37	Cobble content	0.32
Murrill	35	Very limited		Very limited	
		Cobble content	1.00	Cobble content	1.00
		Large stones content	0.76	Too acid	1.00
		Slope	0.63	Slope	0.63
46D:					
Oriskany	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.76	Too acid	0.96
		Too acid	0.37	Cobble content	0.32
Murrill	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Cobble content	1.00	Cobble content	1.00
		Large stones content	0.76	Too acid	1.00
47E:					
Oriskany	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Too acid	0.96
		Too acid	0.37	Cobble content	0.32
Murrill	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Cobble content	1.00
		Cobble content	1.00	Too acid	1.00
48C:					
Paddyknob	60	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Droughty	1.00
		Too acid	0.89	Too acid	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		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
48C:					
Madsheep-----------	35	Somewhat limited		Very limited	
		Droughty	0.96	Low adsorption	1.00
		Too acid	0.89	Too acid	1.00
		Large stones content	0.76	Droughty	0.96
48D:					
Paddyknob-----------	55	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
Madsheep-----------	35	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.96	Slope	1.00
		Too acid	0.89	Too acid	1.00
48E:					
Paddyknob-----------	55	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
Madsheep-----------	35	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.96	Slope	1.00
		Too acid	0.89	Too acid	1.00
49A:					
Purdy---------------	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	1.00
		Ponding	1.00	Too acid	1.00
50C:					
Shelocta------------	60	Somewhat limited		Very limited	
		Slope	0.63	Too acid	0.99
		Too acid	0.50	Slope	0.63
Berks---------------	20	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	0.71	Droughty	1.00
		Slope	0.63	Too acid	0.96
50D:					
Shelocta------------	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.50	Too acid	0.99
Berks---------------	20	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
50E:					
Shelocta	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.50	Too acid	0.99
Berks	25	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
51B:					
Sugarhol	85	Somewhat limited		Very limited	
		Too acid	0.89	Too acid	1.00
51C:					
Sugarhol	85	Somewhat limited		Very limited	
		Too acid	0.89	Too acid	1.00
		Slope	0.63	Slope	0.63
52:					
Udorthents, dams	95	Not rated		Not rated	
53:					
Udorthents, smoothed	85	Not rated		Not rated	
54:					
Udorthents	65	Not rated		Not rated	
Rock outcrop	25	Not rated		Not rated	
55E:					
Watahala	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.89	Too acid	1.00
		Large stones content	0.47		
Frederick	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.47	Too acid	0.42
		Too acid	0.11		
56E:					
Weikert	50	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Low adsorption	1.00
Berks	40	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Large stones content	0.76	Droughty	1.00
57D:					
Weikert	35	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Low adsorption	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
57D:					
Berks	34	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
Rough	10	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Low adsorption	1.00
57E:					
Weikert	40	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Low adsorption	1.00
Berks	30	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
Rough	15	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Low adsorption	1.00
58F:					
Weikert	40	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Low adsorption	1.00
Berks	30	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Large stones content	0.76	Droughty	1.00
Rough	15	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Low adsorption	1.00
59F:					
Weikert	40	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Low adsorption	1.00
Rock outcrop	25	Not rated		Not rated	
Rough	20	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Low adsorption	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
60F:					
Weikert	65	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Low adsorption	1.00
Rough	25	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Low adsorption	1.00
61C:					
Wharton	55	Somewhat limited		Very limited	
		Depth to saturated zone	0.95	Too acid	1.00
		Slow water movement	0.81	Depth to saturated zone	0.95
		Slope	0.63	Slow water movement	0.68
Blairton	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.63	Low adsorption	1.00
		Too acid	0.62	Too acid	1.00
61D:					
Wharton	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to saturated zone	0.95	Too acid	1.00
		Slow water movement	0.81	Depth to saturated zone	0.95
Blairton	40	Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Low adsorption	1.00
		Too acid	0.62	Slope	1.00
62A:					
Wolfgap	95	Somewhat limited		Very limited	
		Flooding	0.60	Flooding	1.00
		Too acid	0.01	Too acid	0.01
63A:					
Wolfgap	95	Somewhat limited		Somewhat limited	
		Too acid	0.01	Flooding	0.40
				Too acid	0.01
64B:					
Zoar	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	1.00
		Too acid	0.22	Too acid	0.77
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
1A:					
Alonzville----------	80	Somewhat limited		Very limited	
		Too acid	0.96	Seepage	1.00
				Too acid	0.96
				Flooding	0.40
2B:					
Alonzville----------	85	Somewhat limited		Very limited	
		Too acid	0.96	Seepage	1.00
		Too steep	0.32	Too acid	0.96
3C:					
Alticrest-----------	50	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too acid	1.00
Dekalb--------------	30	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too acid	1.00
4A:					
Atkins--------------	75	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Too acid	0.99	Seepage	1.00
5D:					
Berks---------------	80	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
5E:					
Berks---------------	80	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
6B:					
Berks---------------	55	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	0.96	Seepage	1.00
		Depth to bedrock	0.71	Too acid	0.96
Weikert-------------	35	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too acid	0.96	Too acid	0.96

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
6C:					
Berks	55	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Seepage	1.00
		Too acid	0.96	Too steep	1.00
Weikert	30	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
7C:					
Berks	50	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Seepage	1.00
		Too acid	0.96	Too steep	0.99
Weikert	40	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	0.99
7D:					
Berks	70	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
Weikert	25	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
8B:					
Blairton	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	1.00	Depth to bedrock	1.00
		Slow water movement	0.37	Seepage	1.00
Wharton	30	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.95	Too acid	1.00
		Slow water movement	0.68	Depth to saturated zone	0.95
9C:					
Caneyville	85	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Seepage	1.00
				Too steep	0.99
9D:					
Caneyville	85	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep	1.00
				Seepage	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
9E:					
Caneyville----------	85	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep	1.00
				Seepage	1.00
10B:					
Cottonbend----------	85	Somewhat limited		Very limited	
		Too acid	0.96	Seepage	1.00
		Too steep	0.32	Too acid	0.96
11A:					
Coursey-------------	80	Very limited		Very limited	
		Depth to saturated zone	0.99	Seepage	1.00
		Too acid	0.96	Depth to saturated zone	0.99
				Too acid	0.96
12D:					
Dekalb--------------	60	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
Alticrest-----------	25	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
12E:					
Dekalb--------------	60	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
Alticrest-----------	25	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty		Depth to bedrock	1.00
				Too steep	1.00
13D:					
Dekalb--------------	40	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
Lily----------------	30	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too steep	1.00
				Seepage	1.00
McClung-------------	15	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too steep	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		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
14E:					
Dekalb	65	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
Lily	20	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too steep	1.00
				Seepage	1.00
15D:					
Dekalb	60	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
Rock outcrop	30	Not rated		Not rated	
15E:					
Dekalb	60	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
Rock outcrop	30	Not rated		Not rated	
16E:					
Dekalb	35	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
Watahala	30	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too steep	1.00
				Too acid	1.00
McClung	20	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too steep	1.00
				Too acid	1.00
17A:					
Derroc	80	Very limited		Very limited	
		Filtering capacity	0.99	Flooding	1.00
				Seepage	1.00
		Cobble content	0.98	Cobble content	1.00
		Droughty	0.84		
18B:					
Escatawba	80	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.86	Too acid	1.00
				Depth to saturated zone	0.86
		Slow water movement	0.37		

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
18C:					
Escatawba-----------	80	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Depth to saturated zone	0.86	Too steep	1.00
18D:					
Escatawba-----------	75	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Too acid	1.00	Seepage	1.00
				Too acid	1.00
19B:					
Escatawba-----------	80	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.86	Too acid	1.00
		Slow water movement	0.37	Depth to saturated zone	0.86
19C:					
Escatawba-----------	80	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Depth to saturated zone	0.86	Too steep	0.99
20C:					
Faywood-------------	50	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	0.90	Too steep	1.00
Poplimento----------	40	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.42	Too steep	1.00
				Too acid	0.42
20D:					
Faywood-------------	50	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
Poplimento----------	40	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Too acid	0.42	Seepage	1.00
				Too acid	0.42
20E:					
Faywood-------------	45	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
Poplimento----------	35	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Too acid	0.42	Seepage	1.00
				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
21A:					
Feedstone-----------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.07	Seepage	1.00
				Flooding	0.40
22C:					
Frederick-----------	75	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.42	Too steep	1.00
				Too acid	0.42
22D:					
Frederick-----------	75	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.42	Too steep	1.00
				Too acid	0.42
23C:					
Frederick-----------	50	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.42	Too steep	1.00
				Too acid	0.42
Watahala------------	40	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
				Too steep	1.00
23D:					
Frederick-----------	50	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.42	Too steep	1.00
				Too acid	0.42
Watahala------------	40	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too steep	1.00
				Too acid	1.00
24B:					
Gilpin--------------	80	Very limited		Very limited	
		Too acid	1.00	Depth to bedrock	1.00
		Droughty	0.37	Seepage	1.00
		Too steep	0.32	Too acid	1.00
24C:					
Gilpin--------------	80	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Too acid	1.00	Seepage	1.00
				Too acid	1.00
24D:					
Gilpin--------------	85	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too steep	1.00
				Seepage	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
25A:					
Gladehill	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Too acid	0.07	Seepage	1.00
				Too acid	0.07
26A:					
Irongate	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.60	Depth to saturated zone	1.00
		Too acid	0.42	Seepage	1.00
27C:					
Lehew	50	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too acid	1.00
Berks	45	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Seepage	1.00
		Too acid	0.96	Too steep	1.00
27D:					
Lehew	50	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
Berks	45	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
27E:					
Lehew	45	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
Berks	40	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
28F:					
Lehew	45	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
Berks	40	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
Rock outcrop	10	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:					
Lily	85	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Too acid	1.00	Seepage	1.00
				Too acid	1.00
30D:					
Lily	80	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too steep	1.00
				Seepage	1.00
31C:					
Lily	45	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Too acid	1.00	Seepage	1.00
				Too acid	1.00
McClung	30	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
				Too steep	1.00
Dekalb	20	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too acid	1.00
32C:					
Macove	85	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.99	Too steep	1.00
				Stone content	1.00
32D:					
Macove	75	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.99	Too steep	1.00
				Stone content	1.00
33E:					
Macove	75	Very limited		Very limited	
		Large stones on the surface	1.00	Seepage	1.00
				Too steep	1.00
		Too steep	1.00	Stone content	1.00
34D:					
Macove	55	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.99	Too steep	1.00
				Stone content	1.00
Berks	35	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	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
34E:					
Macove	55	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.99	Too steep	1.00
				Stone content	1.00
Berks	35	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
35C:					
Mandy	75	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Too acid	1.00	Seepage	1.00
				Too acid	1.00
35D:					
Mandy	75	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too steep	1.00
				Seepage	1.00
35E:					
Mandy	75	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too steep	1.00
				Seepage	1.00
36A:					
Maurertown	70	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	Too acid	0.77
37B:					
McClung	45	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Too steep	0.32	Too acid	1.00
Lily	35	Very limited		Very limited	
		Too acid	1.00	Depth to bedrock	1.00
		Droughty	0.74	Seepage	1.00
		Too steep	0.32	Too acid	1.00
38C:					
McClung	45	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
				Too steep	0.99
Watahala	25	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
				Too steep	0.99

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
38C:					
Dekalb	20	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too acid	1.00
38D:					
McClung	45	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too steep	1.00
				Too acid	1.00
Watahala	25	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too steep	1.00
				Too acid	1.00
Dekalb	20	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
39B:					
Murrill	85	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Too steep	0.32	Too acid	1.00
39C:					
Murrill	85	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too steep	1.00
				Too acid	1.00
39D:					
Murrill	85	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Too acid	1.00	Seepage	1.00
				Too acid	1.00
40C:					
Murrill	95	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Cobble content	1.00	Too steep	1.00
		Too acid	1.00	Too acid	1.00
40D:					
Murrill	95	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Cobble content	1.00	Seepage	1.00
				Too acid	1.00
40E:					
Murrill	95	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Cobble content	1.00	Seepage	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
41B:					
Nicelytown----------	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.96	Seepage	1.00
		Slow water movement	0.50	Too acid	0.96
42A:					
Ogles---------------	80	Very limited		Very limited	
		Cobble content	1.00	Flooding	1.00
		Droughty	1.00	Seepage	1.00
		Too acid	0.67	Cobble content	1.00
43B:					
Oriskany------------	85	Somewhat limited		Very limited	
		Too acid	0.96	Seepage	1.00
		Too steep	0.32	Cobble content	1.00
		Cobble content	0.32	Too acid	0.96
44C:					
Oriskany------------	75	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.96	Too steep	1.00
				Cobble content	1.00
44D:					
Oriskany------------	75	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.96	Too steep	1.00
				Cobble content	1.00
44E:					
Oriskany------------	80	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.96	Too steep	1.00
				Cobble content	1.00
45E:					
Oriskany------------	85	Very limited		Very limited	
		Large stones on the surface	1.00	Seepage	1.00
				Too steep	1.00
		Too steep	1.00	Cobble content	0.99
46C:					
Oriskany------------	55	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.96	Too steep	1.00
				Cobble content	1.00
Murrill-------------	35	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Cobble content	1.00	Too steep	1.00
		Too acid	1.00	Too acid	1.00
46D:					
Oriskany------------	55	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.96	Too steep	1.00
				Cobble content	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
46D:					
Murrill	35	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Cobble content	1.00	Seepage	1.00
				Too acid	1.00
47E:					
Oriskany	65	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.96	Too steep	1.00
				Cobble content	1.00
Murrill	25	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Cobble content	1.00	Seepage	1.00
				Too acid	1.00
48C:					
Paddyknob	60	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	1.00	Too acid	1.00
Madsheep	35	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Depth to bedrock	1.00
		Droughty	0.96	Too acid	1.00
48D:					
Paddyknob	55	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
Madsheep	35	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Depth to bedrock	1.00
				Too steep	1.00
48E:					
Paddyknob	55	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
				Too steep	1.00
Madsheep	35	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Depth to bedrock	1.00
				Too steep	1.00
49A:					
Purdy	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	1.00	Ponding	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
50C:					
Shelocta------------	60	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.99	Too steep	1.00
				Too acid	0.99
Berks---------------	20	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Seepage	1.00
		Too acid	0.96	Too steep	1.00
50D:					
Shelocta------------	60	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Too acid	0.99	Seepage	1.00
				Too acid	0.99
Berks---------------	20	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
50E:					
Shelocta------------	70	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Too acid	0.99	Seepage	1.00
				Too acid	0.99
Berks---------------	25	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
51B:					
Sugarhol------------	85	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Too steep	0.32	Too acid	1.00
51C:					
Sugarhol------------	85	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
				Too steep	1.00
52:					
Udorthents, dams----	95	Not rated		Not rated	
53:					
Udorthents, smoothed	85	Not rated		Not rated	
54:					
Udorthents----------	65	Not rated		Not rated	
Rock outcrop--------	25	Not rated		Not rated	
55E:					
Watahala------------	45	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too steep	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
55E:					
Frederick-----------	35	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	0.42	Too steep	1.00
				Too acid	0.42
56E:					
Weikert-------------	50	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
Berks---------------	40	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
57D:					
Weikert-------------	35	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
Berks---------------	34	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
Rough---------------	10	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
57E:					
Weikert-------------	40	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
Berks---------------	30	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	1.00
Rough---------------	15	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
58F:					
Weikert-------------	40	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
Berks---------------	30	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep	1.00
				Seepage	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
58F:					
Rough	15	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
59F:					
Weikert	40	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
Rock outcrop	25	Not rated		Not rated	
Rough	20	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
60F:					
Weikert	65	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
Rough	25	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep	1.00	Too steep	1.00
61C:					
Wharton	55	Very limited		Very limited	
		Too steep	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Depth to saturated zone	0.95	Too steep	1.00
Blairton	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too steep	1.00	Depth to bedrock	1.00
		Too acid	1.00	Seepage	1.00
61D:					
Wharton	55	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Too acid	1.00	Seepage	1.00
				Too acid	1.00
Blairton	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too steep	1.00	Depth to bedrock	1.00
				Too steep	1.00
62A:					
Wolfgap	95	Somewhat limited		Very limited	
		Flooding	0.60	Flooding	1.00
		Too acid	0.01	Seepage	1.00
				Too acid	0.01

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
63A:					
Wolfgap	95	Somewhat limited		Very limited	
		Too acid	0.01	Seepage	1.00
				Flooding	0.40
				Too acid	0.01
64B:					
Zoar	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	1.00
		Too acid	0.77	Too acid	0.77
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
1A:					
Alonzville	80	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.96
2B:					
Alonzville	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.96
				Too steep	0.32
		Slope	0.12		
		Cobble content	0.01		
3C:					
Alticrest	50	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32	Too acid	1.00
Dekalb	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.21	Too acid	1.00
4A:					
Atkins	75	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Ponding	1.00
				Too acid	0.99
		Ponding	1.00		
5D:					
Berks	80	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
5E:					
Berks	80	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
6B:					
Berks	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.62	Too acid	0.96
				Too steep	0.32
		Slope	0.12		

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
6B:					
Weikert	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.32	Too acid	0.96
		Slope	0.12	Too steep	0.32
6C:					
Berks	55	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
Weikert	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		
7C:					
Berks	50	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
Weikert	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		
7D:					
Berks	70	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
Weikert	25	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		
8B:					
Blairton	50	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too acid	1.00
Wharton	30	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to bedrock	1.00	Depth to saturated zone	0.95
		Depth to saturated zone	0.95	Slow water movement	0.50

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
9C:					
Caneyville	85	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep	1.00
		Depth to bedrock	1.00		
9D:					
Caneyville	85	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep	1.00
		Depth to bedrock	1.00		
9E:					
Caneyville	85	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep	1.00
		Depth to bedrock	1.00		
10B:					
Cottonbend	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.96
				Too steep	0.32
		Slope	0.12		
		Too acid	0.03		
11A:					
Coursey	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Slow water movement	1.00	Too acid	0.96
12D:					
Dekalb	60	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.21		
Alticrest	25	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		
12E:					
Dekalb	60	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.21		
Alticrest	25	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		

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
13D:					
Dekalb	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.21		
Lily	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
McClung	15	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.14		
14E:					
Dekalb	65	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.21		
Lily	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
15D:					
Dekalb	60	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.21		
Rock outcrop	30	Not rated		Not rated	
15E:					
Dekalb	60	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.21		
Rock outcrop	30	Not rated		Not rated	
16E:					
Dekalb	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.21		
Watahala	30	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.03		

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
16E:					
McClung-------------	20	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.14		
17A:					
Derroc--------------	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Filtering capacity	0.99
		Cobble content	1.00	Cobble content	0.98
		Flooding	0.60	Flooding	0.60
18B:					
Escatawba-----------	80	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Too acid	0.21	Too steep	0.32
18C:					
Escatawba-----------	80	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	0.86		
18D:					
Escatawba-----------	75	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	0.86		
19B:					
Escatawba-----------	80	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Too acid	0.21	Too steep	0.32
19C:					
Escatawba-----------	80	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	0.86		
20C:					
Faywood-------------	50	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep	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: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
20C:					
Poplimento----------	40	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	0.42
20D:					
Faywood------------	50	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep	1.00
		Depth to bedrock	1.00		
Poplimento----------	40	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	0.42
20E:					
Faywood------------	45	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep	1.00
		Depth to bedrock	1.00		
Poplimento----------	35	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	0.42
21A:					
Feedstone----------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.99	Too acid	0.07
22C:					
Frederick----------	75	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	0.42
22D:					
Frederick----------	75	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	0.42
23C:					
Frederick----------	50	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	0.42
Watahala-----------	40	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.03		

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
23D:					
Frederick-----------	50	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	0.42
Watahala------------	40	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.03		
24B:					
Gilpin--------------	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too acid	1.00
				Too steep	0.32
		Slope	0.12		
24C:					
Gilpin--------------	80	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
24D:					
Gilpin--------------	85	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	1.00		
25A:					
Gladehill-----------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	0.32	Too acid	0.07
26A:					
Irongate------------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Flooding	0.60
				Too acid	0.42
		Flooding	0.60		
27C:					
Lehew---------------	50	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
				Too acid	1.00
Berks---------------	45	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		

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
27D:					
Lehew	50	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
Berks	45	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
27E:					
Lehew	45	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
Berks	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
28F:					
Lehew	45	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
Berks	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
Rock outcrop	10	Not rated		Not rated	
29C:					
Lily	85	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62	Too acid	1.00
30D:					
Lily	80	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
31C:					
Lily	45	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62	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: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
31C:					
McClung	30	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.14		
Dekalb	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.21	Too acid	1.00
32C:					
Macove	85	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Stone content	1.00	Too acid	0.99
		Slow water movement	0.32		
32D:					
Macove	75	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Stone content	1.00	Too acid	0.99
		Slow water movement	0.32		
33E:					
Macove	75	Very limited		Very limited	
		Slope	1.00	Large stones on the surface	1.00
		Stone content	1.00	Too steep	1.00
		Slow water movement	0.32		
34D:					
Macove	55	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Stone content	1.00	Too acid	0.99
		Slow water movement	0.32		
Berks	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
34E:					
Macove	55	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Stone content	1.00	Too acid	0.99
		Slow water movement	0.32		
Berks	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		

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
35C:					
Mandy----------------	75	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
35D:					
Mandy----------------	75	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	1.00		
35E:					
Mandy----------------	75	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	1.00		
36A:					
Maurertown-----------	70	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	1.00
37B:					
McClung--------------	45	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
				Too steep	0.32
		Too acid	0.14		
		Slope	0.12		
Lily-----------------	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.62	Too acid	1.00
				Too steep	0.32
		Too acid	0.14		
38C:					
McClung--------------	45	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.14		
Watahala-------------	25	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.03		
Dekalb---------------	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.21	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: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
38D:					
McClung-------------	45	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.14		
Watahala------------	25	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.03		
Dekalb--------------	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.21		
39B:					
Murrill-------------	85	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
				Too steep	0.32
		Slope	0.12		
		Too acid	0.03		
39C:					
Murrill-------------	85	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.03		
39D:					
Murrill-------------	85	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.03		
40C:					
Murrill-------------	95	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Cobble content	1.00
		Too acid	0.03		
40D:					
Murrill-------------	95	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Cobble content	1.00
		Too acid	0.03		
40E:					
Murrill-------------	95	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Cobble content	1.00
		Too acid	0.03		

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
41B:					
Nicelytown----------	80	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too acid	0.96
		Slope	0.12	Slow water movement	0.34
42A:					
Ogles---------------	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Cobble content	1.00
		Cobble content	1.00	Too acid	0.67
		Flooding	0.60	Flooding	0.60
43B:					
Oriskany------------	85	Very limited		Somewhat limited	
		Cobble content	1.00	Too acid	0.96
		Slow water movement	0.32	Too steep	0.32
		Slope	0.12	Cobble content	0.32
44C:					
Oriskany------------	75	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Cobble content	1.00	Too acid	0.96
		Slow water movement	0.32		
44D:					
Oriskany------------	75	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Cobble content	1.00	Too acid	0.96
		Slow water movement	0.32		
44E:					
Oriskany------------	80	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Cobble content	1.00	Too acid	0.96
		Slow water movement	0.32		
45E:					
Oriskany------------	85	Very limited		Very limited	
		Slope	1.00	Large stones on the surface	1.00
		Cobble content	1.00	Too steep	1.00
		Stone content	0.41		
46C:					
Oriskany------------	55	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Cobble content	1.00	Too acid	0.96
		Slow water movement	0.32		
Murrill-------------	35	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Cobble content	1.00
		Too acid	0.03		

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
46D:					
Oriskany	55	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Cobble content	1.00	Too acid	0.96
		Slow water movement	0.32		
Murrill	35	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Cobble content	1.00
		Too acid	0.03		
47E:					
Oriskany	65	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Cobble content	1.00	Too acid	0.96
		Slow water movement	0.32		
Murrill	25	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Cobble content	1.00
		Too acid	0.03		
48C:					
Paddyknob	60	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.55	Too acid	1.00
Madsheep	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32	Too acid	1.00
48D:					
Paddyknob	55	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.55		
Madsheep	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		
48E:					
Paddyknob	55	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.55		
Madsheep	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		

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
49A:					
Purdy	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
		Ponding	1.00	Ponding	1.00
50C:					
Shelocta	60	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	0.99
Berks	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
50D:					
Shelocta	60	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	0.99
Berks	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
50E:					
Shelocta	70	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	0.99
Berks	25	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
51B:					
Sugarhol	85	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Slope	0.12	Too steep	0.32
		Too acid	0.03		
51C:					
Sugarhol	85	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.03		
52:					
Udorthents, dams	95	Not rated		Not rated	

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
53:					
Udorthents, smoothed	85	Not rated		Not rated	
54:					
Udorthents----------	65	Not rated		Not rated	
Rock outcrop--------	25	Not rated		Not rated	
55E:					
Watahala------------	45	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.03		
Frederick-----------	35	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	0.42
56E:					
Weikert-------------	50	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		
Berks---------------	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
57D:					
Weikert-------------	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		
Berks---------------	34	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
Rough---------------	10	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.03		
57E:					
Weikert-------------	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		

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
57E:					
Berks	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
Rough	15	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.03		
58F:					
Weikert	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		
Berks	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.62		
Rough	15	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.03		
59F:					
Weikert	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		
Rock outcrop	25	Not rated		Not rated	
Rough	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.03		
60F:					
Weikert	65	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Slow water movement	0.32		
Rough	25	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep	1.00
		Too acid	0.03		

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
61C:					
Wharton	55	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Depth to bedrock	1.00		
Blairton	40	Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
		Depth to saturated zone	1.00	Too steep	1.00
61D:					
Wharton	55	Very limited		Very limited	
		Slope	1.00	Too steep	1.00
		Slow water movement	1.00	Too acid	1.00
		Depth to bedrock	1.00		
Blairton	40	Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
		Depth to saturated zone	1.00	Too steep	1.00
62A:					
Wolfgap	95	Very limited		Somewhat limited	
		Slow water movement	1.00	Flooding	0.60
		Flooding	0.60	Too acid	0.01
63A:					
Wolfgap	95	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.01
64B:					
Zoar	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	0.96
		Slope	0.12	Too acid	0.77
W:					
Water	100	Not rated		Not rated	

Table 8.—Forestland Productivity

(Absence of an entry indicates that information was not available)

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
1A:				
Alonzville	northern red oak	70	52	eastern white pine, northern red oak, white oak, yellow-poplar
	yellow-poplar	90	90	
	eastern white pine	80	144	
	hickory	65	48	
	white oak	70	52	
2B:				
Alonzville	eastern white pine	85	155	black oak, eastern white pine, white oak
	white oak	75	57	
	black oak	75	57	
	scarlet oak	75	57	
	Virginia pine	75	118	
3C:				
Alticrest	northern red oak	60	43	eastern white pine, northern red oak
	chestnut oak	60	43	
	pitch pine	60	91	
	scarlet oak	60	43	
	Virginia pine	60	91	
Dekalb	northern red oak	55	38	eastern white pine, northern red oak
	chestnut oak	55	38	
	pitch pine	55	80	
	scarlet oak	55	38	
	Virginia pine	55	80	
4A:				
Atkins	pin oak	75	57	swamp white oak
	red maple	75	47	
	American sycamore	75	47	
	swamp white oak	70	52	
	Virginia pine	75	115	
	sweetgum	75	115	
5D:				
Berks	northern red oak	65	48	black oak, eastern white pine, northern red oak, white oak
	chestnut oak	65	48	
	black oak	65	48	
	hickory	---	---	
	white oak	65	48	
	eastern white pine	---	---	
5E:				
Berks	northern red oak	65	48	black oak, eastern white pine, northern red oak, white oak
	chestnut oak	65	48	
	black oak	65	48	
	hickory	60	---	
	white oak	65	48	
	eastern white pine	---	---	

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	
6B:				
Berks	white oak	60	43	black oak, eastern white pine, white oak
	black oak	60	43	
	chestnut oak	60	43	
	eastern white pine	70	121	
	pitch pine	60	91	
	scarlet oak	60	43	
Weikert	white oak	50	34	eastern white pine, white oak
	chestnut oak	50	34	
	pitch pine	50	68	
	scarlet oak	50	34	
	Table Mountain pine	50	68	
	Virginia pine	50	68	
6C:				
Berks	white oak	60	43	black oak, eastern white pine, white oak
	black oak	60	43	
	chestnut oak	60	43	
	eastern white pine	70	121	
	pitch pine	60	91	
	scarlet oak	60	43	
Weikert	white oak	50	34	eastern white pine, white oak
	chestnut oak	50	34	
	pitch pine	50	68	
	scarlet oak	50	34	
	Table Mountain pine	50	68	
	Virginia pine	50	68	
7C:				
Berks	northern red oak	65	48	black oak, eastern white pine, northern red oak, white oak
	chestnut oak	65	48	
	black oak	65	48	
	hickory	60	---	
	eastern white pine	70	120	
	white oak	65	48	
Weikert	chestnut oak	55	38	eastern white pine, northern red oak, white oak
	northern red oak	55	38	
	hickory	50	---	
	eastern white pine	65	109	
	white oak	55	38	
	scarlet oak	55	38	
	Virginia pine	55	85	
	pitch pine	55	85	
7D:				
Berks	northern red oak	65	48	black oak, eastern white pine, northern red oak, white oak
	chestnut oak	65	48	
	black oak	65	48	
	hickory	60	---	
	eastern white pine	---	---	
	white oak	---	---	

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	
7D:				
Weikert	chestnut oak	55	38	eastern white pine, northern red oak, white oak
	northern red oak	55	38	
	hickory	50	---	
	eastern white pine	65	109	
	white oak	---	---	
	scarlet oak	---	---	
	Virginia pine	---	---	
	pitch pine	---	---	
8B:				
Blairton	white oak	70	52	black oak, eastern white pine, northern red oak, white oak
	northern red oak	70	52	
	black oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
	Virginia pine	70	109	
Wharton	white oak	70	52	black oak, northern red oak, white oak
	northern red oak	70	52	
	black oak	70	52	
	chestnut oak	70	52	
	Virginia pine	70	109	
9C:				
Caneyville	northern red oak	71	53	black walnut, northern red oak, sugar maple, white oak
	black walnut	70	---	
	black locust	75	57	
	sugar maple	70	45	
	white oak	70	53	
9D:				
Caneyville	northern red oak	71	53	black walnut, northern red oak, sugar maple, white oak
	black walnut	70	---	
	black locust	75	57	
	sugar maple	70	45	
	white oak	---	---	
9E:				
Caneyville	northern red oak	71	53	black walnut, northern red oak, sugar maple, white oak
	black walnut	70	---	
	black locust	75	57	
	sugar maple	70	45	
	white oak	---	---	
10B:				
Cottonbend	eastern white pine	85	155	black oak, eastern white pine, white oak
	white oak	75	57	
	black oak	75	57	
	scarlet oak	75	57	
	Virginia pine	75	118	
11A:				
Coursey	northern red oak	75	57	black oak, eastern white pine, northern red oak
	American sycamore	80	---	
	black oak	75	57	
	eastern white pine	85	155	

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	
12D:				
Dekalb	chestnut oak	60	43	black oak, eastern white pine
	black oak	60	43	
	scarlet oak	60	43	
	eastern white pine	70	121	
	Virginia pine	---	---	
	pitch pine	---	---	
Alticrest	chestnut oak	65	48	black oak, eastern white pine, white oak
	white oak	65	48	
	black oak	65	48	
	scarlet oak	65	48	
	eastern white pine	75	132	
	Virginia pine	---	---	
	pitch pine	---	---	
12E:				
Dekalb	chestnut oak	60	43	black oak, eastern white pine
	black oak	60	43	
	scarlet oak	60	43	
	eastern white pine	70	121	
	Virginia pine	---	---	
	pitch pine	---	---	
	hickory	---	---	
Alticrest	chestnut oak	65	48	black oak, eastern white pine, white oak
	white oak	65	48	
	black oak	65	48	
	scarlet oak	65	48	
	eastern white pine	75	132	
	Virginia pine	---	---	
	pitch pine	---	---	
13D:				
Dekalb	chestnut oak	60	43	black oak, eastern white pine, northern red oak, white oak
	white oak	60	43	
	black oak	60	43	
	scarlet oak	60	43	
	northern red oak	60	43	
	eastern white pine	70	121	
	pitch pine	---	---	
Lily	black oak	70	52	black oak, eastern white pine, northern red oak, white oak, yellow-poplar
	yellow-poplar	90	90	
	white oak	70	52	
	chestnut oak	70	52	
	northern red oak	70	52	
	eastern white pine	80	144	
	scarlet oak	---	---	
	pitch pine	---	---	
McClung	black oak	80	62	black oak, northern red oak, white oak, yellow-poplar
	yellow-poplar	90	90	
	northern red oak	80	62	
	white oak	80	62	
	scarlet oak	80	62	
	chestnut oak	80	62	

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	
14E:				
Dekalb	chestnut oak	60	43	black oak, eastern white pine, northern red oak, white oak
	white oak	60	43	
	black oak	60	43	
	scarlet oak	60	43	
	northern red oak	60	43	
	eastern white pine	65	109	
	pitch pine	---	---	
	hickory	---	---	
Lily	black oak	70	52	black oak, eastern white pine, northern red oak, white oak
	white oak	70	52	
	chestnut oak	70	52	
	hickory	65	---	
	northern red oak	70	52	
	eastern white pine	80	144	
	scarlet oak	---	---	
	pitch pine	---	---	
15D:				
Dekalb	chestnut oak	60	43	black oak, eastern white pine
	scarlet oak	60	43	
	hickory	55	---	
	Virginia pine	60	91	
	black oak	60	43	
	pitch pine	---	---	
	Table Mountain pine	---	---	
Rock outcrop.				
15E:				
Dekalb	chestnut oak	60	43	black oak, eastern white pine
	scarlet oak	60	43	
	hickory	55	---	
	Virginia pine	60	91	
	black oak	60	43	
	pitch pine	---	---	
	Table Mountain pine	---	---	
Rock outcrop.				
16E:				
Dekalb	chestnut oak	60	43	black oak, eastern white pine, northern red oak, white oak
	white oak	60	43	
	black oak	60	43	
	scarlet oak	60	43	
	northern red oak	60	43	
	eastern white pine	70	121	
	pitch pine	---	---	
	hickory	---	---	
Watahala	black oak	85	67	black oak, northern red oak, white oak, yellow-poplar
	scarlet oak	85	67	
	chestnut oak	85	67	
	white oak	85	67	
	yellow-poplar	95	98	
	northern red oak	85	67	
	pitch pine	---	---	

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	
16E:				
McClung	black oak	80	62	black oak, northern red oak, white oak, yellow-poplar
	yellow-poplar	90	90	
	white oak	80	62	
	scarlet oak	80	62	
	chestnut oak	80	62	
	northern red oak	80	62	
17A:				
Derroc	eastern white pine	85	162	eastern white pine, white oak, yellow-poplar
	white oak	75	57	
	scarlet oak	75	57	
	yellow-poplar	85	80	
	Virginia pine	75	114	
	American sycamore	80	---	
18B:				
Escatawba	white oak	70	52	black oak, eastern white pine, white oak
	black oak	70	52	
	scarlet oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
	pitch pine	70	109	
18C:				
Escatawba	white oak	70	52	black oak, eastern white pine, white oak
	black oak	70	52	
	scarlet oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
	pitch pine	70	109	
18D:				
Escatawba	white oak	70	52	black oak, eastern white pine, white oak
	black oak	70	52	
	scarlet oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
	pitch pine	70	109	
19B:				
Escatawba	white oak	70	52	black oak, eastern white pine, white oak
	black oak	70	52	
	scarlet oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
	pitch pine	70	109	
19C:				
Escatawba	white oak	70	52	black oak, eastern white pine, white oak
	black oak	70	52	
	scarlet oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
	pitch pine	70	109	

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	
20C:				
Faywood	northern red oak	70	52	black oak, northern red oak, sugar maple, white ash, yellow-poplar
	black oak	70	52	
	black locust	75	57	
	sugar maple	65	42	
	yellow-poplar	80	71	
	white ash	70	45	
Poplimento	northern red oak	80	62	black oak, northern red oak, sugar maple, white ash, yellow-poplar
	black oak	80	62	
	black locust	85	67	
	sugar maple	75	48	
	yellow-poplar	90	90	
	white ash	80	62	
20D:				
Faywood	northern red oak	70	52	black oak, northern red oak, sugar maple, white ash, white oak, yellow-poplar
	black locust	75	57	
	yellow-poplar	80	71	
	black oak	70	52	
	sugar maple	65	42	
	white ash	70	45	
	hickory	---	---	
	white oak	---	---	
	chestnut oak	---	---	
Poplimento	northern red oak	80	62	black oak, northern red oak, sugar maple, white ash, white oak, yellow-poplar
	black locust	85	67	
	yellow-poplar	90	90	
	black oak	80	62	
	sugar maple	75	48	
	white ash	80	62	
	hickory	---	---	
	white oak	---	---	
	chestnut oak	---	---	
20E:				
Faywood	northern red oak	70	52	black oak, northern red oak, sugar maple, white ash, white oak, yellow-poplar
	black locust	75	57	
	yellow-poplar	80	71	
	black oak	70	52	
	sugar maple	65	42	
	white ash	70	45	
	hickory	---	---	
	white oak	---	---	
	chestnut oak	---	---	
Poplimento	northern red oak	80	62	black oak, northern red oak, sugar maple, white ash, white oak, yellow-poplar
	black locust	85	67	
	yellow-poplar	90	90	
	black oak	80	62	
	sugar maple	75	48	
	white ash	80	62	
	hickory	---	---	
	white oak	---	---	
	chestnut oak	---	---	

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	
21A:				
Feedstone	yellow-poplar	95	98	black walnut, eastern white pine, yellow-poplar
	black locust	85	---	
	red maple	80	---	
	black walnut	85	---	
	American sycamore	85	---	
22C:				
Frederick	northern red oak	80	62	black oak, northern red oak, yellow-poplar
	black oak	80	62	
	black locust	85	67	
	red maple	80	65	
	yellow-poplar	90	90	
22D:				
Frederick	northern red oak	80	62	black oak, northern red oak, white oak, yellow-poplar
	black oak	80	62	
	black locust	85	67	
	yellow-poplar	90	90	
	red maple	80	65	
	white oak	---	---	
23C:				
Frederick	northern red oak	80	62	black oak, northern red oak, yellow-poplar
	black oak	80	62	
	black locust	85	67	
	red maple	80	65	
	yellow-poplar	90	90	
Watahala	black oak	85	67	black oak, northern red oak, white oak, yellow-poplar
	yellow-poplar	95	98	
	northern red oak	85	67	
	white oak	85	67	
	scarlet oak	85	67	
	chestnut oak	85	67	
23D:				
Frederick	northern red oak	80	62	black oak, northern red oak, white oak, yellow-poplar
	black oak	80	62	
	black locust	85	67	
	yellow-poplar	90	90	
	red maple	80	65	
	white oak	---	---	
Watahala	black oak	85	67	black oak, northern red oak, white oak, yellow-poplar
	white oak	85	67	
	scarlet oak	85	67	
	chestnut oak	85	67	
	yellow-poplar	95	98	
	northern red oak	85	67	
	pitch pine	---	---	
24B:				
Gilpin	white oak	70	52	black oak, eastern white pine, white oak
	black oak	70	52	
	scarlet oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
	pitch pine	70	109	

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	
24C:				
Gilpin	white oak	70	52	black oak, eastern white pine, white oak
	black oak	70	52	
	scarlet oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
	pitch pine	70	109	
24D:				
Gilpin	white oak	70	52	black oak, eastern white pine, white oak
	scarlet oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
	pitch pine	70	109	
	black oak	70	52	
	Virginia pine	---	---	
25A:				
Gladehill	yellow-poplar	85	81	black walnut, eastern white pine, yellow-poplar
	American sycamore	75	---	
	black locust	75	---	
	black walnut	75	---	
	red maple	70	---	
26A:				
Irongate	yellow-poplar	95	98	black walnut, eastern white pine, yellow-poplar
	black locust	85	---	
	red maple	80	---	
	black walnut	85	---	
	American sycamore	85	---	
27C:				
Lehew	chestnut oak	60	43	black oak, northern red oak
	northern red oak	60	43	
	black oak	60	43	
	scarlet oak	60	43	
Berks	white oak	60	43	black oak, eastern white pine, white oak
	black oak	60	43	
	scarlet oak	60	43	
	chestnut oak	60	43	
	eastern white pine	70	---	
	pitch pine	60	---	
27D:				
Lehew	chestnut oak	60	43	black oak, northern red oak
	black oak	60	43	
	scarlet oak	60	43	
	northern red oak	60	43	
	pitch pine	---	---	
	Virginia pine	---	---	
Berks	chestnut oak	65	48	black oak, eastern white pine, white oak
	white oak	65	48	
	scarlet oak	65	48	
	eastern white pine	75	132	
	Virginia pine	65	97	
	black oak	65	48	
	pitch pine	---	---	

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	
27E:				
Lehew	chestnut oak	60	43	black oak, northern red oak
	black oak	60	43	
	scarlet oak	60	43	
	northern red oak	60	43	
	pitch pine	---	---	
	Virginia pine	---	---	
Berks	chestnut oak	65	48	black oak, eastern white pine, white oak
	white oak	65	48	
	scarlet oak	65	48	
	eastern white pine	75	132	
	Virginia pine	65	97	
	black oak	65	48	
	pitch pine	---	---	
28F:				
Lehew	chestnut oak	60	43	black oak, northern red oak
	black oak	60	43	
	scarlet oak	60	43	
	northern red oak	60	43	
	pitch pine	---	---	
	Virginia pine	---	---	
Berks	chestnut oak	65	48	black oak, eastern white pine, white oak
	white oak	65	48	
	scarlet oak	65	48	
	eastern white pine	75	132	
	Virginia pine	65	97	
	black oak	65	48	
	pitch pine	---	---	
Rock outcrop.				
29C:				
Lily	black oak	70	52	black oak, eastern white pine, northern red oak, white oak, yellow-poplar
	yellow-poplar	80	71	
	northern red oak	70	52	
	white oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
30D:				
Lily	black oak	70	52	black oak, eastern white pine, northern red oak, white oak, yellow-poplar
	northern red oak	70	52	
	white oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
	yellow-poplar	80	71	
	scarlet oak	---	---	
31C:				
Lily	black oak	70	52	black oak, eastern white pine, northern red oak, white oak, yellow-poplar
	yellow-poplar	80	71	
	northern red oak	70	52	
	white oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	

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	
31C:				
McClung	black oak	80	62	black oak, eastern white pine, northern red oak, white oak, yellow-poplar
	yellow-poplar	90	90	
	northern red oak	80	62	
	white oak	80	62	
	scarlet oak	80	62	
	eastern white pine	90	166	
Dekalb	chestnut oak	60	43	black oak, northern red oak, white oak
	northern red oak	60	43	
	white oak	60	43	
	black oak	60	43	
	scarlet oak	60	43	
	hickory	55	---	
32C:				
Macove	northern red oak	80	62	black oak, northern red oak, white oak
	white oak	80	62	
	black oak	80	62	
	chestnut oak	80	62	
	hickory	75	---	
	eastern white pine	90	166	
32D:				
Macove	northern red oak	80	62	black oak, northern red oak, white oak
	white oak	80	62	
	black oak	80	62	
	chestnut oak	80	62	
	hickory	75	---	
	eastern white pine	90	166	
33E:				
Macove	northern red oak	75	57	black oak, northern red oak, white oak
	white oak	75	57	
	black oak	75	57	
	chestnut oak	75	57	
	hickory	65	---	
	eastern white pine	85	162	
34D:				
Macove	northern red oak	80	62	black oak, northern red oak, white oak
	white oak	80	62	
	black oak	80	62	
	chestnut oak	80	62	
	hickory	75	---	
	eastern white pine	90	166	
Berks	white oak	60	43	black oak, eastern white pine, northern red oak, white oak
	chestnut oak	60	43	
	eastern white pine	70	121	
	northern red oak	60	43	
	black oak	60	43	
	hickory	55	---	
	Virginia pine	---	---	
	scarlet oak	---	---	

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	
34E:				
Macove	northern red oak	80	62	black oak, northern red oak, white oak
	white oak	80	62	
	black oak	80	62	
	chestnut oak	80	62	
	hickory	75	---	
	eastern white pine	90	166	
Berks	white oak	60	43	black oak, eastern white pine, northern red oak, white oak
	chestnut oak	60	43	
	eastern white pine	70	121	
	northern red oak	60	43	
	black oak	60	43	
	hickory	55	---	
	Virginia pine	---	---	
	scarlet oak	---	---	
35C:				
Mandy	northern red oak	75	57	black cherry, northern red oak, Norway spruce, red maple, red pine, sugar maple
	sugar maple	80	50	
	red maple	80	50	
	red spruce	70	165	
	black cherry	80	50	
	sweet birch	70	---	
	white ash	80	50	
35D:				
Mandy	northern red oak	75	57	black cherry, northern red oak, Norway spruce, red maple, red pine, sugar maple
	sugar maple	80	50	
	red maple	80	50	
	black cherry	80	50	
	red spruce	70	165	
	sweet birch	70	---	
	white ash	80	50	
	American beech	---	---	
35E:				
Mandy	northern red oak	75	57	black cherry, northern red oak, Norway spruce, red maple, red pine, sugar maple
	sugar maple	80	50	
	red maple	80	50	
	black cherry	80	50	
	red spruce	70	165	
	sweet birch	70	---	
	white ash	80	50	
	American beech	---	---	
36A:				
Maurertown	Virginia pine	75	115	swamp white oak, white ash
	pin oak	80	62	
	red maple	80	---	
	swamp white oak	75	57	
	white ash	80	---	
	sweetgum	75	115	

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	
37B:				
McClung	black oak	80	62	black oak, eastern white pine, northern red oak, white oak, yellow-poplar
	yellow-poplar	90	90	
	northern red oak	80	62	
	white oak	80	62	
	scarlet oak	80	62	
	eastern white pine	90	166	
Lily	black oak	70	52	black oak, eastern white pine, northern red oak, white oak, yellow-poplar
	yellow-poplar	80	71	
	northern red oak	70	52	
	white oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
38C:				
McClung	black oak	80	62	black oak, northern red oak, white oak, yellow-poplar
	yellow-poplar	90	90	
	white oak	80	62	
	scarlet oak	80	62	
	chestnut oak	80	62	
	northern red oak	80	62	
Watahala	black oak	85	67	black oak, northern red oak, white oak, yellow-poplar
	white oak	85	67	
	scarlet oak	85	67	
	chestnut oak	85	67	
	northern red oak	85	67	
	yellow-poplar	95	98	
Dekalb	chestnut oak	60	43	black oak, northern red oak, white oak
	white oak	60	43	
	black oak	60	43	
	scarlet oak	60	43	
	hickory	55	---	
	northern red oak	60	43	
38D:				
McClung	black oak	80	62	black oak, northern red oak, white oak, yellow-poplar
	yellow-poplar	90	90	
	white oak	80	62	
	scarlet oak	80	62	
	chestnut oak	80	62	
	northern red oak	80	62	
Watahala	black oak	85	67	black oak, northern red oak, white oak, yellow-poplar
	white oak	85	67	
	scarlet oak	85	67	
	chestnut oak	85	67	
	northern red oak	85	67	
	yellow-poplar	95	98	
	pitch pine	---	---	
Dekalb	chestnut oak	60	43	black oak, northern red oak, white oak
	white oak	60	43	
	black oak	60	43	
	scarlet oak	60	43	
	hickory	55	---	
	northern red oak	60	43	
	pitch pine	---	---	

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	
39B:				
Murrill	northern red oak	80	62	northern red oak, white oak, yellow-poplar
	yellow-poplar	90	90	
	white oak	80	62	
	chestnut oak	80	62	
	black locust	85	---	
39C:				
Murrill	northern red oak	80	62	northern red oak, white oak, yellow-poplar
	yellow-poplar	90	90	
	white oak	80	62	
	chestnut oak	80	62	
	black locust	85	---	
39D:				
Murrill	white oak	80	62	black oak, northern red oak, white oak, yellow-poplar
	chestnut oak	80	62	
	black locust	85	---	
	northern red oak	80	62	
	yellow-poplar	90	90	
	black oak	---	---	
	scarlet oak	---	---	
	hickory	---	---	
40C:				
Murrill	northern red oak	80	62	northern red oak, white oak, yellow-poplar
	yellow-poplar	90	90	
	white oak	80	62	
	chestnut oak	80	62	
	black locust	85	---	
40D:				
Murrill	white oak	80	62	black oak, northern red oak, white oak, yellow-poplar
	chestnut oak	80	62	
	black locust	85	---	
	northern red oak	80	62	
	yellow-poplar	90	90	
	black oak	---	---	
	scarlet oak	---	---	
	hickory	---	---	
40E:				
Murrill	white oak	80	62	black oak, northern red oak, white oak, yellow-poplar
	chestnut oak	80	62	
	black locust	85	---	
	northern red oak	80	62	
	yellow-poplar	90	90	
	black oak	---	---	
	scarlet oak	---	---	
	hickory	---	---	
41B:				
Nicelytown	white oak	70	52	black oak, eastern white pine, white oak
	black oak	70	52	
	red maple	70	52	
	eastern white pine	80	144	
	Virginia pine	70	109	

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	
42A:				
Ogles------------------	eastern white pine--	80	144	eastern white pine, white oak, yellow-poplar
	white oak-----------	70	52	
	scarlet oak---------	70	52	
	yellow-poplar-------	80	71	
	Virginia pine-------	70	109	
	American sycamore---	75	---	
43B:				
Oriskany---------------	white oak-----------	70	52	black oak, white oak, yellow-poplar
	black oak-----------	70	52	
	scarlet oak---------	70	52	
	chestnut oak--------	70	52	
	yellow-poplar-------	80	71	
44C:				
Oriskany---------------	white oak-----------	70	52	black oak, white oak, yellow-poplar
	black oak-----------	70	52	
	scarlet oak---------	70	52	
	chestnut oak--------	70	52	
	yellow-poplar-------	80	71	
44D:				
Oriskany---------------	black oak-----------	75	57	black oak, northern red oak, white oak, yellow-poplar
	chestnut oak--------	75	57	
	white oak-----------	75	57	
	scarlet oak---------	75	57	
	yellow-poplar-------	85	81	
	northern red oak----	75	57	
	pitch pine----------	---	---	
44E:				
Oriskany---------------	black oak-----------	75	57	black oak, northern red oak, white oak, yellow-poplar
	chestnut oak--------	75	57	
	white oak-----------	75	57	
	scarlet oak---------	75	57	
	yellow-poplar-------	85	81	
	northern red oak----	75	57	
	pitch pine----------	---	---	
45E:				
Oriskany---------------	pitch pine----------	---	---	black oak, northern red oak, white oak, yellow-poplar
	yellow-poplar-------	80	71	
	black oak-----------	70	52	
	chestnut oak--------	70	52	
	northern red oak----	70	52	
	white oak-----------	70	52	
	scarlet oak---------	70	52	
46C:				
Oriskany---------------	white oak-----------	75	57	black oak, northern red oak, white oak, yellow-poplar
	northern red oak----	75	57	
	black oak-----------	75	57	
	chestnut oak--------	75	57	
	yellow-poplar-------	85	81	

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	
46C:				
Murrill	northern red oak	80	62	black locust, northern red oak, white oak, yellow-poplar
	yellow-poplar	90	90	
	white oak	80	62	
	chestnut oak	80	62	
	black oak	80	62	
46D:				
Oriskany	chestnut oak	75	57	black oak, northern red oak, white oak, yellow-poplar
	white oak	75	57	
	black oak	75	57	
	northern red oak	75	57	
	yellow-poplar	85	81	
	pitch pine	---	---	
	scarlet oak	---	---	
Murrill	black oak	80	62	black oak, northern red oak, white oak, yellow-poplar
	chestnut oak	80	62	
	white oak	80	62	
	hickory	75	---	
	yellow-poplar	90	90	
	northern red oak	80	62	
	scarlet oak	---	---	
47E:				
Oriskany	chestnut oak	75	57	black oak, northern red oak, white oak, yellow-poplar
	white oak	75	57	
	black oak	75	57	
	northern red oak	75	57	
	yellow-poplar	85	81	
	pitch pine	---	---	
	scarlet oak	---	---	
Murrill	black oak	80	62	black oak, northern red oak, white oak, yellow-poplar
	chestnut oak	80	62	
	white oak	80	62	
	hickory	75	---	
	yellow-poplar	90	90	
	northern red oak	80	62	
	scarlet oak	---	---	
48C:				
Paddyknob	northern red oak	65	48	black cherry, northern red oak, Norway spruce, red maple, red pine, sugar maple
	red maple	70	43	
	sugar maple	70	43	
	black cherry	70	43	
	white ash	75	50	
	red spruce	65	152	
Madsheep	northern red oak	65	48	black cherry, northern red oak, Norway spruce, red maple, red pine, sugar maple
	red maple	70	43	
	sugar maple	70	43	
	black cherry	70	43	
	white ash	75	50	
	red spruce	65	152	

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	
48D:				
Paddyknob	northern red oak	65	48	black cherry, northern red oak, Norway spruce, red maple, red pine, sugar maple
	red maple	70	43	
	sugar maple	70	43	
	black cherry	70	43	
	white ash	75	50	
	red spruce	65	152	
	chestnut oak	---	---	
	black locust	---	---	
Madsheep	northern red oak	65	48	black cherry, northern red oak, Norway spruce, red maple, red pine, sugar maple
	red maple	70	43	
	sugar maple	70	43	
	black cherry	70	43	
	white ash	75	50	
	red spruce	65	152	
	chestnut oak	---	---	
	black locust	---	---	
48E:				
Paddyknob	northern red oak	65	48	black cherry, northern red oak, Norway spruce, red maple, red pine, sugar maple
	red maple	70	43	
	sugar maple	70	43	
	black cherry	70	43	
	white ash	75	50	
	red spruce	65	152	
	chestnut oak	---	---	
	black locust	---	---	
Madsheep	northern red oak	65	48	black cherry, northern red oak, Norway spruce, red maple, red pine, sugar maple
	red maple	70	43	
	sugar maple	70	43	
	black cherry	70	43	
	white ash	75	50	
	red spruce	65	152	
	chestnut oak	---	---	
	black locust	---	---	
49A:				
Purdy	Virginia pine	75	115	swamp white oak, white ash
	pin oak	80	62	
	red maple	80	---	
	swamp white oak	75	57	
	white ash	80	---	
	sweetgum	75	115	
50C:				
Shelocta	white oak	75	57	black oak, eastern white pine, northern red oak, white oak
	northern red oak	75	57	
	black oak	75	57	
	eastern white pine	85	155	
Berks	white oak	60	43	black oak, eastern white pine, northern red oak, white oak
	northern red oak	60	43	
	black oak	60	43	
	chestnut oak	60	43	
	hickory	55	---	
	eastern white pine	70	121	

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	
50D:				
Shelocta	white oak	75	57	black oak, eastern white pine, northern red oak, white oak
	black oak	75	57	
	eastern white pine	85	155	
	northern red oak	75	57	
	chestnut oak	---	---	
Berks	white oak	60	43	black oak, eastern white pine, northern red oak, white oak
	chestnut oak	60	43	
	eastern white pine	70	121	
	northern red oak	60	43	
	black oak	60	43	
	hickory	55	---	
	Virginia pine	---	---	
	scarlet oak	---	---	
50E:				
Shelocta	white oak	75	57	black oak, eastern white pine, northern red oak, white oak
	black oak	75	57	
	eastern white pine	85	155	
	northern red oak	75	57	
	chestnut oak	---	---	
Berks	white oak	60	43	black oak, eastern white pine, northern red oak, white oak
	chestnut oak	60	43	
	eastern white pine	70	121	
	northern red oak	60	43	
	black oak	60	43	
	hickory	55	---	
	Virginia pine	---	---	
	scarlet oak	---	---	
51B:				
Sugarhol	white oak	75	57	black oak, eastern white pine, white oak
	eastern white pine	85	155	
	black oak	75	57	
	scarlet oak	75	57	
51C:				
Sugarhol	white oak	75	57	black oak, eastern white pine, white oak
	eastern white pine	85	155	
	black oak	75	57	
	scarlet oak	75	57	
52. Udorthents, dams				
53. Udorthents, smoothed				
54. Udorthents-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	
55E:				
Watahala	black oak	85	67	black oak, northern red oak, white oak, yellow-poplar
	white oak	85	67	
	scarlet oak	85	67	
	chestnut oak	85	67	
	northern red oak	85	57	
	yellow-poplar	95	98	
	pitch pine	---	---	
Frederick	northern red oak	80	62	black oak, northern red oak, white oak, yellow-poplar
	hickory	75	---	
	black locust	85	---	
	yellow-poplar	90	90	
	white oak	---	---	
	black oak	80	62	
56E:				
Weikert	chestnut oak	55	38	eastern white pine, northern red oak, white oak
	northern red oak	55	38	
	hickory	50	---	
	eastern white pine	65	109	
	white oak	---	---	
	scarlet oak	---	---	
	Virginia pine	---	---	
	pitch pine	---	---	
Berks	northern red oak	65	48	black oak, eastern white pine, northern red oak, white oak
	chestnut oak	65	48	
	black oak	65	48	
	hickory	60	---	
	eastern white pine	---	---	
	white oak	---	---	
57D:				
Weikert	eastern white pine	60	97	black oak, eastern white pine, white oak
	chestnut oak	50	34	
	white oak	50	34	
	black oak	50	34	
	Table Mountain pine	---	---	
	pitch pine	---	---	
	Virginia pine	---	---	
	scarlet oak	---	---	
Berks	chestnut oak	60	43	black oak, eastern white pine, white oak
	white oak	60	43	
	scarlet oak	60	43	
	eastern white pine	70	121	
	Virginia pine	60	91	
	black oak	60	43	
	pitch pine	---	---	
Rough	chestnut oak	40	26	black oak, eastern white pine, white oak
	scarlet oak	40	26	
	eastern white pine	50	72	
	white oak	40	26	
	black oak	40	26	
	Table Mountain pine	---	---	
	pitch pine	---	---	
	Virginia pine	---	---	

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	
57E:				
Weikert	eastern white pine	60	97	black oak, eastern white pine, white oak
	chestnut oak	50	34	
	white oak	50	34	
	black oak	50	34	
	Table Mountain pine	---	---	
	pitch pine	---	---	
	Virginia pine	---	---	
	scarlet oak	---	---	
Berks	chestnut oak	60	43	black oak, eastern white pine, white oak
	white oak	60	43	
	scarlet oak	60	43	
	eastern white pine	70	121	
	Virginia pine	60	91	
	black oak	60	43	
	pitch pine	---	---	
Rough	chestnut oak	40	26	black oak, eastern white pine, white oak
	scarlet oak	40	26	
	eastern white pine	50	72	
	white oak	40	26	
	black oak	40	26	
	Table Mountain pine	---	---	
	pitch pine	---	---	
	Virginia pine	---	---	
58F:				
Weikert	chestnut oak	50	34	black oak, eastern white pine, white oak
	northern red oak	50	34	
	hickory	45	---	
	eastern white pine	60	97	
	white oak	---	---	
	scarlet oak	---	---	
	Virginia pine	---	---	
	pitch pine	---	---	
Berks	northern red oak	60	43	black oak, eastern white pine, northern red oak, white oak
	chestnut oak	60	43	
	black oak	60	43	
	hickory	55	---	
	white oak	---	---	
	eastern white pine	---	---	
Rough	chestnut oak	40	26	black oak, eastern white pine, white oak
	black oak	40	26	
	hickory	35	---	
	eastern white pine	50	72	
	white oak	---	---	
	scarlet oak	---	---	
	Virginia pine	---	---	
	pitch pine	---	---	

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	
59F:				
Weikert	chestnut oak	45	30	---
	eastern white pine	55	84	
	black oak	45	30	
	white oak	45	30	
	Table Mountain pine	---	---	
	pitch pine	---	---	
	Virginia pine	---	---	
	scarlet oak	---	---	
Rock outcrop.				
Rough	chestnut oak	35	---	---
	scarlet oak	35	---	
	white oak	35	---	
	black oak	35	---	
	eastern white pine	45	---	
	Table Mountain pine	---	---	
	pitch pine	---	---	
	Virginia pine	---	---	
60F:				
Weikert	chestnut oak	45	30	black oak, eastern white pine, white oak
	eastern white pine	55	84	
	black oak	45	30	
	white oak	45	30	
	Table Mountain pine	---	---	
	pitch pine	---	---	
	Virginia pine	---	---	
	scarlet oak	---	---	
Rough	chestnut oak	35	---	black oak, eastern white pine, white oak
	scarlet oak	35	---	
	white oak	35	---	
	black oak	35	---	
	eastern white pine	45	---	
	Table Mountain pine	---	---	
	pitch pine	---	---	
	Virginia pine	---	---	
61C:				
Wharton	white oak	70	52	black oak, northern red oak, white oak
	northern red oak	70	52	
	black oak	70	52	
	chestnut oak	70	52	
	Virginia pine	70	109	
Blairton	white oak	70	52	black oak, eastern white pine, northern red oak, white oak
	northern red oak	70	52	
	black oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
	Virginia pine	70	109	

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	
61D:				
Wharton	white oak	70	52	black oak, northern red oak, white oak
	northern red oak	70	52	
	black oak	70	52	
	chestnut oak	70	52	
	Virginia pine	70	109	
Blairton	white oak	70	52	black oak, eastern white pine, northern red oak, white oak
	northern red oak	70	52	
	black oak	70	52	
	chestnut oak	70	52	
	eastern white pine	80	144	
	Virginia pine	70	109	
62A:				
Wolfgap	yellow-poplar	95	98	black walnut, eastern white pine, yellow-poplar
	black locust	85	---	
	red maple	80	---	
	black walnut	85	---	
	American sycamore	85	---	
63A:				
Wolfgap	yellow-poplar	95	98	black walnut, eastern white pine, yellow-poplar
	black locust	85	---	
	red maple	80	---	
	black walnut	85	---	
	American sycamore	85	---	
64B:				
Zoar	white oak	70	52	eastern white pine, white oak
	hickory	65	---	
	red maple	70	---	
	eastern white pine	80	144	
	Virginia pine	70	109	
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
1A:							
Alonzville-----	80	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
2B:							
Alonzville-----	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
3C:							
Alticrest------	50	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
Dekalb---------	30	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
4A:							
Atkins---------	75	Severe		Poorly suited		Severe	
		Flooding	1.00	Ponding	1.00	Low strength	1.00
		Wetness	1.00	Flooding	1.00		
		Low strength	0.50	Wetness	0.50		
5D:							
Berks----------	80	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50				
5E:							
Berks----------	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
6B:							
Berks----------	55	Moderate		Well suited		Severe	
		Restrictive layer	0.50			Low strength	1.00
Weikert--------	35	Severe		Moderately suited		Severe	
		Restrictive layer	1.00	Low strength	0.50	Low strength	1.00
6C:							
Berks----------	55	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
Weikert--------	30	Severe		Moderately suited		Severe	
		Restrictive layer	1.00	Slope	0.50	Low strength	1.00
				Low strength	0.50		
7C:							
Berks----------	50	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
Weikert--------	40	Severe		Moderately suited		Severe	
		Restrictive layer	1.00	Slope	0.50	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
7D:							
Berks----------	70	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50				
Weikert--------	25	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
8B:							
Blairton-------	50	Moderate		Moderately suited		Severe	
		Low strength	0.50	Wetness	0.50	Low strength	1.00
		Restrictive layer	0.50	Low strength	0.50		
Wharton--------	30	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
9C:							
Caneyville-----	85	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
9D:							
Caneyville-----	85	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
9E:							
Caneyville-----	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
10B:							
Cottonbend-----	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
11A:							
Coursey--------	80	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
12D:							
Dekalb---------	60	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50				
Alticrest------	25	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50				
12E:							
Dekalb---------	60	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
Alticrest------	25	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00

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
13D:							
Dekalb---------	40	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50				
Lily-----------	30	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50				
McClung--------	15	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
14E:							
Dekalb---------	65	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
Lily-----------	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50				
15D:							
Dekalb---------	60	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50	Rock fragments	0.50		
		Stoniness	0.50				
Rock outcrop---	30	Not rated		Not rated		Not rated	
15E:							
Dekalb---------	60	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
Rock outcrop---	30	Not rated		Not rated		Not rated	
16E:							
Dekalb---------	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
Watahala-------	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Sandiness	0.50		
McClung--------	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
17A:							
Derroc---------	80	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Low strength	0.50
		Sandiness	0.50	Sandiness	0.50		
18B:							
Escatawba------	80	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				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: 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
18C:							
Escatawba------	80	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
				Rock fragments	0.50		
18D:							
Escatawba------	75	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
				Rock fragments	0.50		
19B:							
Escatawba------	80	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
19C:							
Escatawba------	80	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
20C:							
Faywood--------	50	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Poplimento-----	40	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
20D:							
Faywood--------	50	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
Poplimento-----	40	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
20E:							
Faywood--------	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Poplimento-----	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
21A:							
Feedstone------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
22C:							
Frederick------	75	Slight		Moderately suited		Severe	
				Slope	0.50	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: 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
22D:							
Frederick------	75	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
23C:							
Frederick------	50	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
Watahala-------	40	Moderate		Moderately suited		Severe	
		Sandiness	0.50	Slope	0.50	Low strength	1.00
				Sandiness	0.50		
23D:							
Frederick------	50	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
Watahala-------	40	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Sandiness	0.50	Sandiness	0.50		
24B:							
Gilpin---------	80	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
24C:							
Gilpin---------	80	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
24D:							
Gilpin---------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
25A:							
Gladehill------	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
26A:							
Irongate-------	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
27C:							
Lehew----------	50	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
Berks----------	45	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
27D:							
Lehew----------	50	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50				
Berks----------	45	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	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
27E:							
Lehew----------	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
Berks----------	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
28F:							
Lehew----------	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
Berks----------	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
Rock outcrop---	10	Not rated		Not rated		Not rated	
29C:							
Lily-----------	85	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50				
30D:							
Lily-----------	80	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50				
31C:							
Lily-----------	45	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50				
McClung--------	30	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
Dekalb---------	20	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
32C:							
Macove---------	85	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Rock fragments	0.50		
32D:							
Macove---------	75	Severe		Poorly suited		Severe	
		Stoniness	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Rock fragments	0.50		
33E:							
Macove---------	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Rock fragments	1.00	Low strength	0.50
		Stoniness	1.00	Slope	1.00		
34D:							
Macove---------	55	Severe		Poorly suited		Severe	
		Stoniness	1.00	Slope	1.00	Low strength	1.00
		Slope	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
34D:							
Berks----------	35	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50				
34E:							
Macove---------	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
Berks----------	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
35C:							
Mandy----------	75	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
35D:							
Mandy----------	75	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
35E:							
Mandy----------	75	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
36A:							
Maurertown-----	70	Severe		Poorly suited		Severe	
		Wetness	1.00	Ponding	1.00	Low strength	1.00
		Low strength	0.50	Wetness	0.50		
				Low strength	0.50		
37B:							
McClung--------	45	Slight		Well suited		Severe	
						Low strength	1.00
Lily-----------	35	Moderate		Well suited		Severe	
		Low strength	0.50			Low strength	1.00
		Restrictive layer	0.50				
38C:							
McClung--------	45	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
Watahala-------	25	Moderate		Moderately suited		Severe	
		Sandiness	0.50	Slope	0.50	Low strength	1.00
				Sandiness	0.50		
Dekalb---------	20	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
38D:							
McClung--------	45	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
Watahala-------	25	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Sandiness	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: 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
38D:							
Dekalb---------	20	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50				
39B:							
Murrill--------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
39C:							
Murrill--------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
39D:							
Murrill--------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
40C:							
Murrill--------	95	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Slope	0.50	Low strength	0.50
				Low strength	0.50		
				Rock fragments	0.50		
40D:							
Murrill--------	95	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
				Low strength	0.50		
				Rock fragments	0.50		
40E:							
Murrill--------	95	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Low strength	0.50	Low strength	0.50		
				Rock fragments	0.50		
41B:							
Nicelytown-----	80	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
42A:							
Ogles----------	80	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Low strength	0.50
43B:							
Oriskany-------	85	Severe		Moderately suited		Moderate	
		Stoniness	1.00	Rock fragments	0.50	Low strength	0.50
44C:							
Oriskany-------	75	Severe		Moderately suited		Moderate	
		Stoniness	1.00	Rock fragments	0.50	Low strength	0.50
				Slope	0.50		
44D:							
Oriskany-------	75	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		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: 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
44E:							
Oriskany-------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Stoniness	0.50	Rock fragments	0.50		
45E:							
Oriskany-------	85	Severe		Poorly suited		Moderate	
		Stoniness	1.00	Rock fragments	1.00	Low strength	0.50
		Slope	1.00	Slope	1.00		
46C:							
Oriskany-------	55	Severe		Moderately suited		Moderate	
		Stoniness	1.00	Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
Murrill--------	35	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Slope	0.50	Low strength	0.50
				Low strength	0.50		
				Rock fragments	0.50		
46D:							
Oriskany-------	55	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
				Rock fragments	0.50		
Murrill--------	35	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
				Low strength	0.50		
				Rock fragments	0.50		
47E:							
Oriskany-------	65	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Stoniness	0.50	Rock fragments	0.50		
Murrill--------	25	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Stoniness	0.50	Rock fragments	0.50		
		Low strength	0.50	Low strength	0.50		
48C:							
Paddyknob------	60	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
Madsheep-------	35	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
48D:							
Paddyknob------	55	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50				
Madsheep-------	35	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	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
48E:							
Paddyknob------	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
Madsheep-------	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
49A:							
Purdy----------	85	Severe		Poorly suited		Severe	
		Wetness	1.00	Ponding	1.00	Low strength	1.00
		Low strength	0.50	Wetness	0.50		
		Stickiness/slope	0.50	Low strength	0.50		
50C:							
Shelocta-------	60	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
Berks----------	20	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
50D:							
Shelocta-------	60	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Berks----------	20	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50				
50E:							
Shelocta-------	70	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Berks----------	25	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
51B:							
Sugarhol-------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
51C:							
Sugarhol-------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
52:							
Udorthents, dams----------	95	Not rated		Not rated		Not rated	
53:							
Udorthents, smoothed------	85	Not rated		Not rated		Not rated	
54:							
Udorthents-----	65	Not rated		Not rated		Not rated	
Rock outcrop---	25	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
55E:							
Watahala-------	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Sandiness	0.50		
Frederick------	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50				
56E:							
Weikert--------	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Berks----------	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
57D:							
Weikert--------	35	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
Berks----------	34	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50				
Rough----------	10	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50				
57E:							
Weikert--------	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Berks----------	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
Rough----------	15	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
58F:							
Weikert--------	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Berks----------	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
Rough----------	15	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
59F:							
Weikert--------	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Rock outcrop---	25	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
59F:							
Rough----------	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
60F:							
Weikert--------	65	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Rough----------	25	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
61C:							
Wharton--------	55	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
Blairton-------	40	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Wetness	0.50		
				Low strength	0.50		
61D:							
Wharton--------	55	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Blairton-------	40	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50	Wetness	0.50		
				Low strength	0.50		
62A:							
Wolfgap--------	95	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
63A:							
Wolfgap--------	95	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
64B:							
Zoar-----------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
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
1A:							
Alonzville-----	80	Slight		Slight		Moderately suited	
						Low strength	0.50
2B:							
Alonzville-----	85	Slight		Slight		Moderately suited	
						Low strength	0.50
3C:							
Alticrest------	50	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Dekalb---------	30	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
4A:							
Atkins---------	75	Slight		Slight		Poorly suited	
						Ponding	1.00
						Flooding	1.00
						Wetness	0.50
5D:							
Berks----------	80	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
5E:							
Berks----------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
6B:							
Berks----------	55	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
Weikert--------	35	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
6C:							
Berks----------	55	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Weikert--------	30	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
7C:							
Berks----------	50	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Weikert--------	40	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	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
7D:							
Berks----------	70	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Weikert--------	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
8B:							
Blairton-------	50	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Wetness	0.50
						Low strength	0.50
Wharton--------	30	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
9C:							
Caneyville-----	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
9D:							
Caneyville-----	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
9E:							
Caneyville-----	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
10B:							
Cottonbend-----	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
11A:							
Coursey--------	80	Slight		Slight		Moderately suited	
						Low strength	0.50
12D:							
Dekalb---------	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Alticrest------	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
12E:							
Dekalb---------	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Alticrest------	25	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
13D:							
Dekalb---------	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Lily-----------	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	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
13D:							
McClung	15	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
14E:							
Dekalb	65	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Lily	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
15D:							
Dekalb	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
15E:							
Dekalb	60	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
16E:							
Dekalb	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Watahala	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
McClung	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
17A:							
Derroc	80	Slight		Slight		Poorly suited	
						Flooding	1.00
						Sandiness	0.50
18B:							
Escatawba	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Rock fragments	0.50
18C:							
Escatawba	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
						Rock fragments	0.50
18D:							
Escatawba	75	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Rock fragments	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
19B:							
Escatawba------	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
19C:							
Escatawba------	80	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
20C:							
Faywood--------	50	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
Poplimento-----	40	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
20D:							
Faywood--------	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Poplimento-----	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
20E:							
Faywood--------	45	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Poplimento-----	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
21A:							
Feedstone------	85	Slight		Slight		Moderately suited	
						Low strength	0.50
22C:							
Frederick------	75	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
22D:							
Frederick------	75	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
23C:							
Frederick------	50	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Watahala-------	40	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						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
23D:							
Frederick------	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Watahala-------	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
24B:							
Gilpin---------	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
24C:							
Gilpin---------	80	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
24D:							
Gilpin---------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
25A:							
Gladehill------	85	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
26A:							
Irongate-------	85	Slight		Slight		Poorly suited	
						Flooding	1.00
27C:							
Lehew----------	50	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Berks----------	45	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
27D:							
Lehew----------	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Berks----------	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
27E:							
Lehew----------	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Berks----------	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
28F:							
Lehew----------	45	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
Berks----------	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	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
28F:							
Rock outcrop---	10	Not rated		Not rated		Not rated	
29C:							
Lily-----------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
30D:							
Lily-----------	80	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
31C:							
Lily-----------	45	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
McClung--------	30	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
Dekalb---------	20	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
32C:							
Macove---------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
32D:							
Macove---------	75	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
33E:							
Macove---------	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Rock fragments	1.00
						Slope	1.00
34D:							
Macove---------	55	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Berks----------	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
34E:							
Macove---------	55	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Berks----------	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
35C:							
Mandy----------	75	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
35D:							
Mandy----------	75	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
35E:							
Mandy----------	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
36A:							
Maurertown-----	70	Slight		Slight		Poorly suited	
						Ponding	1.00
						Wetness	0.50
						Low strength	0.50
37B:							
McClung--------	45	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
Lily-----------	35	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
38C:							
McClung--------	45	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
Watahala-------	25	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Sandiness	0.50
Dekalb---------	20	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
38D:							
McClung--------	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Watahala-------	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
Dekalb---------	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
39B:							
Murrill--------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
39C:							
Murrill--------	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
39D:							
Murrill--------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
40C:							
Murrill--------	95	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
						Rock fragments	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
40D:							
Murrill--------	95	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Rock fragments	0.50
40E:							
Murrill--------	95	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Rock fragments	0.50
41B:							
Nicelytown-----	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
42A:							
Ogles----------	80	Slight		Slight		Poorly suited	
						Flooding	1.00
43B:							
Oriskany-------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Rock fragments	0.50
44C:							
Oriskany-------	75	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Rock fragments	0.50
						Slope	0.50
44D:							
Oriskany-------	75	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
44E:							
Oriskany-------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
45E:							
Oriskany-------	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Rock fragments	1.00
						Slope	1.00
46C:							
Oriskany-------	55	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
Murrill--------	35	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
						Rock fragments	0.50
46D:							
Oriskany-------	55	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	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
46D:							
Murrill--------	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Rock fragments	0.50
47E:							
Oriskany-------	65	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
Murrill--------	25	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
48C:							
Paddyknob------	60	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Madsheep-------	35	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
48D:							
Paddyknob------	55	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Madsheep-------	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
48E:							
Paddyknob------	55	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Madsheep-------	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
49A:							
Purdy----------	85	Slight		Slight		Poorly suited	
						Ponding	1.00
						Wetness	0.50
						Low strength	0.50
50C:							
Shelocta-------	60	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
Berks----------	20	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
50D:							
Shelocta-------	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Berks----------	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	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
50E:							
Shelocta-------	70	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Berks----------	25	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
51B:							
Sugarhol-------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
51C:							
Sugarhol-------	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
52:							
Udorthents, dams----------	95	Not rated		Not rated		Not rated	
53:							
Udorthents, smoothed------	85	Not rated		Not rated		Not rated	
54:							
Udorthents-----	65	Not rated		Not rated		Not rated	
Rock outcrop---	25	Not rated		Not rated		Not rated	
55E:							
Watahala-------	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
Frederick------	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
56E:							
Weikert--------	50	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Berks----------	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
57D:							
Weikert--------	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Berks----------	34	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Rough----------	10	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
57E:							
Weikert--------	40	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
57E:							
Berks----------	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rough----------	15	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
58F:							
Weikert--------	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Berks----------	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rough----------	15	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
59F:							
Weikert--------	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rock outcrop---	25	Not rated		Not rated		Not rated	
Rough----------	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
60F:							
Weikert--------	65	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rough----------	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
61C:							
Wharton--------	55	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
Blairton-------	40	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Wetness	0.50
						Low strength	0.50
61D:							
Wharton--------	55	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Blairton-------	40	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Wetness	0.50
						Low strength	0.50
62A:							
Wolfgap--------	95	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
63A:							
Wolfgap--------	95	Slight		Slight		Moderately suited	
						Low strength	0.50
64B:							
Zoar-----------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	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
1A:							
Alonzville------	80	Well suited		Well suited		Moderately suited	
						Low strength	0.50
2B:							
Alonzville------	85	Well suited		Moderately suited		Moderately suited	
				Rock fragments	0.50	Low strength	0.50
				Slope	0.50		
3C:							
Alticrest-------	50	Well suited		Moderately suited		Well suited	
				Slope	0.50		
				Rock fragments	0.50		
Dekalb----------	30	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.50		
4A:							
Atkins----------	75	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50
5D:							
Berks-----------	80	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
5E:							
Berks-----------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
6B:							
Berks-----------	55	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.50		
Weikert---------	35	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
6C:							
Berks-----------	55	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.50		
Weikert---------	30	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	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
7C:							
Berks-----------	50	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.50		
Weikert---------	40	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
7D:							
Berks-----------	70	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
Weikert---------	25	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Low strength	0.50
				Rock fragments	0.75	Slope	0.50
8B:							
Blairton--------	50	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Wharton---------	30	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
9C:							
Caneyville------	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		
9D:							
Caneyville------	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
9E:							
Caneyville------	85	Moderately suited		Unsuited		Poorly suited	
		Stickiness; high plasticity index	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
10B:							
Cottonbend------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
11A:							
Coursey---------	80	Well suited		Well suited		Moderately suited	
						Low strength	0.50
12D:							
Dekalb----------	60	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
Alticrest-------	25	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
12E:							
Dekalb----------	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Alticrest-------	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
13D:							
Dekalb----------	40	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
Lily------------	30	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
McClung---------	15	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
14E:							
Dekalb----------	65	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Lily------------	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
15D:							
Dekalb----------	60	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	0.50
				Rock fragments	0.75	Slope	0.50
Rock outcrop----	30	Not rated		Not rated		Not rated	
15E:							
Dekalb----------	60	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
Rock outcrop----	30	Not rated		Not rated		Not rated	
16E:							
Dekalb----------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Watahala--------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
McClung---------	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	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
17A:							
Derroc	80	Moderately suited		Unsuited		Moderately suited	
		Sandiness	0.50	Rock fragments	1.00	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
18B:							
Escatawba	80	Well suited		Moderately suited		Moderately suited	
				Rock fragments	0.50	Low strength	0.50
				Slope	0.50	Rock fragments	0.50
18C:							
Escatawba	80	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50	Rock fragments	0.50
18D:							
Escatawba	75	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Rock fragments	0.50
						Slope	0.50
19B:							
Escatawba	80	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
19C:							
Escatawba	80	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
20C:							
Faywood	50	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		
Poplimento	40	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		
20D:							
Faywood	50	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
Poplimento	40	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
20E:							
Faywood	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
Poplimento	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	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
21A:							
Feedstone-------	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
22C:							
Frederick-------	75	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
22D:							
Frederick-------	75	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
23C:							
Frederick-------	50	Well suited		Moderately suited		Well suited	
				Slope	0.50		
				Rock fragments	0.50		
Watahala--------	40	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Slope	0.50		
				Sandiness	0.50		
23D:							
Frederick-------	50	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
Watahala--------	40	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Slope	0.75	Sandiness	0.50
		Rock fragments	0.50	Rock fragments	0.75	Slope	0.50
				Sandiness	0.50		
24B:							
Gilpin----------	80	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
24C:							
Gilpin----------	80	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
24D:							
Gilpin----------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
25A:							
Gladehill-------	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
26A:							
Irongate--------	85	Well suited		Well suited		Well suited	
27C:							
Lehew-----------	50	Moderately suited		Poorly suited		Well suited	
		Rock fragments	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
27C:							
Berks-----------	45	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.50		
27D:							
Lehew-----------	50	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
Berks-----------	45	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
27E:							
Lehew-----------	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Berks-----------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
28F:							
Lehew-----------	45	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
Berks-----------	40	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
Rock outcrop----	10	Not rated		Not rated		Not rated	
29C:							
Lily------------	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
30D:							
Lily------------	80	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
31C:							
Lily------------	45	Well suited		Moderately suited		Well suited	
				Slope	0.50		
McClung---------	30	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Dekalb----------	20	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.50		
32C:							
Macove----------	85	Well suited		Moderately suited		Moderately suited	
				Rock fragments	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
32D:							
Macove----------	75	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Rock fragments	0.50
				Rock fragments	0.50	Slope	0.50
33E:							
Macove----------	75	Unsuited		Unsuited		Poorly suited	
		Rock fragments	1.00	Slope	1.00	Rock fragments	1.00
		Slope	0.50	Rock fragments	1.00	Slope	1.00
34D:							
Macove----------	55	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
Berks-----------	35	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
34E:							
Macove----------	55	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Berks-----------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
35C:							
Mandy-----------	75	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
35D:							
Mandy-----------	75	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Low strength	0.50
				Rock fragments	0.75	Slope	0.50
35E:							
Mandy-----------	75	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
36A:							
Maurertown------	70	Moderately suited		Moderately suited		Poorly suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Wetness	1.00
						Low strength	0.50
37B:							
McClung---------	45	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Lily-----------	35	Well suited		Moderately suited		Well suited	
				Slope	0.50		
38C:							
McClung---------	45	Well suited		Moderately suited		Well suited	
				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
38C:							
Watahala--------	25	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Slope	0.50		
				Sandiness	0.50		
Dekalb----------	20	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.50		
38D:							
McClung---------	45	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
Watahala--------	25	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Slope	0.75	Sandiness	0.50
		Rock fragments	0.50	Rock fragments	0.75	Slope	0.50
				Sandiness	0.50		
Dekalb----------	20	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
39B:							
Murrill---------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
39C:							
Murrill---------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
39D:							
Murrill---------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
40C:							
Murrill---------	95	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50	Rock fragments	0.50
40D:							
Murrill---------	95	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Low strength	0.50
				Rock fragments	0.75	Rock fragments	0.50
						Slope	0.50
40E:							
Murrill---------	95	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
						Rock fragments	0.50
41B:							
Nicelytown------	80	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	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
42A:							
Ogles	80	Moderately suited		Unsuited		Well suited	
		Rock fragments	0.50	Rock fragments	1.00		
43B:							
Oriskany	85	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
				Slope	0.50		
44C:							
Oriskany	75	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
				Slope	0.50		
44D:							
Oriskany	75	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
				Slope	0.75	Slope	0.50
44E:							
Oriskany	80	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
45E:							
Oriskany	85	Unsuited		Unsuited		Poorly suited	
		Rock fragments	1.00	Rock fragments	1.00	Rock fragments	1.00
		Slope	0.50	Slope	1.00	Slope	1.00
46C:							
Oriskany	55	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
				Slope	0.50		
Murrill	35	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50	Rock fragments	0.50
46D:							
Oriskany	55	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
				Slope	0.75	Slope	0.50
Murrill	35	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Low strength	0.50
				Rock fragments	0.75	Rock fragments	0.50
						Slope	0.50
47E:							
Oriskany	65	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
Murrill	25	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
						Low strength	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
48C:							
Paddyknob	60	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.50		
Madsheep	35	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		
				Slope	0.50		
48D:							
Paddyknob	55	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
Madsheep	35	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
48E:							
Paddyknob	55	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Madsheep	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
49A:							
Purdy	85	Moderately suited		Moderately suited		Poorly suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Wetness	1.00
						Low strength	0.50
50C:							
Shelocta	60	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
Berks	20	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.50		
50D:							
Shelocta	60	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
Berks	20	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
50E:							
Shelocta	70	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Berks	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		

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
51B:							
Sugarhol--------	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		
51C:							
Sugarhol--------	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		
52:							
Udorthents, dams	95	Not rated		Not rated		Not rated	
53:							
Udorthents, smoothed-------	85	Not rated		Not rated		Not rated	
54:							
Udorthents------	65	Not rated		Not rated		Not rated	
Rock outcrop----	25	Not rated		Not rated		Not rated	
55E:							
Watahala--------	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
Frederick-------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
56E:							
Weikert---------	50	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
Berks-----------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
57D:							
Weikert---------	35	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Low strength	0.50
				Rock fragments	0.75	Slope	0.50
Berks-----------	34	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.75		
Rough-----------	10	Unsuited		Unsuited		Moderately suited	
		Restrictive layer	1.00	Rock fragments	1.00	Slope	0.50
		Rock fragments	0.75	Slope	0.75		
				Restrictive layer	0.50		
57E:							
Weikert---------	40	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

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
57E:							
Berks	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Rough	15	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Rock fragments	0.75	Rock fragments	1.00		
		Slope	0.50	Restrictive layer	0.50		
58F:							
Weikert	40	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
Berks	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Rough	15	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Rock fragments	0.75	Rock fragments	1.00		
		Slope	0.50	Restrictive layer	0.50		
59F:							
Weikert	40	Poorly suited		Unsuited		Poorly suited	
		Slope	0.75	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
Rock outcrop	25	Not rated		Not rated		Not rated	
Rough	20	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Slope	0.75	Rock fragments	1.00		
		Rock fragments	0.75	Restrictive layer	0.50		
60F:							
Weikert	65	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
Rough	25	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Rock fragments	0.75	Rock fragments	1.00		
		Slope	0.50	Restrictive layer	0.50		
61C:							
Wharton	55	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Blairton	40	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
61D:							
Wharton	55	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
Blairton	40	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	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
62A:							
Wolfgap----------	95	Well suited		Well suited		Moderately suited	
						Low strength	0.50
63A:							
Wolfgap----------	95	Well suited		Well suited		Moderately suited	
						Low strength	0.50
64B:							
Zoar-------------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	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)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1A:					
Alonzville----------	80	Well suited		Well suited	
2B:					
Alonzville----------	85	Well suited		Well suited	
3C:					
Alticrest-----------	50	Well suited		Poorly suited	
				Restrictive layer	0.50
Dekalb--------------	30	Poorly suited		Poorly suited	
		Rock fragments	0.50	Restrictive layer	0.50
4A:					
Atkins--------------	75	Well suited		Unsuited	
				Wetness	1.00
5D:					
Berks---------------	80	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50
5E:					
Berks---------------	80	Unsuited		Unsuited	
		Slope	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Slope	1.00
6B:					
Berks---------------	55	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
Weikert-------------	35	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
6C:					
Berks---------------	55	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
Weikert-------------	30	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
7C:					
Berks---------------	50	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
Weikert-------------	40	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
7D:					
Berks---------------	70	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	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
7D:					
Weikert-------------	25	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50
8B:					
Blairton------------	50	Well suited		Well suited	
Wharton-------------	30	Well suited		Well suited	
9C:					
Caneyville----------	85	Well suited		Poorly suited	
				Restrictive layer	0.50
9D:					
Caneyville----------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
9E:					
Caneyville----------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
10B:					
Cottonbend----------	85	Well suited		Well suited	
11A:					
Coursey-------------	80	Well suited		Well suited	
12D:					
Dekalb--------------	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Restrictive layer	0.50
Alticrest-----------	25	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
12E:					
Dekalb--------------	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
Alticrest-----------	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
13D:					
Dekalb--------------	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Restrictive layer	0.50
Lily----------------	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
McClung-------------	15	Poorly suited		Poorly suited	
		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
14E:					
Dekalb	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
Lily	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
15D:					
Dekalb	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
				Restrictive layer	0.50
Rock outcrop	30	Not rated		Not rated	
15E:					
Dekalb	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
				Restrictive layer	0.50
Rock outcrop	30	Not rated		Not rated	
16E:					
Dekalb	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
Watahala	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
McClung	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
17A:					
Derroc	80	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
18B:					
Escatawba	80	Poorly suited		Well suited	
		Rock fragments	0.50		
18C:					
Escatawba	80	Poorly suited		Well suited	
		Rock fragments	0.50		
18D:					
Escatawba	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
19B:					
Escatawba	80	Well suited		Well suited	
19C:					
Escatawba	80	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
20C:					
Faywood-------------	50	Well suited		Poorly suited	
				Restrictive layer	0.50
Poplimento----------	40	Well suited		Well suited	
20D:					
Faywood-------------	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
Poplimento----------	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
20E:					
Faywood-------------	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Poplimento----------	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
21A:					
Feedstone-----------	85	Well suited		Well suited	
22C:					
Frederick-----------	75	Well suited		Well suited	
22D:					
Frederick-----------	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
23C:					
Frederick-----------	50	Well suited		Well suited	
Watahala------------	40	Poorly suited		Well suited	
		Rock fragments	0.50		
23D:					
Frederick-----------	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Watahala------------	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
24B:					
Gilpin--------------	80	Well suited		Well suited	
24C:					
Gilpin--------------	80	Well suited		Well suited	
24D:					
Gilpin--------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
25A:					
Gladehill-----------	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): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
26A:					
Irongate------------	85	Well suited		Well suited	
27C:					
Lehew---------------	50	Poorly suited		Poorly suited	
		Rock fragments	0.50	Restrictive layer	0.50
Berks---------------	45	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
27D:					
Lehew---------------	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Restrictive layer	0.50
Berks---------------	45	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50
27E:					
Lehew---------------	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
Berks---------------	40	Unsuited		Unsuited	
		Slope	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Slope	1.00
28F:					
Lehew---------------	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
				Restrictive layer	0.50
Berks---------------	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
				Rock fragments	0.50
Rock outcrop--------	10	Not rated		Not rated	
29C:					
Lily----------------	85	Well suited		Poorly suited	
				Restrictive layer	0.50
30D:					
Lily----------------	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
31C:					
Lily----------------	45	Well suited		Poorly suited	
				Restrictive layer	0.50
McClung-------------	30	Well suited		Well suited	
Dekalb--------------	20	Poorly suited		Poorly suited	
		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
32C:					
Macove--------------	85	Poorly suited		Well suited	
		Rock fragments	0.50		
32D:					
Macove--------------	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
33E:					
Macove--------------	75	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	1.00	Slope	1.00
34D:					
Macove--------------	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Berks---------------	35	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50
34E:					
Macove--------------	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Berks---------------	35	Unsuited		Unsuited	
		Slope	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Slope	1.00
35C:					
Mandy---------------	75	Poorly suited		Well suited	
		Rock fragments	0.50		
35D:					
Mandy---------------	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
35E:					
Mandy---------------	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
36A:					
Maurertown----------	70	Well suited		Unsuited	
				Wetness	1.00
37B:					
McClung-------------	45	Well suited		Well suited	
Lily----------------	35	Well suited		Poorly suited	
				Restrictive layer	0.50
38C:					
McClung-------------	45	Well suited		Well suited	
Watahala------------	25	Poorly suited		Well suited	
		Rock fragments	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
38C:					
Dekalb	20	Poorly suited		Poorly suited	
		Rock fragments	0.50	Restrictive layer	0.50
38D:					
McClung	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Watahala	25	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
Dekalb	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Restrictive layer	0.50
39B:					
Murrill	85	Well suited		Well suited	
39C:					
Murrill	85	Well suited		Well suited	
39D:					
Murrill	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
40C:					
Murrill	95	Poorly suited		Well suited	
		Rock fragments	0.50		
40D:					
Murrill	95	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
40E:					
Murrill	95	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
41B:					
Nicelytown	80	Well suited		Well suited	
42A:					
Ogles	80	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
43B:					
Oriskany	85	Poorly suited		Well suited	
		Rock fragments	0.50		
44C:					
Oriskany	75	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
44D:					
Oriskany	75	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50	Rock fragments	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
44E:					
Oriskany-----------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
45E:					
Oriskany-----------	85	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	1.00	Slope	1.00
46C:					
Oriskany-----------	55	Poorly suited		Well suited	
		Rock fragments	0.50		
Murrill------------	35	Poorly suited		Well suited	
		Rock fragments	0.50		
46D:					
Oriskany-----------	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
Murrill------------	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
47E:					
Oriskany-----------	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Murrill------------	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
48C:					
Paddyknob----------	60	Poorly suited		Poorly suited	
		Rock fragments	0.50	Restrictive layer	0.50
Madsheep-----------	35	Well suited		Poorly suited	
				Restrictive layer	0.50
48D:					
Paddyknob----------	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Restrictive layer	0.50
Madsheep-----------	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
48E:					
Paddyknob----------	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
Madsheep-----------	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				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
49A:					
Purdy----------------	85	Well suited		Unsuited	
				Wetness	1.00
50C:					
Shelocta------------	60	Well suited		Well suited	
Berks----------------	20	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
50D:					
Shelocta------------	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Berks----------------	20	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50
50E:					
Shelocta------------	70	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Berks----------------	25	Unsuited		Unsuited	
		Slope	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Slope	1.00
51B:					
Sugarhol------------	85	Well suited		Well suited	
51C:					
Sugarhol------------	85	Well suited		Well suited	
52:					
Udorthents, dams----	95	Not rated		Not rated	
53:					
Udorthents, smoothed	85	Not rated		Not rated	
54:					
Udorthents----------	65	Not rated		Not rated	
Rock outcrop--------	25	Not rated		Not rated	
55E:					
Watahala------------	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Frederick-----------	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
56E:					
Weikert-------------	50	Unsuited		Unsuited	
		Slope	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Slope	1.00
Berks----------------	40	Unsuited		Unsuited	
		Slope	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Slope	1.00

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
57D:					
Weikert	35	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50
Berks	34	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50
Rough	10	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Restrictive layer	0.50	Slope	0.50
		Rock fragments	0.50		
57E:					
Weikert	40	Unsuited		Unsuited	
		Slope	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Slope	1.00
Berks	30	Unsuited		Unsuited	
		Slope	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Slope	1.00
Rough	15	Unsuited		Unsuited	
		Slope	1.00	Restrictive layer	1.00
		Restrictive layer	0.50	Slope	1.00
		Rock fragments	0.50		
58F:					
Weikert	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
Berks	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
Rough	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	0.50	Restrictive layer	1.00
		Rock fragments	0.50		
59F:					
Weikert	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
Rock outcrop	25	Not rated		Not rated	
Rough	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	0.50	Restrictive layer	1.00
		Rock fragments	0.50		
60F:					
Weikert	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00

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
60F:					
Rough	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	0.50	Restrictive layer	1.00
		Rock fragments	0.50		
61C:					
Wharton	55	Well suited		Well suited	
Blairton	40	Well suited		Well suited	
61D:					
Wharton	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Blairton	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
62A:					
Wolfgap	95	Well suited		Well suited	
63A:					
Wolfgap	95	Well suited		Well suited	
64B:					
Zoar	85	Well suited		Well suited	
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
1A:					
Alonzville	80	Low		Low	
		Texture/rock fragments	0.10		
2B:					
Alonzville	85	Low		Low	
		Texture/rock fragments	0.10		
3C:					
Alticrest	50	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
Dekalb	30	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
4A:					
Atkins	75	Low		High	
		Texture/surface depth/rock fragments	0.10	Wetness	1.00
5D:					
Berks	80	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
5E:					
Berks	80	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
6B:					
Berks	55	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Weikert	35	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
6C:					
Berks	55	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Weikert	30	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
7C:					
Berks	50	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Weikert	40	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
7D:					
Berks	70	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Weikert	25	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
8B:					
Blairton	50	Moderate		Low	
		Texture/rock fragments	0.50		
Wharton	30	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
9C:					
Caneyville	85	Moderate		Low	
		Texture/rock fragments	0.50		
9D:					
Caneyville	85	Moderate		Low	
		Texture/rock fragments	0.50		
9E:					
Caneyville	85	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
10B:					
Cottonbend----------	85	Moderate		Low	
		Texture/rock fragments	0.50		
11A:					
Coursey-------------	80	Low		Low	
		Texture/rock fragments	0.10		
12D:					
Dekalb--------------	60	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
Alticrest-----------	25	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
12E:					
Dekalb--------------	60	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
Alticrest-----------	25	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
13D:					
Dekalb--------------	40	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
Lily----------------	30	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
McClung-------------	15	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
14E:					
Dekalb--------------	65	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
Lily----------------	20	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	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
15D:					
Dekalb	60	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
Rock outcrop	30	Not rated		Not rated	
15E:					
Dekalb	60	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
Rock outcrop	30	Not rated		Not rated	
16E:					
Dekalb	35	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
Watahala	30	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
McClung	20	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
17A:					
Derroc	80	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
18B:					
Escatawba	80	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
18C:					
Escatawba	80	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
18D:					
Escatawba	75	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
19B:					
Escatawba	80	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
19C:					
Escatawba-----------	80	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
20C:					
Faywood-------------	50	Moderate		Low	
		Texture/rock fragments	0.50		
Poplimento----------	40	Moderate		Low	
		Texture/rock fragments	0.50		
20D:					
Faywood-------------	50	Moderate		Low	
		Texture/rock fragments	0.50		
Poplimento----------	40	Moderate		Low	
		Texture/rock fragments	0.50		
20E:					
Faywood-------------	45	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
Poplimento----------	35	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
21A:					
Feedstone-----------	85	Low		Low	
		Texture/rock fragments	0.10		
22C:					
Frederick-----------	75	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
22D:					
Frederick-----------	75	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
23C:					
Frederick-----------	50	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Watahala------------	40	High		Moderate	
		Texture/surface depth/rock fragments	1.00	Soil reaction	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
23D:					
Frederick-----------	50	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Watahala------------	40	High		Moderate	
		Texture/surface depth/rock fragments	1.00	Soil reaction	0.50
24B:					
Gilpin--------------	80	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
24C:					
Gilpin--------------	80	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
24D:					
Gilpin--------------	85	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
25A:					
Gladehill-----------	85	Low		Low	
		Texture/rock fragments	0.10		
26A:					
Irongate------------	85	Low		Low	
		Texture/rock fragments	0.10		
27C:					
Lehew---------------	50	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
Berks---------------	45	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
27D:					
Lehew---------------	50	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
Berks---------------	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
27E:					
Lehew	45	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
Berks	40	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
28F:					
Lehew	45	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
Berks	40	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Rock outcrop	10	Not rated		Not rated	
29C:					
Lily	85	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
30D:					
Lily	80	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
31C:					
Lily	45	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
McClung	30	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
Dekalb	20	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
32C:					
Macove	85	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		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
32D:					
Macove	75	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
33E:					
Macove	75	Low		Low	
34D:					
Macove	55	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Berks	35	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
34E:					
Macove	55	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Berks	35	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
35C:					
Mandy	75	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
35D:					
Mandy	75	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
35E:					
Mandy	75	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
36A:					
Maurertown	70	Low		High	
		Texture/rock fragments	0.10	Wetness	1.00
37B:					
McClung	45	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	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
37B:					
Lily	35	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
38C:					
McClung	45	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
Watahala	25	High		Moderate	
		Texture/surface depth/rock fragments	1.00	Soil reaction	0.50
Dekalb	20	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
38D:					
McClung	45	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
Watahala	25	High		Moderate	
		Texture/surface depth/rock fragments	1.00	Soil reaction	0.50
Dekalb	20	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
39B:					
Murrill	85	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
39C:					
Murrill	85	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
39D:					
Murrill	85	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
40C:					
Murrill-------------	95	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
40D:					
Murrill-------------	95	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
40E:					
Murrill-------------	95	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
41B:					
Nicelytown----------	80	Moderate		Low	
		Texture/rock fragments	0.50		
42A:					
Ogles---------------	80	Low		Low	
		Texture/rock fragments	0.10		
43B:					
Oriskany------------	85	Moderate		Low	
		Texture/rock fragments	0.50		
44C:					
Oriskany------------	75	Moderate		Low	
		Texture/rock fragments	0.50		
44D:					
Oriskany------------	75	Moderate		Low	
		Texture/rock fragments	0.50		
44E:					
Oriskany------------	80	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
45E:					
Oriskany------------	85	High		Low	
		Texture/slope/ rock fragments	1.00		
46C:					
Oriskany------------	55	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
46C:					
Murrill-------------	35	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
46D:					
Oriskany------------	55	Moderate		Low	
		Texture/rock fragments	0.50		
Murrill-------------	35	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
47E:					
Oriskany------------	65	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
Murrill-------------	25	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
48C:					
Paddyknob-----------	60	High		Moderate	
		Texture/surface depth/rock fragments	1.00	Soil reaction	0.50
Madsheep------------	35	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
48D:					
Paddyknob-----------	55	High		Moderate	
		Texture/surface depth/rock fragments	1.00	Soil reaction	0.50
Madsheep------------	35	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
48E:					
Paddyknob-----------	55	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
Madsheep------------	35	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	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
49A:					
Purdy---------------	85	Moderate		High	
		Texture/rock fragments	0.50	Wetness	1.00
50C:					
Shelocta------------	60	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Berks---------------	20	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
50D:					
Shelocta------------	60	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Berks---------------	20	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
50E:					
Shelocta------------	70	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Berks---------------	25	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
51B:					
Sugarhol------------	85	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
51C:					
Sugarhol------------	85	Moderate		Moderate	
		Texture/surface depth/rock fragments	0.50	Soil reaction	0.50
52:					
Udorthents, dams----	95	Not rated		Not rated	
53:					
Udorthents, smoothed	85	Not rated		Not rated	
54:					
Udorthents----------	65	Not rated		Not rated	
Rock outcrop--------	25	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
55E:					
Watahala	45	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
Frederick	35	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
56E:					
Weikert	50	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Berks	40	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
57D:					
Weikert	35	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Berks	34	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Rough	10	High		Low	
		Texture/surface depth/rock fragments	1.00		
57E:					
Weikert	40	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Berks	30	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Rough	15	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
58F:					
Weikert	40	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		

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
58F:					
Berks	30	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Rough	15	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
59F:					
Weikert	40	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Available water	0.50
Rock outcrop	25	Not rated		Not rated	
Rough	20	High		High	
		Texture/slope/ surface depth/ rock fragments	1.00	Available water	1.00
60F:					
Weikert	65	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Rough	25	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
61C:					
Wharton	55	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Blairton	40	Moderate		Low	
		Texture/rock fragments	0.50		
61D:					
Wharton	55	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Blairton	40	Moderate		Low	
		Texture/rock fragments	0.50		
62A:					
Wolfgap	95	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		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
63A:					
Wolfgap	95	Low		Low	
		Texture/rock fragments	0.10		
64B:					
Zoar	85	Moderate		Low	
		Texture/rock fragments	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		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1A:							
Alonzville------	80	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Gravel content	0.56
2B:							
Alonzville------	85	Not limited		Not limited		Somewhat limited	
						Gravel content	0.93
						Slope	0.88
						Large stones content	0.32
3C:							
Alticrest-------	50	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
		Slope	0.63	Slope	0.63	Large stones content	0.76
						Gravel content	0.68
Dekalb----------	30	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
		Slope	0.63	Slope	0.63	Large stones content	0.76
						Depth to bedrock	0.46
4A:							
Atkins----------	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00			Flooding	0.60
5D:							
Berks-----------	80	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	0.71
5E:							
Berks-----------	80	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	0.71
6B:							
Berks-----------	55	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.61	Gravel content	0.61	Gravel content	1.00
						Slope	0.88
						Depth to bedrock	0.71
Weikert---------	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.05	Gravel content	0.05	Gravel content	1.00
						Slope	0.88

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
6C:							
Berks	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Gravel content	0.61	Gravel content	0.61	Gravel content	1.00
						Depth to bedrock	0.71
Weikert	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Slope	0.63	Slope	0.63	Depth to bedrock	1.00
		Gravel content	0.05	Gravel content	0.05	Gravel content	1.00
7C:							
Berks	50	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
		Gravel content	0.61	Gravel content	0.61	Gravel content	1.00
		Slope	0.50	Slope	0.50	Large stones content	0.76
Weikert	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Depth to bedrock	1.00
		Slope	0.50	Slope	0.50	Gravel content	1.00
7D:							
Berks	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
		Gravel content	0.61	Gravel content	0.61	Large stones content	0.76
Weikert	25	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	0.76	Large stones content	0.76	Gravel content	1.00
8B:							
Blairton	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.81	Depth to saturated zone	0.48	Slope	0.88
		Slow water movement	0.26	Slow water movement	0.26	Depth to saturated zone	0.81
						Slow water movement	0.26
Wharton	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slow water movement	0.50	Slope	0.88
		Depth to saturated zone	0.07	Depth to saturated zone	0.03	Slow water movement	0.50
						Depth to saturated zone	0.07
9C:							
Caneyville	85	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.50	Slope	0.50	Slow water movement	0.96
						Depth to bedrock	0.54

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9D:							
Caneyville------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Depth to bedrock	0.54
9E:							
Caneyville------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Depth to bedrock	0.54
10B:							
Cottonbend------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
						Gravel content	0.78
11A:							
Coursey---------	80	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.19	Depth to saturated zone	0.39
		Depth to saturated zone	0.39				
12D:							
Dekalb----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Large stones content	0.76
						Depth to bedrock	0.46
Alticrest-------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Large stones content	0.76
						Gravel content	0.68
12E:							
Dekalb----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Large stones content	0.76
						Depth to bedrock	0.46
Alticrest-------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Large stones content	0.76
						Gravel content	0.68
13D:							
Dekalb----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Large stones content	0.76
						Depth to bedrock	0.46

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
13D:							
Lily-----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Large stones content	0.76
McClung---------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
14E:							
Dekalb----------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Large stones content	0.76
						Depth to bedrock	0.46
Lily-----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Large stones content	0.76
15D:							
Dekalb----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
						Depth to bedrock	0.46
Rock outcrop----	30	Not rated		Not rated		Not rated	
15E:							
Dekalb----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
						Depth to bedrock	0.46
Rock outcrop----	30	Not rated		Not rated		Not rated	
16E:							
Dekalb----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.46
						Gravel content	0.34
Watahala--------	30	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
McClung---------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
17A:							
Derroc----------	80	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Large stones content	0.05	Large stones content	1.00
		Large stones content	0.05			Gravel content	0.79
						Flooding	0.60

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
18B:							
Escatawba-------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.94	Large stones content	0.94	Large stones content	0.94
		Slow water movement	0.26	Slow water movement	0.26	Slope	0.88
						Slow water movement	0.26
18C:							
Escatawba-------	80	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.94	Large stones content	0.94	Slope	1.00
		Slope	0.63	Slope	0.63	Large stones content	0.94
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26
18D:							
Escatawba-------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.94	Large stones content	0.94	Large stones content	0.94
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26
19B:							
Escatawba-------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.26	Slow water movement	0.26	Slope	0.88
						Gravel content	0.56
						Slow water movement	0.26
19C:							
Escatawba-------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Slope	0.50	Slope	1.00
		Slow water movement	0.26	Slow water movement	0.26	Gravel content	0.56
						Slow water movement	0.26
20C:							
Faywood---------	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Slow water movement	0.50	Slow water movement	0.50	Depth to bedrock	0.90
						Slow water movement	0.50
Poplimento------	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26
20D:							
Faywood---------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.50	Slow water movement	0.50	Depth to bedrock	0.90
						Slow water movement	0.50
Poplimento------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26

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
20E:							
Faywood	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.50	Slow water movement	0.50	Depth to bedrock	0.90
						Slow water movement	0.50
Poplimento	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26
21A:							
Feedstone	85	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.39	Depth to saturated zone	0.72
		Depth to saturated zone	0.72				
22C:							
Frederick	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Gravel content	0.22
22D:							
Frederick	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.22
23C:							
Frederick	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
Watahala	40	Very limited		Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	0.63	Slope	0.63	Slope	1.00
23D:							
Frederick	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
Watahala	40	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
24B:							
Gilpin	80	Not limited		Not limited		Somewhat limited	
						Slope	0.88
						Gravel content	0.56
						Depth to bedrock	0.29
24C:							
Gilpin	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.29

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
24D:							
Gilpin	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.29
25A:							
Gladehill	85	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
26A:							
Irongate	85	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.39	Depth to saturated zone	0.72
		Depth to saturated zone	0.72			Flooding	0.60
27C:							
Lehew	50	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
		Slope	0.63	Slope	0.63	Gravel content	1.00
		Gravel content	0.06	Gravel content	0.06	Large stones content	0.76
Berks	45	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
		Slope	0.63	Slope	0.63	Gravel content	1.00
		Gravel content	0.61	Gravel content	0.61	Large stones content	0.76
27D:							
Lehew	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
		Gravel content	0.06	Gravel content	0.06	Large stones content	0.76
Berks	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
		Gravel content	0.61	Gravel content	0.61	Large stones content	0.76
27E:							
Lehew	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
		Gravel content	0.06	Gravel content	0.06	Large stones content	0.76
Berks	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
		Gravel content	0.61	Gravel content	0.61	Large stones content	0.76

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
28F:							
Lehew-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Gravel content	0.06	Gravel content	0.06	Gravel content	1.00
Berks-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Gravel content	0.61	Gravel content	0.61	Gravel content	1.00
Rock outcrop----	10	Not rated		Not rated		Not rated	
29C:							
Lily------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.29
30D:							
Lily------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Large stones content	0.76
31C:							
Lily------------	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.29
McClung---------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Dekalb----------	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Depth to bedrock	0.46
						Gravel content	0.34
32C:							
Macove----------	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.94	Large stones content	0.94	Gravel content	1.00
		Slope	0.63	Slope	0.63	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Large stones content	0.94
32D:							
Macove----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.94	Large stones content	0.94	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Large stones content	0.94
33E:							
Macove----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Large stones content	1.00	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
34D:							
Macove----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.94	Large stones content	0.94	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Large stones content	0.94
Berks-----------	35	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
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.71
34E:							
Macove----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.94	Large stones content	0.94	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Large stones content	0.94
Berks-----------	35	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
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.71
35C:							
Mandy-----------	75	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
						Gravel content	0.97
		Slope	0.50	Slope	0.50	Large stones content	0.76
35D:							
Mandy-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	0.97
						Large stones content	0.76
35E:							
Mandy-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	0.97
						Large stones content	0.76
36A:							
Maurertown------	70	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
				Depth to saturated zone	1.00		
		Flooding	1.00			Ponding	1.00
		Ponding	1.00	Slow water movement	1.00	Slow water movement	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
37B:							
McClung----------	45	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Lily------------	35	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Slope	0.88
						Depth to bedrock	0.29
38C:							
McClung----------	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Slope	0.50	Slope	1.00
Watahala---------	25	Very limited		Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	0.50	Slope	0.50	Slope	1.00
Dekalb-----------	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Slope	0.50	Slope	1.00
						Depth to bedrock	0.46
						Gravel content	0.34
38D:							
McClung----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Watahala---------	25	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
Dekalb-----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.46
						Gravel content	0.34
39B:							
Murrill----------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
						Gravel content	0.56
39C:							
Murrill----------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Gravel content	0.56
39D:							
Murrill----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.56
40C:							
Murrill----------	95	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
		Slope	0.63	Slope	0.63	Large stones 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	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
40D:							
Murrill---------	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Large stones content	1.00
40E:							
Murrill---------	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Large stones content	1.00
41B:							
Nicelytown------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Slow water movement	0.35	Slow water movement	0.35	Slope	0.88
						Slow water movement	0.35
42A:							
Ogles-----------	80	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Large stones content	0.32	Large stones content	1.00
		Large stones content	0.32	Gravel content	0.04	Gravel content	1.00
		Gravel content	0.04			Flooding	0.60
43B:							
Oriskany--------	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Large stones content	1.00
						Slope	0.88
44C:							
Oriskany--------	75	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
		Slope	0.63	Slope	0.63	Large stones content	1.00
44D:							
Oriskany--------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
44E:							
Oriskany--------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
45E:							
Oriskany--------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Large stones content	1.00
		Large stones content	1.00	Large stones content	1.00	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
46C:							
Oriskany--------	55	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
		Slope	0.63	Slope	0.63	Large stones content	1.00
Murrill---------	35	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
		Slope	0.63	Slope	0.63	Large stones content	1.00
46D:							
Oriskany--------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Large stones content	1.00
Murrill---------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Large stones content	1.00
47E:							
Oriskany--------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
Murrill---------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
48C:							
Paddyknob-------	60	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
						Slope	1.00
		Gravel content	0.76	Gravel content	0.76	Depth to bedrock	0.80
		Slope	0.50	Slope	0.50		
Madsheep--------	35	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
						Gravel content	1.00
		Slope	0.50	Slope	0.50	Large stones content	0.76
		Gravel content	0.08	Gravel content	0.08		
48D:							
Paddyknob-------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
						Depth to bedrock	0.80
		Gravel content	0.76	Gravel content	0.76		
Madsheep--------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
						Large stones content	0.76
		Gravel content	0.08	Gravel content	0.08		

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
48E:							
Paddyknob	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
		Gravel content	0.76	Gravel content	0.76	Depth to bedrock	0.80
Madsheep	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
		Gravel content	0.08	Gravel content	0.08	Large stones content	0.76
49A:							
Purdy	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Slow water movement	0.99	Slow water movement	0.99	Slow water movement	0.99
50C:							
Shelocta	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Gravel content	0.78
Berks	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Gravel content	0.61	Gravel content	0.61	Gravel content	1.00
						Depth to bedrock	0.71
50D:							
Shelocta	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.78
Berks	20	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	0.71
50E:							
Shelocta	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.78
Berks	25	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	0.71
51B:							
Sugarhol	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
51C:							
Sugarhol	85	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	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
52:							
Udorthents, dams	95	Not rated		Not rated		Not rated	
53:							
Udorthents, smoothed-------	85	Not rated		Not rated		Not rated	
54:							
Udorthents------	65	Not rated		Not rated		Not rated	
Rock outcrop----	25	Not rated		Not rated		Not rated	
55E:							
Watahala--------	45	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
Frederick-------	35	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
						Large stones content	0.47
		Gravel content	0.08	Gravel content	0.08		
56E:							
Weikert---------	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
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
Berks-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
						Large stones content	0.76
		Gravel content	0.61	Gravel content	0.61		
57D:							
Weikert---------	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	0.05	Gravel content	0.05	Gravel content	1.00
Berks-----------	34	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	0.71
Rough-----------	10	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	1.00	Gravel content	1.00	Depth to bedrock	1.00
57E:							
Weikert---------	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
		Gravel content	0.05	Gravel content	0.05	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	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
57E:							
Berks-----------	30	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	0.71
Rough-----------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	1.00	Gravel content	1.00	Depth to bedrock	1.00
58F:							
Weikert---------	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	0.76	Large stones content	0.76	Gravel content	1.00
Berks-----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	1.00
		Gravel content	0.61	Gravel content	0.61	Large stones content	0.76
Rough-----------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	1.00	Gravel content	1.00	Depth to bedrock	1.00
59F:							
Weikert---------	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
		Gravel content	0.05	Gravel content	0.05	Gravel content	1.00
Rock outcrop----	25	Not rated		Not rated		Not rated	
Rough-----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	1.00	Gravel content	1.00	Depth to bedrock	1.00
60F:							
Weikert---------	65	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	0.05	Gravel content	0.05	Gravel content	1.00
Rough-----------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	1.00	Gravel content	1.00	Depth to bedrock	1.00
61C:							
Wharton---------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Slow water movement	0.50	Slow water movement	0.50	Slow water movement	0.50
		Depth to saturated zone	0.07	Depth to saturated zone	0.03	Depth to saturated zone	0.07

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61C:							
Blairton	40	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.81	Slope	0.63	Slope	1.00
		Slope	0.63	Depth to saturated zone	0.48	Depth to saturated zone	0.81
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26
61D:							
Wharton	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.50	Slow water movement	0.50	Slow water movement	0.50
		Depth to saturated zone	0.07	Depth to saturated zone	0.03	Depth to saturated zone	0.07
Blairton	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.81	Depth to saturated zone	0.48	Depth to saturated zone	0.81
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26
62A:							
Wolfgap	95	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
63A:							
Wolfgap	95	Very limited		Not limited		Not limited	
		Flooding	1.00				
64B:							
Zoar	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Slow water movement	0.50	Slow water movement	0.50	Slope	0.88
						Slow water movement	0.50
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
1A:							
Alonzville------	80	Not limited		Not limited		Not limited	
2B:							
Alonzville------	85	Not limited		Not limited		Somewhat limited	
						Large stones content	0.32
3C:							
Alticrest-------	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.76	Large stones content	0.76	Droughty	0.71
						Slope	0.63
						Depth to bedrock	0.46
Dekalb----------	30	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Droughty	1.00
						Slope	0.63
						Depth to bedrock	0.46
4A:							
Atkins----------	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
						Flooding	0.60
5D:							
Berks-----------	80	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Droughty	0.75
						Depth to bedrock	0.71
5E:							
Berks-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.75
						Depth to bedrock	0.71
6B:							
Berks-----------	55	Not limited		Not limited		Somewhat limited	
						Droughty	0.75
						Depth to bedrock	0.71
						Gravel content	0.61
Weikert---------	35	Not limited		Not limited		Very limited	
						Depth to bedrock	1.00
						Droughty	1.00
						Gravel content	0.05
6C:							
Berks-----------	55	Not limited		Not limited		Somewhat limited	
						Droughty	0.75
						Depth to bedrock	0.71
						Slope	0.63

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
6C:							
Weikert----------	30	Not limited		Not limited		Very limited	
						Depth to bedrock	1.00
						Droughty	1.00
						Slope	0.63
7C:							
Berks------------	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.76	Large stones content	0.76	Droughty	0.75
						Depth to bedrock	0.71
						Gravel content	0.61
Weikert----------	40	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Depth to bedrock	1.00
						Droughty	1.00
						Slope	0.50
7D:							
Berks------------	70	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Slope	1.00
		Large stones content	0.76			Droughty	0.75
						Depth to bedrock	0.71
Weikert----------	25	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Depth to bedrock	1.00
		Large stones content	0.76			Slope	1.00
						Droughty	1.00
8B:							
Blairton---------	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
						Depth to bedrock	0.01
Wharton----------	30	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.03
9C:							
Caneyville-------	85	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.54
						Slope	0.50
9D:							
Caneyville-------	85	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00			Depth to bedrock	0.54
9E:							
Caneyville-------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Depth to bedrock	0.54
10B:							
Cottonbend-------	85	Not limited		Not limited		Not limited	
11A:							
Coursey----------	80	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19

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
12D:							
Dekalb----------	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Slope	1.00
		Large stones content	0.76			Droughty	1.00
						Depth to bedrock	0.46
Alticrest-------	25	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Slope	1.00
		Large stones content	0.76			Droughty	0.71
						Depth to bedrock	0.46
12E:							
Dekalb----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Droughty	1.00
						Depth to bedrock	0.46
Alticrest-------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Droughty	0.71
						Depth to bedrock	0.46
13D:							
Dekalb----------	40	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Slope	1.00
		Large stones content	0.76			Droughty	1.00
						Depth to bedrock	0.46
Lily------------	30	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Slope	1.00
		Large stones content	0.76			Depth to bedrock	0.29
						Gravel content	0.01
McClung---------	15	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
14E:							
Dekalb----------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Droughty	1.00
						Depth to bedrock	0.46
Lily------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Depth to bedrock	0.29
						Gravel content	0.01
15D:							
Dekalb----------	60	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			Depth to bedrock	0.46
Rock outcrop----	30	Not rated		Not rated		Not rated	
15E:							
Dekalb----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Slope	1.00
		Large stones content	1.00			Droughty	1.00
				Slope	1.00	Depth to bedrock	0.46

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
15E:							
Rock outcrop----	30	Not rated		Not rated		Not rated	
16E:							
Dekalb----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Depth to bedrock	0.46
Watahala--------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
McClung---------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
17A:							
Derroc----------	80	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.05	Large stones content	0.05	Large stones content	1.00
						Flooding	0.60
						Droughty	0.58
18B:							
Escatawba-------	80	Somewhat limited		Somewhat limited		Not limited	
		Large stones content	0.94	Large stones content	0.94		
18C:							
Escatawba-------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.94	Large stones content	0.94	Slope	0.63
18D:							
Escatawba-------	75	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.94	Slope	1.00
		Large stones content	0.94				
19B:							
Escatawba-------	80	Not limited		Not limited		Not limited	
19C:							
Escatawba-------	80	Not limited		Not limited		Somewhat limited	
						Slope	0.50
20C:							
Faywood---------	50	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.90
						Droughty	0.74
						Slope	0.63
Poplimento------	40	Not limited		Not limited		Somewhat limited	
						Slope	0.63
20D:							
Faywood---------	50	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00			Depth to bedrock	0.90
						Droughty	0.74

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
20D:							
Poplimento------	40	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
20E:							
Faywood---------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Depth to bedrock	0.90
						Droughty	0.74
Poplimento------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
21A:							
Feedstone-------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.06	Depth to saturated zone	0.06	Depth to saturated zone	0.39
22C:							
Frederick-------	75	Not limited		Not limited		Somewhat limited	
						Slope	0.63
22D:							
Frederick-------	75	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
23C:							
Frederick-------	50	Not limited		Not limited		Somewhat limited	
						Slope	0.63
						Gravel content	0.08
Watahala--------	40	Not limited		Not limited		Very limited	
						Gravel content	1.00
						Slope	0.63
23D:							
Frederick-------	50	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Gravel content	0.08
Watahala--------	40	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Gravel content	1.00
24B:							
Gilpin----------	80	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.29
24C:							
Gilpin----------	80	Not limited		Not limited		Somewhat limited	
						Slope	0.63
						Depth to bedrock	0.29
24D:							
Gilpin----------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Depth to bedrock	0.29

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
25A:							
Gladehill-------	85	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
26A:							
Irongate--------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.06	Depth to saturated zone	0.06	Flooding	0.60
						Depth to saturated zone	0.39
27C:							
Lehew-----------	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.76	Large stones content	0.76	Droughty	0.97
						Depth to bedrock	0.71
						Slope	0.63
Berks-----------	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.76	Large stones content	0.76	Droughty	0.75
						Depth to bedrock	0.71
						Slope	0.63
27D:							
Lehew-----------	50	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Slope	1.00
		Large stones content	0.76			Droughty	0.97
						Depth to bedrock	0.71
Berks-----------	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Slope	1.00
		Large stones content	0.76			Droughty	0.75
						Depth to bedrock	0.71
27E:							
Lehew-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Droughty	0.97
						Depth to bedrock	0.71
Berks-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Droughty	0.75
						Depth to bedrock	0.71
28F:							
Lehew-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00	Droughty	0.97
						Depth to bedrock	0.71
Berks-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	1.00	Large stones content	1.00	Droughty	0.75
						Depth to bedrock	0.71
Rock outcrop----	10	Not rated		Not rated		Not rated	
29C:							
Lily------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.63
						Depth to bedrock	0.29
						Gravel content	0.01

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
30D:							
Lily------------	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Slope	1.00
		Large stones content	0.76			Depth to bedrock	0.29
						Gravel content	0.01
31C:							
Lily------------	45	Not limited		Not limited		Somewhat limited	
						Slope	0.63
						Depth to bedrock	0.29
						Gravel content	0.01
McClung---------	30	Not limited		Not limited		Somewhat limited	
						Slope	0.63
Dekalb----------	20	Not limited		Not limited		Very limited	
						Droughty	1.00
						Slope	0.63
						Depth to bedrock	0.46
32C:							
Macove----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.94	Large stones content	0.94	Slope	0.63
						Droughty	0.32
						Large stones content	0.03
32D:							
Macove----------	75	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.94	Slope	1.00
		Large stones content	0.94			Droughty	0.32
						Large stones content	0.03
33E:							
Macove----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Slope	1.00
		Large stones content	1.00	Slope	1.00	Large stones content	1.00
						Droughty	0.02
34D:							
Macove----------	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.94	Slope	1.00
		Large stones content	0.94			Droughty	0.32
						Large stones content	0.03
Berks-----------	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Droughty	0.75
						Depth to bedrock	0.71
34E:							
Macove----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.94	Large stones content	0.94	Droughty	0.32
						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
34E:							
Berks-----------	35	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	Droughty	0.75
						Depth to bedrock	0.71
35C:							
Mandy-----------	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.76	Large stones content	0.76	Slope	0.50
						Depth to bedrock	0.03
35D:							
Mandy-----------	75	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Slope	1.00
		Large stones content	0.76			Depth to bedrock	0.03
35E:							
Mandy-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Depth to bedrock	0.03
36A:							
Maurertown------	70	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
37B:							
McClung---------	45	Not limited		Not limited		Not limited	
Lily------------	35	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.29
						Gravel content	0.01
38C:							
McClung---------	45	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Watahala--------	25	Not limited		Not limited		Very limited	
						Gravel content	1.00
						Slope	0.50
Dekalb----------	20	Not limited		Not limited		Very limited	
						Droughty	1.00
						Slope	0.50
						Depth to bedrock	0.46
38D:							
McClung---------	45	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
Watahala--------	25	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Gravel content	1.00
Dekalb----------	20	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Droughty	1.00
						Depth to bedrock	0.46

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
39B:							
Murrill---------	85	Not limited		Not limited		Not limited	
39C:							
Murrill---------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.63
39D:							
Murrill---------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
40C:							
Murrill---------	95	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Large stones content	1.00
						Slope	0.63
40D:							
Murrill---------	95	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Slope	1.00
		Large stones content	0.76			Large stones content	1.00
40E:							
Murrill---------	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Large stones content	1.00
41B:							
Nicelytown------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
42A:							
Ogles-----------	80	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.32	Large stones content	0.32	Large stones content	1.00
						Droughty	0.99
						Flooding	0.60
43B:							
Oriskany--------	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Large stones content	1.00
44C:							
Oriskany--------	75	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
						Slope	0.63
44D:							
Oriskany--------	75	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
		Slope	1.00			Large stones content	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
44E:							
Oriskany--------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones	1.00	Slope	1.00
		Large stones	1.00	content		Large stones	1.00
		content		Slope	1.00	content	
45E:							
Oriskany--------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones	1.00	Slope	1.00
		Large stones	1.00	content		Large stones	1.00
		content		Slope	1.00	content	
46C:							
Oriskany--------	55	Somewhat limited		Somewhat limited		Very limited	
		Large stones	0.76	Large stones	0.76	Large stones	1.00
		content		content		content	
						Slope	0.63
Murrill---------	35	Somewhat limited		Somewhat limited		Very limited	
		Large stones	0.76	Large stones	0.76	Large stones	1.00
		content		content		content	
						Slope	0.63
46D:							
Oriskany--------	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones	0.76	Slope	1.00
		Large stones	0.76	content		Large stones	1.00
		content			0.03	content	
Murrill---------	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones	0.76	Slope	1.00
		Large stones	0.76	content		Large stones	1.00
		content				content	
47E:							
Oriskany--------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones	1.00	Slope	1.00
		Large stones	1.00	content		Large stones	1.00
		content		Slope	1.00	content	
Murrill---------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones	1.00	Slope	1.00
		Large stones	1.00	content		Large stones	1.00
		content		Slope	1.00	content	
48C:							
Paddyknob-------	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones	0.76	Large stones	0.76	Droughty	0.99
		content		content		Depth to bedrock	0.80
						Gravel content	0.76
Madsheep--------	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones	0.76	Large stones	0.76	Slope	0.50
		content		content		Depth to bedrock	0.46
						Droughty	0.18

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:							
Paddyknob--------	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Slope	1.00
		Large stones content	0.76			Droughty	0.99
						Depth to bedrock	0.80
Madsheep---------	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.76	Slope	1.00
		Large stones content	0.76			Depth to bedrock	0.46
						Droughty	0.18
48E:							
Paddyknob--------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Droughty	0.99
						Depth to bedrock	0.80
Madsheep---------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Depth to bedrock	0.46
						Droughty	0.18
49A:							
Purdy------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
50C:							
Shelocta---------	60	Not limited		Not limited		Somewhat limited	
						Slope	0.63
Berks------------	20	Not limited		Not limited		Somewhat limited	
						Droughty	0.75
						Depth to bedrock	0.71
						Slope	0.63
50D:							
Shelocta---------	60	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
50D:							
Berks------------	20	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Droughty	0.75
						Depth to bedrock	0.71
50E:							
Shelocta---------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Berks------------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.75
						Depth to bedrock	0.71
51B:							
Sugarhol---------	85	Not limited		Not limited		Not limited	

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
51C:							
Sugarhol--------	85	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.63
52:							
Udorthents, dams	95	Not rated		Not rated		Not rated	
53:							
Udorthents, smoothed-------	85	Not rated		Not rated		Not rated	
54:							
Udorthents------	65	Not rated		Not rated		Not rated	
Rock outcrop----	25	Not rated		Not rated		Not rated	
55E:							
Watahala--------	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
Frederick-------	35	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	0.08
56E:							
Weikert---------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
						Droughty	1.00
Berks-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Droughty	0.75
						Depth to bedrock	0.71
57D:							
Weikert---------	35	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
Berks-----------	34	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Droughty	0.75
						Depth to bedrock	0.71
Rough-----------	10	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
57E:							
Weikert---------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	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
57E:							
Berks-----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.75
						Depth to bedrock	0.71
Rough-----------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
58F:							
Weikert---------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
						Droughty	1.00
Berks-----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Droughty	0.75
						Depth to bedrock	0.71
Rough-----------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
						Droughty	1.00
59F:							
Weikert---------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
Rock outcrop----	25	Not rated		Not rated		Not rated	
Rough-----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
60F:							
Weikert---------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
Rough-----------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
61C:							
Wharton---------	55	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.63
						Depth to saturated zone	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
61C:							
Blairton--------	40	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.63
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
						Depth to bedrock	0.01
61D:							
Wharton---------	55	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00			Depth to saturated zone	0.03
Blairton--------	40	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	0.11	Depth to saturated zone	0.48
		Depth to saturated zone	0.11			Depth to bedrock	0.01
62A:							
Wolfgap---------	95	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
63A:							
Wolfgap---------	95	Not limited		Not limited		Not limited	
64B:							
Zoar------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
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: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
1A:							
Alonzville------	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
2B:							
Alonzville------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.12
3C:							
Alticrest-------	50	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Slope	0.63	Depth to hard bedrock	0.46
Dekalb----------	30	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Slope	0.63	Depth to hard bedrock	0.46
4A:							
Atkins----------	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
5D:							
Berks-----------	80	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
5E:							
Berks-----------	80	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
6B:							
Berks-----------	55	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Depth to hard bedrock	0.71
						Slope	0.12
Weikert---------	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
						Slope	0.12
6C:							
Berks-----------	55	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.63	Slope	0.63	Depth to hard bedrock	0.71

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6C:							
Weikert	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.63	Slope	0.63	Depth to hard bedrock	1.00
7C:							
Berks	50	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.50	Slope	0.50	Depth to hard bedrock	0.71
Weikert	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.50	Slope	0.50	Depth to hard bedrock	1.00
7D:							
Berks	70	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
Weikert	25	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
8B:							
Blairton	50	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
		Depth to hard bedrock	0.01	Depth to hard bedrock	1.00	Slope	0.12
						Depth to hard bedrock	0.01
Wharton	30	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.07	Shrink-swell	0.50	Slope	0.12
						Depth to saturated zone	0.07
9C:							
Caneyville	85	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.54	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.50	Slope	0.50	Depth to hard bedrock	0.54
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
9D:							
Caneyville	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.54	Depth to hard bedrock	1.00	Depth to hard bedrock	0.54
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9E:							
Caneyville------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.54	Depth to hard bedrock	1.00	Depth to hard bedrock	0.54
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
10B:							
Cottonbend------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.12
11A:							
Coursey---------	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
12D:							
Dekalb----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
Alticrest-------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
12E:							
Dekalb----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
Alticrest-------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
13D:							
Dekalb----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
Lily------------	30	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
McClung---------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
14E:							
Dekalb----------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46

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
14E:							
Lily-----------	20	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
15D:							
Dekalb----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
Rock outcrop----	30	Not rated		Not rated		Not rated	
15E:							
Dekalb----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
Rock outcrop----	30	Not rated		Not rated		Not rated	
16E:							
Dekalb----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
Watahala--------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Shrink-swell	0.50		
McClung---------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
17A:							
Derroc----------	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Large stones content	0.94	Large stones content	0.94	Large stones content	0.94
				Depth to saturated zone	0.82		
18B:							
Escatawba-------	80	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	0.99	Slope	0.12
18C:							
Escatawba-------	80	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to saturated zone	0.99	Slope	1.00
				Slope	0.63		
18D:							
Escatawba-------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to saturated zone	0.99		

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
19B:							
Escatawba	80	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	0.99	Slope	0.12
19C:							
Escatawba	80	Somewhat limited		Very limited		Very limited	
		Slope	0.50	Depth to saturated zone	0.99	Slope	1.00
				Slope	0.50		
20C:							
Faywood	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
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Poplimento	40	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Slope	0.63	Slope	1.00
		Slope	0.63	Shrink-swell	0.50	Shrink-swell	1.00
20D:							
Faywood	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
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Poplimento	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
20E:							
Faywood	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
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Poplimento	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
21A:							
Feedstone	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.72	Depth to saturated zone	1.00	Depth to saturated zone	0.72
22C:							
Frederick	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
22D:							
Frederick	75	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

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
23C:							
Frederick	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Watahala	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
				Shrink-swell	0.50		
23D:							
Frederick	50	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
Watahala	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Shrink-swell	0.50		
24B:							
Gilpin	80	Not limited		Somewhat limited		Somewhat limited	
				Depth to soft bedrock	0.29	Slope	0.12
24C:							
Gilpin	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
				Depth to soft bedrock	0.29		
24D:							
Gilpin	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.29		
25A:							
Gladehill	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
26A:							
Irongate	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.72	Depth to saturated zone	1.00	Depth to saturated zone	0.72
27C:							
Lehew	50	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.63	Slope	0.63	Depth to hard bedrock	0.71
Berks	45	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.63	Slope	0.63	Depth to hard bedrock	0.71

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
27D:							
Lehew-----------	50	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
Berks-----------	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
27E:							
Lehew-----------	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
Berks-----------	40	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
28F:							
Lehew-----------	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
Berks-----------	40	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
Rock outcrop----	10	Not rated		Not rated		Not rated	
29C:							
Lily------------	85	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Slope	0.63	Depth to hard bedrock	0.29
30D:							
Lily------------	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
31C:							
Lily------------	45	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Slope	0.63	Depth to hard bedrock	0.29
McClung---------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Dekalb----------	20	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Slope	0.63	Depth to hard bedrock	0.46

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
32C:							
Macove	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Large stones content	0.03	Large stones content	0.03	Large stones content	0.03
32D:							
Macove	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.03	Large stones content	0.03	Large stones content	0.03
33E:							
Macove	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.51	Large stones content	0.51	Large stones content	0.51
34D:							
Macove	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.03	Large stones content	0.03	Large stones content	0.03
Berks	35	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
34E:							
Macove	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.03	Large stones content	0.03	Large stones content	0.03
Berks	35	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
35C:							
Mandy	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Slope	0.50	Slope	1.00
				Depth to soft bedrock	0.03		
35D:							
Mandy	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.03		
35E:							
Mandy	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.03		

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
36A:							
Maurertown------	70	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
37B:							
McClung---------	45	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Lily------------	35	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
						Slope	0.12
38C:							
McClung---------	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Slope	0.50	Slope	1.00
Watahala--------	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Slope	0.50	Slope	1.00
				Shrink-swell	0.50		
Dekalb----------	20	Somewhat limited		Very limited		Very limited	
		Slope	0.50	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Slope	0.50	Depth to hard bedrock	0.46
38D:							
McClung---------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Watahala--------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Shrink-swell	0.50		
Dekalb----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
39B:							
Murrill---------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.12
39C:							
Murrill---------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
39D:							
Murrill---------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
40C:							
Murrill---------	95	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
40D:							
Murrill	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
40E:							
Murrill	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
41B:							
Nicelytown	80	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
						Slope	0.12
42A:							
Ogles	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Large stones content	0.72	Depth to saturated zone	0.82	Large stones content	0.72
				Large stones content	0.72		
43B:							
Oriskany	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.78	Large stones content	0.78	Large stones content	0.78
						Slope	0.12
44C:							
Oriskany	75	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.78	Large stones content	0.78	Slope	1.00
		Slope	0.63	Slope	0.63	Large stones content	0.78
44D:							
Oriskany	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.78	Large stones content	0.78	Large stones content	0.78
44E:							
Oriskany	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.78	Large stones content	0.78	Large stones content	0.78
45E:							
Oriskany	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.96	Large stones content	0.96	Large stones content	0.96
46C:							
Oriskany	55	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.78	Large stones content	0.78	Slope	1.00
		Slope	0.63	Slope	0.63	Large stones content	0.78
Murrill	35	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
46D:							
Oriskany	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.78	Large stones content	0.78	Large stones content	0.78
Murrill	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
47E:							
Oriskany	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.78	Large stones content	0.78	Large stones content	0.78
Murrill	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
48C:							
Paddyknob	60	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.79	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.50	Slope	0.50	Depth to hard bedrock	0.79
Madsheep	35	Somewhat limited		Very limited		Very limited	
		Slope	0.50	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Slope	0.50	Depth to hard bedrock	0.46
48D:							
Paddyknob	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.79	Depth to hard bedrock	1.00	Depth to hard bedrock	0.79
Madsheep	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
48E:							
Paddyknob	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.79	Depth to hard bedrock	1.00	Depth to hard bedrock	0.79
Madsheep	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
49A:							
Purdy	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

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
50C:							
Shelocta--------	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Berks-----------	20	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.63	Slope	0.63	Depth to hard bedrock	0.71
50D:							
Shelocta--------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Berks-----------	20	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
50E:							
Shelocta--------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Berks-----------	25	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
51B:							
Sugarhol--------	85	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.01			Slope	0.12
						Shrink-swell	0.01
51C:							
Sugarhol--------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.01			Shrink-swell	0.01
52:							
Udorthents, dams	95	Not rated		Not rated		Not rated	
53:							
Udorthents, smoothed-------	85	Not rated		Not rated		Not rated	
54:							
Udorthents------	65	Not rated		Not rated		Not rated	
Rock outcrop----	25	Not rated		Not rated		Not rated	
55E:							
Watahala--------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Shrink-swell	0.50		
Frederick-------	35	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

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
56E:							
Weikert	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
Berks	40	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
57D:							
Weikert	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
Berks	34	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
Rough	10	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
57E:							
Weikert	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
Berks	30	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
Rough	15	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
58F:							
Weikert	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
Berks	30	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
Rough	15	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
59F:							
Weikert	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
Rock outcrop	25	Not rated		Not rated		Not rated	
Rough	20	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
60F:							
Weikert	65	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
Rough	25	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
61C:							
Wharton	55	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to saturated zone	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	0.63	Shrink-swell	0.50
		Depth to saturated zone	0.07	Shrink-swell	0.50	Depth to saturated zone	0.07
Blairton	40	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.63	Depth to hard bedrock	1.00	Depth to saturated zone	0.81
		Depth to hard bedrock	0.01	Slope	0.63	Depth to hard bedrock	0.01
61D:							
Wharton	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.07	Shrink-swell	0.50	Depth to saturated zone	0.07
Blairton	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
		Depth to hard bedrock	0.01	Depth to hard bedrock	1.00	Depth to hard bedrock	0.01
62A:							
Wolfgap	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
63A:							
Wolfgap	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	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
64B:							
Zoar	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
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
1A:							
Alonzville------	80	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Flooding	0.40				
		Low strength	0.22				
2B:							
Alonzville------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	0.10	Large stones content	0.32
3C:							
Alticrest-------	50	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Depth to hard bedrock	1.00	Droughty	0.71
		Frost action	0.50	Slope	0.63	Slope	0.63
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	Depth to bedrock	0.46
Dekalb----------	30	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to hard bedrock	1.00	Droughty	1.00
		Frost action	0.50	Slope	0.63	Slope	0.63
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	Depth to bedrock	0.46
4A:							
Atkins----------	75	Very limited		Very limited		Very limited	
		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	Ponding	1.00
		Flooding	1.00	Ponding	1.00	Flooding	0.60
5D:							
Berks-----------	80	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	Droughty	0.75
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.71
5E:							
Berks-----------	80	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	Droughty	0.75
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.71
6B:							
Berks-----------	55	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Droughty	0.75
						Depth to bedrock	0.71
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.61

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
6B:							
Weikert---------	35	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	Cutbanks cave	0.10	Gravel content	0.05
6C:							
Berks-----------	55	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Droughty	0.75
						Depth to bedrock	0.71
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
Weikert---------	30	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	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
7C:							
Berks-----------	50	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Droughty	0.75
						Depth to bedrock	0.71
		Slope	0.50	Slope	0.50	Gravel content	0.61
		Frost action	0.50	Cutbanks cave	0.10		
Weikert---------	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	0.50	Slope	0.50	Slope	0.50
		Frost action	0.50	Cutbanks cave	0.10		
7D:							
Berks-----------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71			Droughty	0.75
				Slope	1.00	Depth to bedrock	0.71
		Frost action	0.50	Cutbanks cave	0.10		
Weikert---------	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10		
8B:							
Blairton--------	50	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Depth to saturated zone	0.48
		Low strength	1.00				
		Depth to saturated zone	0.48	Depth to saturated zone	1.00	Depth to bedrock	0.01
				Cutbanks cave	0.10		
Wharton---------	30	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.03
		Low strength	1.00				
		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
9C:							
Caneyville------	85	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.54
		Depth to hard bedrock	0.54	Too clayey	0.88	Slope	0.50
		Slope	0.50	Slope	0.50		
9D:							
Caneyville------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Low strength	1.00	Slope	1.00	Depth to bedrock	0.54
		Depth to hard bedrock	0.54	Too clayey	0.88		
9E:							
Caneyville------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Low strength	1.00	Slope	1.00	Depth to bedrock	0.54
		Depth to hard bedrock	0.54	Too clayey	0.88		
10B:							
Cottonbend------	85	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
11A:							
Coursey---------	80	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Flooding	0.40	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				
12D:							
Dekalb----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard	1.00	Slope	1.00
		Frost action	0.50	bedrock	1.00	Droughty	1.00
		Depth to hard bedrock	0.46	Slope	1.00	Depth to bedrock	0.46
				Cutbanks cave	0.10		
Alticrest-------	25	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	Droughty	0.71
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	Depth to bedrock	0.46
12E:							
Dekalb----------	60	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	Droughty	1.00
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	Depth to bedrock	0.46
Alticrest-------	25	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	Droughty	0.71
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	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
13D:							
Dekalb	40	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	Droughty	1.00
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	Depth to bedrock	0.46
Lily	30	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	Depth to bedrock	0.29
		Depth to hard bedrock	0.29	Cutbanks cave	0.10	Gravel content	0.01
McClung	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
14E:							
Dekalb	65	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	Droughty	1.00
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	Depth to bedrock	0.46
Lily	20	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	Depth to bedrock	0.29
		Depth to hard bedrock	0.29	Cutbanks cave	0.10	Gravel content	0.01
15D:							
Dekalb	60	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	Droughty	1.00
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	Depth to bedrock	0.46
Rock outcrop	30	Not rated		Not rated		Not rated	
15E:							
Dekalb	60	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	Droughty	1.00
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	Depth to bedrock	0.46
Rock outcrop	30	Not rated		Not rated		Not rated	
16E:							
Dekalb	35	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	Droughty	1.00
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	Depth to bedrock	0.46
Watahala	30	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	1.00
				Too clayey	0.92		

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
16E:							
McClung---------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
17A:							
Derroc----------	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Large stones content	1.00
		Large stones content	0.94	Large stones content	0.94	Flooding	0.60
		Frost action	0.50	Depth to saturated zone	0.82	Droughty	0.58
18B:							
Escatawba-------	80	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Depth to saturated zone	0.99		
				Cutbanks cave	0.10		
18C:							
Escatawba-------	80	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Depth to saturated zone	0.99	Slope	0.63
		Frost action	0.50	Slope	0.63		
				Cutbanks cave	0.10		
18D:							
Escatawba-------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to saturated zone	0.99		
				Cutbanks cave	0.10		
19B:							
Escatawba-------	80	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
				Depth to saturated zone	0.99		
				Too clayey	0.12		
19C:							
Escatawba-------	80	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.50	Cutbanks cave	1.00	Slope	0.50
		Frost action	0.50	Depth to saturated zone	0.99		
				Slope	0.50		
20C:							
Faywood---------	50	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.90
		Depth to hard bedrock	0.90	Slope	0.63	Droughty	0.74
		Slope	0.63	Too clayey	0.50	Slope	0.63
Poplimento------	40	Very limited		Somewhat limited		Somewhat limited	
		Shrink-swell	1.00	Slope	0.63	Slope	0.63
		Low strength	1.00	Too clayey	0.12		
		Slope	0.63	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
20D:							
Faywood---------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Low strength	1.00	Slope	1.00	Depth to bedrock	0.90
		Depth to hard bedrock	0.90	Too clayey	0.50	Droughty	0.74
Poplimento------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Too clayey	0.12		
		Low strength	1.00	Cutbanks cave	0.10		
20E:							
Faywood---------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Low strength	1.00	Slope	1.00	Depth to bedrock	0.90
		Depth to hard bedrock	0.90	Too clayey	0.50	Droughty	0.74
Poplimento------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Too clayey	0.12		
		Low strength	1.00	Cutbanks cave	0.10		
21A:							
Feedstone-------	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.39
		Flooding	0.40	Cutbanks cave	1.00		
		Depth to saturated zone	0.39				
22C:							
Frederick-------	75	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Too clayey	1.00	Slope	0.63
		Slope	0.63	Slope	0.63		
		Shrink-swell	0.50	Cutbanks cave	0.10		
22D:							
Frederick-------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	0.50	Cutbanks cave	0.10		
23C:							
Frederick-------	50	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Too clayey	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Gravel content	0.08
		Shrink-swell	0.50	Cutbanks cave	0.10		
Watahala--------	40	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Cutbanks cave	1.00	Gravel content	1.00
		Frost action	0.50	Too clayey	0.92	Slope	0.63
				Slope	0.63		
23D:							
Frederick-------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00	Gravel content	0.08
		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
23D:							
Watahala--------	40	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	1.00
				Too clayey	0.92		
24B:							
Gilpin----------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Depth to soft bedrock	0.29	Depth to bedrock	0.29
				Cutbanks cave	0.10		
24C:							
Gilpin----------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Depth to soft bedrock	0.29	Depth to bedrock	0.29
				Cutbanks cave	0.10		
24D:							
Gilpin----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to soft bedrock	0.29	Depth to bedrock	0.29
				Cutbanks cave	0.10		
25A:							
Gladehill-------	85	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.80	Flooding	1.00
		Frost action	0.50	Cutbanks cave	0.10		
26A:							
Irongate--------	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.39
		Depth to saturated zone	0.39	Flooding	0.60		
27C:							
Lehew-----------	50	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Droughty	0.97
						Depth to bedrock	0.71
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
Berks-----------	45	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Droughty	0.75
						Depth to bedrock	0.71
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
27D:							
Lehew-----------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71			Droughty	0.91
				Slope	1.00	Depth to bedrock	0.71
		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
27D:							
Berks	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	Droughty	0.75
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.71
27E:							
Lehew	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	Droughty	0.97
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.71
Berks	40	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	Droughty	0.75
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.71
28F:							
Lehew	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	Droughty	0.97
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.71
Berks	40	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	Droughty	0.75
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.71
Rock outcrop	10	Not rated		Not rated		Not rated	
29C:							
Lily	85	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Depth to hard bedrock	1.00	Slope	0.63
		Frost action	0.50	Slope	0.63	Depth to bedrock	0.29
		Depth to hard bedrock	0.29	Cutbanks cave	0.10	Gravel content	0.01
30D:							
Lily	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	Depth to bedrock	0.29
		Depth to hard bedrock	0.29	Cutbanks cave	0.10	Gravel content	0.01
31C:							
Lily	45	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Depth to hard bedrock	1.00	Slope	0.63
		Frost action	0.50	Slope	0.63	Depth to bedrock	0.29
		Depth to hard bedrock	0.29	Cutbanks cave	0.10	Gravel content	0.01
McClung	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		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
31C:							
Dekalb----------	20	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to hard bedrock	1.00	Droughty	1.00
		Frost action	0.50	Slope	0.53	Slope	0.63
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	Depth to bedrock	0.46
32C:							
Macove----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.32
		Large stones content	0.03	Large stones content	0.03	Large stones content	0.03
32D:							
Macove----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.32
		Large stones content	0.03	Large stones content	0.03	Large stones content	0.03
33E:							
Macove----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.51	Large stones content	0.51	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.02
34D:							
Macove----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.32
		Large stones content	0.03	Large stones content	0.03	Large stones content	0.03
Berks-----------	35	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	Droughty	0.75
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.71
34E:							
Macove----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.32
		Large stones content	0.03	Large stones content	0.03	Large stones content	0.03
Berks-----------	35	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	Droughty	0.75
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.71
35C:							
Mandy-----------	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.50	Slope	0.50	Slope	0.50
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.03
				Depth to soft bedrock	0.03		

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
35D:							
Mandy-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.03
				Depth to soft bedrock	0.03		
35E:							
Mandy-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.03
				Depth to soft bedrock	0.03		
36A:							
Maurertown------	70	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		
37B:							
McClung---------	45	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
Lily------------	35	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to hard bedrock	1.00	Depth to bedrock	0.29
		Depth to hard bedrock	0.29	Cutbanks cave	0.10	Gravel content	0.01
38C:							
McClung---------	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.50	Slope	0.50	Slope	0.50
		Frost action	0.50	Cutbanks cave	0.10		
Watahala--------	25	Somewhat limited		Very limited		Very limited	
		Slope	0.50	Cutbanks cave	1.00	Gravel content	1.00
		Frost action	0.50	Too clayey	0.92	Slope	0.50
				Slope	0.50		
Dekalb----------	20	Somewhat limited		Very limited		Very limited	
		Slope	0.50	Depth to hard bedrock	1.00	Droughty	1.00
		Frost action	0.50	Slope	0.50	Slope	0.50
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	Depth to bedrock	0.46
38D:							
McClung---------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Watahala--------	25	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	1.00
				Too clayey	0.92		

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
38D:							
Dekalb----------	20	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	Droughty	1.00
		Depth to hard bedrock	0.46	Cutbanks cave	0.10	Depth to bedrock	0.46
39B:							
Murrill---------	85	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.12		
		Frost action	0.50	Cutbanks cave	0.10		
39C:							
Murrill---------	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Slope	0.63	Too clayey	0.12		
		Frost action	0.50	Cutbanks cave	0.10		
39D:							
Murrill---------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	0.12		
		Frost action	0.50	Cutbanks cave	0.10		
40C:							
Murrill---------	95	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Slope	0.63	Large stones content	1.00
		Slope	0.63	Too clayey	0.12	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
40D:							
Murrill---------	95	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	1.00
		Frost action	0.50	Cutbanks cave	0.10		
40E:							
Murrill---------	95	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	1.00
		Frost action	0.50	Cutbanks cave	0.10		
41B:							
Nicelytown------	80	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	0.78	Cutbanks cave	0.10		
		Depth to saturated zone	0.75				
42A:							
Ogles-----------	80	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Depth to saturated zone	0.82	Large stones content	1.00
		Large stones content	0.72	Large stones content	0.72	Droughty	0.99
		Frost action	0.50	Flooding	0.60	Flooding	0.60

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
43B:							
Oriskany--------	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.78	Large stones content	0.78	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10		
44C:							
Oriskany--------	75	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.78	Large stones content	0.78	Large stones content	1.00
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
44D:							
Oriskany--------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.78	Large stones content	0.78	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10		
44E:							
Oriskany--------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.78	Large stones content	0.78	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10		
45E:							
Oriskany--------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.96	Large stones content	0.96	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10		
46C:							
Oriskany--------	55	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.78	Large stones content	0.78	Large stones content	1.00
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
Murrill---------	35	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Slope	0.63	Large stones content	1.00
		Slope	0.63	Too clayey	0.12		
		Frost action	0.50	Cutbanks cave	0.10	Slope	0.63
46D:							
Oriskany--------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.78	Large stones content	0.78	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Murrill---------	35	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	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
47E:							
Oriskany--------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.78	Large stones content	0.78	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Murrill---------	25	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	1.00
		Frost action	0.50	Cutbanks cave	0.10		
48C:							
Paddyknob-------	60	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.79	Depth to hard bedrock	1.00	Droughty	0.99
						Depth to bedrock	0.80
		Slope	0.50	Slope	0.50	Gravel content	0.76
		Frost action	0.50	Cutbanks cave	0.10		
Madsheep--------	35	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.50	Depth to hard bedrock	1.00	Slope	0.50
		Frost action	0.50			Depth to bedrock	0.46
		Depth to hard bedrock	0.46	Slope	0.50	Droughty	0.18
				Cutbanks cave	0.10		
48D:							
Paddyknob-------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.79			Droughty	0.99
				Slope	1.00	Depth to bedrock	0.80
		Frost action	0.50	Cutbanks cave	0.10		
Madsheep--------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard	1.00	Slope	1.00
		Frost action	0.50	bedrock	1.00	Depth to bedrock	0.46
		Depth to hard bedrock	0.46	Slope	1.00	Droughty	0.18
				Cutbanks cave	0.10		
48E:							
Paddyknob-------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.79			Droughty	0.99
				Slope	1.00	Depth to bedrock	0.80
		Frost action	0.50	Cutbanks cave	0.10		
Madsheep--------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50			Depth to bedrock	0.46
		Depth to hard bedrock	0.46	Slope	1.00	Droughty	0.18
				Cutbanks cave	0.10		
49A:							
Purdy-----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Too clayey	1.00	Ponding	1.00
		Low strength	1.00	Ponding	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
50C:							
Shelocta	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
Berks	20	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Droughty	0.75
						Depth to bedrock	0.71
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
50D:							
Shelocta	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Berks	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71			Droughty	0.75
				Slope	1.00	Depth to bedrock	0.71
		Frost action	0.50	Cutbanks cave	0.10		
50E:							
Shelocta	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Berks	25	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71			Droughty	0.75
				Slope	1.00	Depth to bedrock	0.71
		Frost action	0.50	Cutbanks cave	0.10		
51B:							
Sugarhol	85	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.12		
		Frost action	0.50	Cutbanks cave	0.10		
		Shrink-swell	0.01				
51C:							
Sugarhol	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Slope	0.63	Too clayey	0.12		
		Frost action	0.50	Cutbanks cave	0.10		
52:							
Udorthents, dams	95	Not rated		Not rated		Not rated	
53:							
Udorthents, smoothed	85	Not rated		Not rated		Not rated	
54:							
Udorthents	65	Not rated		Not rated		Not rated	
Rock outcrop	25	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
55E:							
Watahala--------	45	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	1.00
				Too clayey	0.92		
Frederick-------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00	Gravel content	0.08
		Shrink-swell	0.50	Cutbanks cave	0.10		
56E:							
Weikert---------	50	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Berks-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71			Droughty	0.75
				Slope	1.00	Depth to bedrock	0.71
		Frost action	0.50	Cutbanks cave	0.10		
57D:							
Weikert---------	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Berks-----------	34	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71			Droughty	0.75
				Slope	1.00	Depth to bedrock	0.71
		Frost action	0.50	Cutbanks cave	0.10		
Rough-----------	10	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10		
57E:							
Weikert---------	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Berks-----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71			Droughty	0.75
				Slope	1.00	Depth to bedrock	0.71
		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
57E:							
Rough-----------	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
58F:							
Weikert---------	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
Berks-----------	30	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	Droughty	0.75
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.71
Rough-----------	15	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
59F:							
Weikert---------	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
Rock outcrop----	25	Not rated		Not rated		Not rated	
Rough-----------	20	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
60F:							
Weikert---------	65	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
Rough-----------	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
61C:							
Wharton---------	55	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Slope	0.63
		Low strength	1.00	Slope	0.63	Depth to saturated zone	0.03
		Slope	0.63	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
61C:							
Blairton--------	40	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Slope	0.63
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
		Slope	0.63	Slope	0.63	Depth to bedrock	0.01
61D:							
Wharton---------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.03
		Low strength	1.00	Cutbanks cave	0.10		
Blairton--------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	1.00	Slope	1.00	Depth to saturated zone	0.48
		Low strength	1.00	Depth to saturated zone	1.00	Depth to bedrock	0.01
62A:							
Wolfgap---------	95	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
63A:							
Wolfgap---------	95	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Flooding	0.40				
64B:							
Zoar------------	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.75				
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		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1A:					
Alonzville----------	80	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
		Flooding	0.40	Flooding	0.40
2B:					
Alonzville----------	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.68
				Seepage	0.50
3C:					
Alticrest-----------	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
Dekalb--------------	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
4A:					
Atkins--------------	75	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Seepage	1.00
5D:					
Berks---------------	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
5E:					
Berks---------------	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
6B:					
Berks---------------	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Seepage	1.00
				Slope	0.68

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
6B:					
Weikert	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Seepage	1.00
				Slope	0.68
6C:					
Berks	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
Weikert	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
7C:					
Berks	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Slope	0.50	Seepage	1.00
Weikert	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Slope	0.50	Seepage	1.00
7D:					
Berks	70	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Weikert	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
8B:					
Blairton	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.94
		Slow water movement	1.00	Slope	0.68
Wharton	30	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Slope	0.68
		Slow water movement	1.00	Depth to saturated zone	0.44

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
9C:					
Caneyville	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	0.50		
9D:					
Caneyville	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00		
9E:					
Caneyville	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00		
10B:					
Cottonbend	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.68
				Seepage	0.50
11A:					
Coursey	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Seepage	0.50
		Flooding	0.40	Flooding	0.40
12D:					
Dekalb	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Alticrest	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
12E:					
Dekalb	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Alticrest	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	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		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
13D:					
Dekalb	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Lily	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
McClung	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.98
14E:					
Dekalb	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Lily	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
15D:					
Dekalb	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Rock outcrop	30	Not rated		Not rated	
15E:					
Dekalb	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Rock outcrop	30	Not rated		Not rated	
16E:					
Dekalb	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Watahala	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.68	Seepage	1.00

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
16E:					
McClung-------------	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.98
17A:					
Derroc--------------	80	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Large stones content	1.00
18B:					
Escatawba-----------	80	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Slope	0.68
		Slow water movement	1.00	Seepage	0.50
				Depth to saturated zone	0.19
18C:					
Escatawba-----------	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Seepage	0.50
		Slope	0.63	Depth to saturated zone	0.19
18D:					
Escatawba-----------	75	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Seepage	0.50
		Slow water movement	1.00	Depth to saturated zone	0.19
19B:					
Escatawba-----------	80	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Slope	0.68
		Slow water movement	1.00	Seepage	0.50
				Depth to saturated zone	0.19
19C:					
Escatawba-----------	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Seepage	0.50
		Slope	0.50	Depth to saturated zone	0.19
20C:					
Faywood-------------	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slow water movement	1.00	Slope	1.00
		Slope	0.63		

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
20C:					
Poplimento----------	40	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.63		
20D:					
Faywood------------	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Slow water movement	1.00		
Poplimento----------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00		
20E:					
Faywood------------	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Slow water movement	1.00		
Poplimento----------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00		
21A:					
Feedstone-----------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Seepage	1.00
		Flooding	0.40	Flooding	0.40
22C:					
Frederick-----------	75	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
22D:					
Frederick-----------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
23C:					
Frederick-----------	50	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Watahala------------	40	Somewhat limited		Very limited	
		Slow water movement	0.68	Slope	1.00
				Seepage	1.00
		Slope	0.63		

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
23D:					
Frederick-----------	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Watahala------------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.68	Seepage	1.00
24B:					
Gilpin--------------	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.50	Slope	0.68
				Seepage	0.50
24C:					
Gilpin--------------	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.63	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
24D:					
Gilpin--------------	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
25A:					
Gladehill-----------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage	1.00	Seepage	1.00
26A:					
Irongate------------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Seepage	1.00
27C:					
Lehew---------------	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Filtering capacity	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Berks---------------	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Slope	0.63	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
27D:					
Lehew	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
Berks	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
27E:					
Lehew	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
Berks	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
28F:					
Lehew	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
Berks	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Rock outcrop	10	Not rated		Not rated	
29C:					
Lily	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
30D:					
Lily	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	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
31C:					
Lily	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
McClung	30	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Slow water movement	0.50	Seepage	0.98
Dekalb	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
32C:					
Macove	85	Very limited		Very limited	
		Seepage	1.00	Seepage	1.00
		Slope	0.63	Slope	1.00
		Large stones content	0.03	Large stones content	0.18
32D:					
Macove	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
		Large stones content	0.03	Large stones content	0.18
33E:					
Macove	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
		Large stones content	0.51	Large stones content	1.00
34D:					
Macove	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
		Large stones content	0.03	Large stones content	0.18
Berks	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
34E:					
Macove	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
		Large stones content	0.03	Large stones content	0.18

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
34E:					
Berks	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
35C:					
Mandy	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.50	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
35D:					
Mandy	75	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
35E:					
Mandy	75	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
36A:					
Maurertown	70	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	Flooding	0.40
37B:					
McClung	45	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.98
				Slope	0.68
Lily	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Seepage	1.00
				Slope	0.68
38C:					
McClung	45	Somewhat limited		Very limited	
		Slope	0.50	Slope	1.00
		Slow water movement	0.50	Seepage	0.98
Watahala	25	Somewhat limited		Very limited	
		Slow water movement	0.68	Slope	1.00
		Slope	0.50	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
38C:					
Dekalb	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
38D:					
McClung	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.98
Watahala	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.68	Seepage	1.00
Dekalb	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
39B:					
Murrill	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.72	Slope	0.68
				Seepage	0.50
39C:					
Murrill	85	Somewhat limited		Very limited	
		Slow water movement	0.72	Slope	1.00
		Slope	0.63	Seepage	0.50
39D:					
Murrill	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.72	Seepage	0.50
40C:					
Murrill	95	Somewhat limited		Very limited	
		Slow water movement	0.72	Slope	1.00
		Slope	0.63	Seepage	0.50
40D:					
Murrill	95	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.72	Seepage	0.50
40E:					
Murrill	95	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.72	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
41B:					
Nicelytown----------	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	0.68
42A:					
Ogles---------------	80	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Large stones content	1.00
43B:					
Oriskany------------	85	Very limited		Very limited	
		Seepage	1.00	Seepage	1.00
		Large stones content	0.78	Large stones content	1.00
				Slope	0.68
44C:					
Oriskany------------	75	Very limited		Very limited	
		Seepage	1.00	Slope	1.00
		Large stones content	0.78	Seepage	1.00
		Slope	0.63	Large stones content	1.00
44D:					
Oriskany------------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
		Large stones content	0.78	Large stones content	1.00
44E:					
Oriskany------------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
		Large stones content	0.78	Large stones content	1.00
45E:					
Oriskany------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
		Large stones content	0.96	Large stones content	1.00
46C:					
Oriskany------------	55	Very limited		Very limited	
		Seepage	1.00	Slope	1.00
		Large stones content	0.78	Seepage	1.00
		Slope	0.63	Large stones content	1.00
Murrill-------------	35	Somewhat limited		Very limited	
		Slow water movement	0.72	Slope	1.00
		Slope	0.63	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
46D:					
Oriskany------------	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
		Large stones content	0.78	Large stones content	1.00
Murrill-------------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.72	Seepage	0.50
47E:					
Oriskany------------	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
		Large stones content	0.78	Large stones content	1.00
Murrill-------------	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.72	Seepage	0.50
48C:					
Paddyknob-----------	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
Madsheep------------	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Slope	0.50	Seepage	1.00
48D:					
Paddyknob-----------	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Madsheep------------	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
48E:					
Paddyknob-----------	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	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
48E:					
Madsheep	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
49A:					
Purdy	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00		
50C:					
Shelocta	60	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Berks	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
50D:					
Shelocta	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Berks	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
50E:					
Shelocta	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Berks	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
51B:					
Sugarhol	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.68
				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
51C:					
Sugarhol	85	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
52:					
Udorthents, dams	95	Not rated		Not rated	
53:					
Udorthents, smoothed	85	Not rated		Not rated	
54:					
Udorthents	65	Not rated		Not rated	
Rock outcrop	25	Not rated		Not rated	
55E:					
Watahala	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.68	Seepage	1.00
Frederick	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
56E:					
Weikert	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Berks	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
57D:					
Weikert	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Berks	34	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Rough	10	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard 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
57E:					
Weikert	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Berks	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Rough	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00		
58F:					
Weikert	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Berks	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Rough	15	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00		
59F:					
Weikert	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00
Rock outcrop	25	Not rated		Not rated	
Rough	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00		
60F:					
Weikert	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	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
60F:					
Rough	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage	1.00		
61C:					
Wharton	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Depth to saturated zone	0.44
		Slope	0.63		
Blairton	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Depth to saturated zone	0.94
61D:					
Wharton	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	0.44
		Slow water movement	1.00		
Blairton	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	0.94
62A:					
Wolfgap	95	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	0.50	Seepage	0.50
63A:					
Wolfgap	95	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
		Flooding	0.40	Flooding	0.40
64B:					
Zoar	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	0.68
				Seepage	0.50
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		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
1A:							
Alonzville-----	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Flooding	0.40	Too clayey	0.50
		Flooding	0.40				
2B:							
Alonzville-----	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
3C:							
Alticrest------	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Seepage	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Seepage	0.50
Dekalb---------	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
		Slope	0.63	Slope	0.63	Gravel content	0.93
4A:							
Atkins---------	75	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	Ponding	1.00
		Seepage	1.00	Seepage	1.00		
5D:							
Berks----------	80	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	1.00	Seepage	1.00	Gravel content	1.00
5E:							
Berks----------	80	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	1.00	Seepage	1.00	Gravel content	1.00
6B:							
Berks----------	55	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
						Seepage	0.21
Weikert--------	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00			Gravel content	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
6C:							
Berks	55	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
		Slope	0.63	Slope	0.63	Slope	0.63
Weikert	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Slope	0.63	Gravel content	1.00
		Slope	0.63			Slope	0.63
7C:							
Berks	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
		Slope	0.50	Slope	0.50	Slope	0.50
Weikert	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Slope	0.50	Gravel content	1.00
		Slope	0.50			Slope	0.50
7D:							
Berks	70	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	1.00	Seepage	1.00	Gravel content	1.00
Weikert	25	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	1.00			Gravel content	1.00
8B:							
Blairton	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to saturated zone	0.94	Depth to saturated zone	0.96
		Too clayey	0.50			Too clayey	0.50
Wharton	30	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to saturated zone	0.44	Depth to saturated zone	0.68
		Depth to saturated zone	0.95			Too clayey	0.50
		Too clayey	0.50				
9C:							
Caneyville	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	1.00	Slope	0.50	Too clayey	1.00
		Slope	0.50			Hard to compact	1.00
9D:							
Caneyville	85	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
		Too clayey	1.00			Too clayey	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
9E:							
Caneyville-----	85	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
		Too clayey	1.00			Too clayey	1.00
10B:							
Cottonbend-----	85	Not limited		Not limited		Not limited	
11A:							
Coursey--------	80	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Flooding	0.40	Flooding	0.40		
12D:							
Dekalb---------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
Alticrest------	25	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	1.00	Seepage	1.00	Seepage	0.50
12E:							
Dekalb---------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
Alticrest------	25	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	1.00	Seepage	1.00	Seepage	0.50
13D:							
Dekalb---------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
Lily-----------	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	1.00	Seepage	1.00	Seepage	0.50
McClung--------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
14E:							
Dekalb---------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00

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
14E:							
Lily-----------	20	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	1.00	Seepage	1.00	Seepage	0.50
15D:							
Dekalb---------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
Rock outcrop---	30	Not rated		Not rated		Not rated	
15E:							
Dekalb---------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
Rock outcrop---	30	Not rated		Not rated		Not rated	
16E:							
Dekalb---------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
Watahala-------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00	Seepage	1.00	Too clayey	1.00
						Hard to compact	1.00
McClung--------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
17A:							
Derroc---------	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Large stones content	0.96
		Seepage	1.00	Seepage	1.00	Gravel content	0.03
18B:							
Escatawba------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.19	Too clayey	0.50
		Too clayey	0.50			Depth to saturated zone	0.47
18C:							
Escatawba------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Slope	0.63	Slope	0.63
		Slope	0.63	Depth to saturated zone	0.19	Too clayey	0.50
		Too clayey	0.50			Depth to saturated zone	0.47

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
18D:							
Escatawba------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.86	Depth to saturated zone	0.19	Too clayey	0.50
		Too clayey	0.50			Depth to saturated zone	0.47
19B:							
Escatawba------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.19	Depth to saturated zone	0.47
						Gravel content	0.01
19C:							
Escatawba------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Slope	0.50	Slope	0.50
		Slope	0.50	Depth to saturated zone	0.19	Depth to saturated zone	0.47
						Gravel content	0.01
20C:							
Faywood--------	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	1.00	Slope	0.63	Too clayey	1.00
		Slope	0.63			Hard to compact	1.00
Poplimento-----	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Too clayey	0.50			Too clayey	0.50
20D:							
Faywood--------	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
		Too clayey	1.00			Too clayey	1.00
Poplimento-----	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
20E:							
Faywood--------	45	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
		Too clayey	1.00			Too clayey	1.00
Poplimento-----	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
21A:							
Feedstone------	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
		Seepage	1.00	Seepage	1.00		
		Flooding	0.40	Flooding	0.40		

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
22C:							
Frederick------	75	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.63	Too clayey	1.00
		Slope	0.63			Hard to compact	1.00
						Slope	0.63
22D:							
Frederick------	75	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
23C:							
Frederick------	50	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.63	Too clayey	1.00
		Slope	0.63			Hard to compact	1.00
						Slope	0.63
Watahala-------	40	Very limited		Very limited		Very limited	
		Too clayey	1.00	Seepage	1.00	Too clayey	1.00
		Slope	0.63	Slope	0.63	Hard to compact	1.00
						Slope	0.63
23D:							
Frederick------	50	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
Watahala-------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00	Seepage	1.00	Too clayey	1.00
						Hard to compact	1.00
24B:							
Gilpin---------	80	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
						Gravel content	0.28
24C:							
Gilpin---------	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.63	Slope	0.63	Slope	0.63
		Too clayey	0.50			Too clayey	0.50
24D:							
Gilpin---------	85	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
		Too clayey	0.50			Too clayey	0.50
25A:							
Gladehill------	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Seepage	0.50
		Seepage	1.00	Seepage	1.00		

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
26A:							
Irongate	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.94
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Seepage	1.00				
27C:							
Lehew	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
		Slope	0.63	Slope	0.63	Seepage	1.00
Berks	45	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
		Slope	0.63	Slope	0.63	Slope	0.63
27D:							
Lehew	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	1.00	Seepage	1.00	Gravel content	1.00
Berks	45	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	1.00	Seepage	1.00	Gravel content	1.00
27E:							
Lehew	45	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	1.00	Seepage	1.00	Gravel content	1.00
Berks	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
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
28F:							
Lehew	45	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	1.00	Seepage	1.00	Gravel content	1.00
Berks	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
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
Rock outcrop	10	Not rated		Not rated		Not rated	
29C:							
Lily	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Seepage	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Seepage	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
30D:							
Lily-----------	80	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	1.00	Seepage	1.00	Seepage	0.50
31C:							
Lily-----------	45	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Seepage	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Seepage	0.50
McClung--------	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
Dekalb---------	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
		Slope	0.63	Slope	0.63	Gravel content	0.93
32C:							
Macove---------	85	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Seepage	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Gravel content	0.55
		Too clayey	0.50			Seepage	0.50
32D:							
Macove---------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	0.55
		Too clayey	0.50			Seepage	0.50
33E:							
Macove---------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
		Too clayey	0.50			Too clayey	0.50
34D:							
Macove---------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	0.55
		Too clayey	0.50			Seepage	0.50
Berks----------	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
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
34E:							
Macove---------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	0.55
		Too clayey	0.50			Seepage	0.50
Berks----------	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
		Seepage	1.00	Seepage	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: 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
35C:							
Mandy----------	75	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.50	Slope	0.50	Gravel content	0.88
						Slope	0.50
35D:							
Mandy----------	75	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	0.88
35E:							
Mandy----------	75	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	0.88
36A:							
Maurertown-----	70	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00	Flooding	0.40	Too clayey	1.00
37B:							
McClung--------	45	Not limited		Not limited		Not limited	
Lily-----------	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
		Too clayey	0.50			Too clayey	0.50
38C:							
McClung--------	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.50	Slope	0.50	Slope	0.50
Watahala-------	25	Very limited		Very limited		Very limited	
		Too clayey	1.00	Seepage	1.00	Too clayey	1.00
		Slope	0.50	Slope	0.50	Hard to compact	1.00
						Slope	0.50
Dekalb---------	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
		Slope	0.50	Slope	0.50	Gravel content	0.93
38D:							
McClung--------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Watahala-------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00	Seepage	1.00	Too clayey	1.00
						Hard to compact	1.00
Dekalb---------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	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
39B:							
Murrill--------	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
39C:							
Murrill--------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Too clayey	0.50			Too clayey	0.50
39D:							
Murrill--------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
40C:							
Murrill--------	95	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Too clayey	0.50			Too clayey	0.50
40D:							
Murrill--------	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
40E:							
Murrill--------	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
41B:							
Nicelytown-----	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Too clayey	0.50			Too clayey	0.50
42A:							
Ogles----------	80	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Gravel content	0.71
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Large stones content	0.57
		Seepage	1.00	Seepage	1.00	Seepage	0.50
43B:							
Oriskany-------	85	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Seepage	1.00	Large stones content	0.86
		Large stones content	0.86			Seepage	0.50
44C:							
Oriskany-------	75	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Seepage	1.00	Large stones content	0.86
		Large stones content	0.86	Slope	0.63	Slope	0.63
		Slope	0.63			Seepage	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
44D:							
Oriskany-------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Large stones content	0.86
		Large stones content	0.86			Seepage	0.50
44E:							
Oriskany-------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Large stones content	0.86
		Large stones content	0.86			Seepage	0.50
45E:							
Oriskany-------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Large stones content	0.96
		Large stones content	0.96			Seepage	0.50
46C:							
Oriskany-------	55	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Seepage	1.00	Large stones content	0.86
		Large stones content	0.86	Slope	0.63	Slope	0.63
		Slope	0.63			Seepage	0.50
Murrill--------	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Too clayey	0.50			Too clayey	0.50
46D:							
Oriskany-------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Large stones content	0.86
		Large stones content	0.86			Seepage	0.50
Murrill--------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
47E:							
Oriskany-------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Large stones content	0.86
		Large stones content	0.86			Seepage	0.50
Murrill--------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
48C:							
Paddyknob------	60	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
		Slope	0.50	Slope	0.50	Gravel content	0.94

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
48C:							
Madsheep-------	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Seepage	1.00	Slope	0.50
		Slope	0.50	Slope	0.50	Seepage	0.50
48D:							
Paddyknob------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
Madsheep-------	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
		Seepage	1.00	Seepage	1.00	Seepage	0.50
48E:							
Paddyknob------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
Madsheep-------	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
		Seepage	1.00	Seepage	1.00	Seepage	0.50
49A:							
Purdy----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00	Ponding	1.00	Too clayey	1.00
		Ponding	1.00			Hard to compact	1.00
50C:							
Shelocta-------	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
						Gravel content	0.14
Berks----------	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
		Slope	0.63	Slope	0.63	Slope	0.63
50D:							
Shelocta-------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.14
Berks----------	20	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	1.00	Seepage	1.00	Gravel content	1.00
50E:							
Shelocta-------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.14

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
50E:							
Berks----------	25	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	1.00	Seepage	1.00	Gravel content	1.00
51B:							
Sugarhol-------	85	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
51C:							
Sugarhol-------	85	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.63	Too clayey	1.00
		Slope	0.63			Slope	0.63
52:							
Udorthents, dams----------	95	Not rated		Not rated		Not rated	
53:							
Udorthents, smoothed------	85	Not rated		Not rated		Not rated	
54:							
Udorthents-----	65	Not rated		Not rated		Not rated	
Rock outcrop---	25	Not rated		Not rated		Not rated	
55E:							
Watahala-------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00	Seepage	1.00	Too clayey	1.00
						Hard to compact	1.00
Frederick------	35	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
56E:							
Weikert--------	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	1.00			Gravel content	1.00
Berks----------	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
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
57D:							
Weikert--------	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
		Seepage	1.00			Gravel content	1.00
Berks----------	34	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	1.00	Seepage	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: 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
57D:							
Rough----------	10	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	1.00			Gravel content	1.00
57E:							
Weikert--------	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
		Seepage	1.00			Gravel content	1.00
Berks----------	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	1.00	Seepage	1.00	Gravel content	1.00
Rough----------	15	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	1.00			Gravel content	1.00
58F:							
Weikert--------	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
		Seepage	1.00			Gravel content	1.00
Berks----------	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	1.00	Seepage	1.00	Gravel content	1.00
Rough----------	15	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	1.00			Gravel content	1.00
59F:							
Weikert--------	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
		Seepage	1.00			Gravel content	1.00
Rock outcrop---	25	Not rated		Not rated		Not rated	
Rough----------	20	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	1.00			Gravel content	1.00
60F:							
Weikert--------	65	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	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
60F:							
Rough----------	25	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	1.00			Gravel content	1.00
61C:							
Wharton--------	55	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Slope	0.63	Depth to saturated zone	0.68
		Depth to saturated zone	0.95	Depth to saturated zone	0.44	Slope	0.63
		Slope	0.63			Too clayey	0.50
Blairton-------	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to saturated zone	0.94	Depth to saturated zone	0.96
		Slope	0.63	Slope	0.63	Slope	0.63
61D:							
Wharton--------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to saturated zone	0.44	Depth to saturated zone	0.68
		Depth to saturated zone	0.95			Too clayey	0.50
Blairton-------	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Depth to bedrock	1.00
		Slope	1.00	Depth to bedrock	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to saturated zone	0.94	Depth to saturated zone	0.96
62A:							
Wolfgap--------	95	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
63A:							
Wolfgap--------	95	Somewhat limited		Somewhat limited		Not limited	
		Flooding	0.40	Flooding	0.40		
64B:							
Zoar-----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Too clayey	0.50			Too clayey	0.50
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
1A:					
Alonzville----------	80	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
2B:					
Alonzville----------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
3C:					
Alticrest-----------	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.04
		Thickest layer	0.00	Thickest layer	0.04
Dekalb--------------	30	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
4A:					
Atkins--------------	75	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
5D:					
Berks---------------	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
5E:					
Berks---------------	80	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
6B:					
Berks---------------	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Weikert-------------	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
6C:					
Berks---------------	55	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Weikert-------------	30	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		Potential source of sand	
		Rating class	Value	Rating class	Value
7C:					
Berks	50	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Weikert	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7D:					
Berks	70	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Weikert	25	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
8B:					
Blairton	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Wharton	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
9C:					
Caneyville	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
9D:					
Caneyville	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
9E:					
Caneyville	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
10B:					
Cottonbend	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
11A:					
Coursey	80	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
12D:					
Dekalb	60	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
Alticrest	25	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.04
		Bottom layer	0.00	Thickest layer	0.04

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
12E:					
Dekalb	60	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
Alticrest	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.04
		Thickest layer	0.00	Thickest layer	0.04
13D:					
Dekalb	40	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
Lily	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
McClung	15	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.04
14E:					
Dekalb	65	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
Lily	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
15D:					
Dekalb	60	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
Rock outcrop	30	Not rated		Not rated	
15E:					
Dekalb	60	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
Rock outcrop	30	Not rated		Not rated	
16E:					
Dekalb	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
Watahala	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
McClung	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04

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
17A:					
Derroc	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
18B:					
Escatawba	80	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
18C:					
Escatawba	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
18D:					
Escatawba	75	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
19B:					
Escatawba	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
19C:					
Escatawba	80	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
20C:					
Faywood	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Poplimento	40	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
20D:					
Faywood	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Poplimento	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
20E:					
Faywood	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Poplimento	35	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		Potential source of sand	
		Rating class	Value	Rating class	Value
21A:					
Feedstone-----------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
22C:					
Frederick-----------	75	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
22D:					
Frederick-----------	75	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
23C:					
Frederick-----------	50	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Watahala------------	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
23D:					
Frederick-----------	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Watahala------------	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
24B:					
Gilpin--------------	80	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
24C:					
Gilpin--------------	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
24D:					
Gilpin--------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
25A:					
Gladehill-----------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
26A:					
Irongate------------	85	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
27C:					
Lehew	50	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Berks	45	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
27D:					
Lehew	50	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Berks	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
27E:					
Lehew	45	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Berks	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
28F:					
Lehew	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Berks	40	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Rock outcrop	10	Not rated		Not rated	
29C:					
Lily	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
30D:					
Lily	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
31C:					
Lily	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
McClung	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04
Dekalb	20	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		Potential source of sand	
		Rating class	Value	Rating class	Value
32C:					
Macove	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
32D:					
Macove	75	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
33E:					
Macove	75	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
34D:					
Macove	55	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Berks	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
34E:					
Macove	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Berks	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
35C:					
Mandy	75	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.15	Thickest layer	0.00
35D:					
Mandy	75	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.15	Thickest layer	0.00
35E:					
Mandy	75	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.15	Thickest layer	0.00
36A:					
Maurertown	70	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
37B:					
McClung	45	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.04

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
37B:					
Lily	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
38C:					
McClung	45	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04
Watahala	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Dekalb	20	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
38D:					
McClung	45	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.04
Watahala	25	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Dekalb	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
39B:					
Murrill	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
39C:					
Murrill	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
39D:					
Murrill	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
40C:					
Murrill	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
40D:					
Murrill	95	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
40E:					
Murrill	95	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		Potential source of sand	
		Rating class	Value	Rating class	Value
41B:					
Nicelytown----------	80	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
42A:					
Ogles---------------	80	Fair		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.03	Thickest layer	0.03
43B:					
Oriskany------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
44C:					
Oriskany------------	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
44D:					
Oriskany------------	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
44E:					
Oriskany------------	80	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
45E:					
Oriskany------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
46C:					
Oriskany------------	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Murrill-------------	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
46D:					
Oriskany------------	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Murrill-------------	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
47E:					
Oriskany------------	65	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
47E:					
Murrill	25	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
48C:					
Paddyknob	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.04
		Thickest layer	0.00	Thickest layer	0.04
Madsheep	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
48D:					
Paddyknob	55	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.04
		Bottom layer	0.00	Thickest layer	0.04
Madsheep	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
48E:					
Paddyknob	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.04
		Thickest layer	0.00	Thickest layer	0.04
Madsheep	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
49A:					
Purdy	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
50C:					
Shelocta	60	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Berks	20	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
50D:					
Shelocta	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Berks	20	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
50E:					
Shelocta	70	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		Potential source of sand	
		Rating class	Value	Rating class	Value
50E:					
Berks---------------	25	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
51B:					
Sugarhol------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
51C:					
Sugarhol------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
52:					
Udorthents, dams----	95	Not rated		Not rated	
53:					
Udorthents, smoothed	85	Not rated		Not rated	
54:					
Udorthents----------	65	Not rated		Not rated	
Rock outcrop--------	25	Not rated		Not rated	
55E:					
Watahala------------	45	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Frederick-----------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
56E:					
Weikert-------------	50	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Berks---------------	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
57D:					
Weikert-------------	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Berks---------------	34	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Rough---------------	10	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.38	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
57E:					
Weikert	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Berks	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rough	15	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.38	Thickest layer	0.00
58F:					
Weikert	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Berks	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rough	15	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.38	Thickest layer	0.00
59F:					
Weikert	40	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Rock outcrop	25	Not rated		Not rated	
Rough	20	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.38	Thickest layer	0.00
60F:					
Weikert	65	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Rough	25	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.38	Thickest layer	0.00
61C:					
Wharton	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Blairton	40	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
61D:					
Wharton	55	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		Potential source of sand	
		Rating class	Value	Rating class	Value
61D:					
Blairton------------	40	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
62A:					
Wolfgap-------------	95	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
63A:					
Wolfgap-------------	95	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
64B:					
Zoar----------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
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
1A:							
Alonzville------	80	Fair		Fair		Fair	
		Too acid	0.46	Low strength	0.78	Rock fragments	0.68
		Organic matter content low	0.88			Too acid	0.95
2B:							
Alonzville------	85	Fair		Good		Fair	
		Too acid	0.46			Rock fragments	0.12
		Organic matter content low	0.88			Hard to reclaim (rock fragments)	0.50
						Too acid	0.95
3C:							
Alticrest-------	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Slope	0.37
						Depth to bedrock	0.54
		Too acid	0.50				
Dekalb----------	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Slope	0.37
						Too acid	0.50
		Too acid	0.50				
4A:							
Atkins----------	75	Fair		Poor		Poor	
		Too acid	0.32	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.88			Hard to reclaim (rock fragments)	0.00
		Water erosion	0.90			Too acid	0.88
5D:							
Berks-----------	80	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.29
		Depth to bedrock	0.29				
5E:							
Berks-----------	80	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.29
		Depth to bedrock	0.29				
6B:							
Berks-----------	55	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.29
						Too acid	0.95
		Depth to bedrock	0.29				

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
6B:							
Weikert---------	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00			Depth to bedrock	0.00
		Organic matter content low	0.12			Too acid	0.95
6C:							
Berks-----------	55	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.29
						Slope	0.37
		Depth to bedrock	0.29				
Weikert---------	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00			Depth to bedrock	0.00
		Organic matter content low	0.12			Slope	0.37
7C:							
Berks-----------	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.29
						Slope	0.50
		Depth to bedrock	0.29				
Weikert---------	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00			Depth to bedrock	0.00
		Organic matter content low	0.12			Slope	0.50
7D:							
Berks-----------	70	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.29
		Depth to bedrock	0.29				
Weikert---------	25	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
8B:							
Blairton--------	50	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.00	Wetness depth	0.29
				Low strength	0.00	Too acid	0.76
		Too acid	0.50	Wetness depth	0.29	Depth to bedrock	0.99
		Water erosion	0.90				
Wharton---------	30	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Wetness depth	0.76
				Wetness depth	0.76	Too acid	0.76
		Too acid	0.20	Shrink-swell	0.87		
		Water erosion	0.68				

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
9C:							
Caneyville------	85	Poor		Poor		Poor	
		Too clayey	0.00	Depth to bedrock	0.00	Too clayey	0.00
		Organic matter content low	0.02	Low strength	0.00	Depth to bedrock	0.46
				Shrink-swell	0.87	Slope	0.50
		Depth to bedrock	0.46				
9D:							
Caneyville------	85	Poor		Poor		Poor	
		Too clayey	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.02	Low strength	0.00	Too clayey	0.00
				Slope	0.00	Depth to bedrock	0.46
		Depth to bedrock	0.46				
9E:							
Caneyville------	85	Poor		Poor		Poor	
		Too clayey	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.02	Slope	0.00	Too clayey	0.00
				Low strength	0.00	Depth to bedrock	0.46
		Depth to bedrock	0.46				
10B:							
Cottonbend------	85	Fair		Good		Fair	
		Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.32
		Too acid	0.46			Too acid	0.95
11A:							
Coursey---------	80	Fair		Fair		Fair	
		Too acid	0.50	Wetness depth	0.53	Wetness depth	0.53
		Organic matter content low	0.88			Too acid	0.95
12D:							
Dekalb----------	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Too acid	0.50
		Too acid	0.50				
Alticrest-------	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.54
		Too acid	0.50				
12E:							
Dekalb----------	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Too acid	0.50
		Too acid	0.50				
Alticrest-------	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.54
		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
13D:							
Dekalb	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Too acid	0.50
Lily	30	Fair		Poor		Poor	
		Organic matter content low	0.18	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.26	Slope	0.00	Rock fragments	0.24
		Too acid	0.50			Too acid	0.59
McClung	15	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50			Too acid	0.76
14E:							
Dekalb	65	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Too acid	0.50
Lily	20	Fair		Poor		Poor	
		Organic matter content low	0.18	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.26	Slope	0.00	Rock fragments	0.24
		Too acid	0.50			Too acid	0.59
15D:							
Dekalb	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Too acid	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
15E:							
Dekalb	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Too acid	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
16E:							
Dekalb	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Too acid	0.50
Watahala	30	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50	Low strength	0.00	Rock fragments	0.00
						Too acid	0.76

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
16E:							
McClung	20	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50			Too acid	0.76
17A:							
Derroc	80	Fair		Poor		Poor	
		Droughty	0.16	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.32	Stone content	0.99	Rock fragments	0.00
		Organic matter content low	0.50				
18B:							
Escatawba	80	Fair		Fair		Fair	
		Too acid	0.08	Low strength	0.22	Too acid	0.50
		Organic matter content low	0.12	Wetness depth	0.89	Wetness depth	0.89
		Water erosion	0.90				
18C:							
Escatawba	80	Fair		Fair		Fair	
		Too acid	0.08	Low strength	0.22	Slope	0.37
		Organic matter content low	0.12	Wetness depth	0.89	Too acid	0.50
		Water erosion	0.90			Wetness depth	0.89
18D:							
Escatawba	75	Fair		Poor		Poor	
		Too acid	0.08	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Low strength	0.22	Too acid	0.50
		Water erosion	0.90	Wetness depth	0.89	Wetness depth	0.89
19B:							
Escatawba	80	Fair		Fair		Fair	
		Too acid	0.08	Wetness depth	0.89	Hard to reclaim (rock fragments)	0.12
		Organic matter content low	0.12			Too acid	0.50
		Water erosion	0.90			Rock fragments	0.76
19C:							
Escatawba	80	Fair		Fair		Fair	
		Too acid	0.08	Wetness depth	0.89	Hard to reclaim (rock fragments)	0.12
		Organic matter content low	0.12			Slope	0.50
		Water erosion	0.90			Too acid	0.50
20C:							
Faywood	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Too clayey	0.00
		Too clayey	0.00	Low strength	0.00	Depth to bedrock	0.10
		Depth to bedrock	0.10	Shrink-swell	0.87	Slope	0.37
Poplimento	40	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.49	Too clayey	0.00
		Organic matter content low	0.02			Slope	0.37
		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
20D:							
Faywood---------	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Depth to bedrock	0.10	Slope	0.00	Depth to bedrock	0.10
Poplimento------	40	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.02	Shrink-swell	0.49	Too clayey	0.00
		Too acid	0.50				
20E:							
Faywood---------	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Too clayey	0.00	Slope	0.00	Too clayey	0.00
		Depth to bedrock	0.10	Low strength	0.00	Depth to bedrock	0.10
Poplimento------	35	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.02	Shrink-swell	0.49	Too clayey	0.00
		Too acid	0.50				
21A:							
Feedstone-------	85	Fair		Fair		Poor	
		Too acid	0.84	Wetness depth	0.35	Hard to reclaim (rock fragments)	0.00
		Water erosion	0.99			Wetness depth	0.35
22C:							
Frederick-------	75	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Slope	0.37
						Too acid	0.98
		Too acid	0.54				
22D:							
Frederick-------	75	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	0.87	Too acid	0.98
		Too acid	0.54				
23C:							
Frederick-------	50	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Slope	0.37
						Too acid	0.98
		Too acid	0.54				
Watahala--------	40	Fair		Poor		Poor	
		Organic matter content low	0.12	Low strength	0.00	Rock fragments	0.00
						Slope	0.37
		Too acid	0.50			Too acid	0.76

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
23D:							
Frederick-------	50	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.00
				Shrink-swell	0.87	Too acid	0.98
		Too acid	0.54				
Watahala--------	40	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Low strength	0.00	Rock fragments	0.00
		Too acid	0.50			Too acid	0.76
24B:							
Gilpin----------	80	Fair		Poor		Poor	
		Organic matter content low	0.02	Depth to bedrock	0.00	Rock fragments	0.00
						Depth to bedrock	0.71
		Too acid	0.50			Too acid	0.76
		Droughty	0.63				
24C:							
Gilpin----------	80	Fair		Poor		Poor	
		Organic matter content low	0.02	Depth to bedrock	0.00	Rock fragments	0.00
						Slope	0.37
		Too acid	0.50			Depth to bedrock	0.71
		Droughty	0.63				
24D:							
Gilpin----------	85	Fair		Poor		Poor	
		Organic matter content low	0.02	Depth to bedrock	0.00	Slope	0.00
				Slope	0.50	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.71
		Droughty	0.63				
25A:							
Gladehill-------	85	Fair		Good		Good	
		Too acid	0.97				
		Water erosion	0.99				
26A:							
Irongate--------	85	Fair		Fair		Fair	
		Too acid	0.84	Wetness depth	0.35	Wetness depth	0.35
27C:							
Lehew-----------	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.29
						Slope	0.37
		Depth to bedrock	0.29				
Berks-----------	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.29
						Slope	0.37
		Depth to bedrock	0.29				

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
27D:							
Lehew-----------	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.29			Depth to bedrock	0.29
Berks-----------	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.29			Depth to bedrock	0.29
27E:							
Lehew-----------	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.29			Depth to bedrock	0.29
Berks-----------	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.29			Depth to bedrock	0.29
28F:							
Lehew-----------	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.29			Depth to bedrock	0.29
Berks-----------	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.29			Depth to bedrock	0.29
Rock outcrop----	10	Not rated		Not rated		Not rated	
29C:							
Lily------------	85	Fair		Poor		Fair	
		Organic matter content low	0.18	Depth to bedrock	0.00	Rock fragments	0.24
		Droughty	0.26			Slope	0.37
		Too acid	0.50			Too acid	0.59
30D:							
Lily------------	80	Fair		Poor		Poor	
		Organic matter content low	0.18	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.26	Slope	0.00	Rock fragments	0.24
		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
31C:							
Lily-----------	45	Fair		Poor		Fair	
		Organic matter content low	0.18	Depth to bedrock	0.00	Rock fragments	0.24
						Slope	0.37
		Droughty	0.26			Too acid	0.59
		Too acid	0.50				
McClung---------	30	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.37
						Too acid	0.76
		Too acid	0.50				
Dekalb----------	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Slope	0.37
						Too acid	0.50
		Too acid	0.50				
32C:							
Macove----------	85	Poor		Poor		Poor	
		Stone content	0.00	Stone content	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.00
		Too acid	0.50			Slope	0.37
32D:							
Macove----------	75	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Stone content	0.00	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
		Too acid	0.50				
33E:							
Macove----------	75	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Stone content	0.00	Rock fragments	0.00
				Cobble content	0.96	Hard to reclaim (rock fragments)	0.00
		Too acid	0.50				
34D:							
Macove----------	55	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Stone content	0.00	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
		Too acid	0.50				
Berks-----------	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.29
		Depth to bedrock	0.29				
34E:							
Macove----------	55	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Stone content	0.00	Rock fragments	0.00
						Hard to reclaim (rock fragments)	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
34E:							
Berks-----------	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.29
		Depth to bedrock	0.29				
35C:							
Mandy-----------	75	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Slope	0.50
		Droughty	0.33			Too acid	0.59
		Too acid	0.50				
35D:							
Mandy-----------	75	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.00	Rock fragments	0.00
		Droughty	0.33			Too acid	0.59
		Too acid	0.50				
35E:							
Mandy-----------	75	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.00	Rock fragments	0.00
		Droughty	0.33			Too acid	0.59
		Too acid	0.50				
36A:							
Maurertown------	70	Poor		Poor		Poor	
		Too clayey	0.00	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.50	Low strength	0.00	Too clayey	0.00
				Shrink-swell	0.12	Too acid	0.99
		Too acid	0.61				
37B:							
McClung---------	45	Fair		Good		Fair	
		Organic matter content low	0.12			Too acid	0.76
		Too acid	0.50				
Lily------------	35	Fair		Poor		Fair	
		Organic matter content low	0.18	Depth to bedrock	0.00	Rock fragments	0.24
						Too acid	0.59
		Droughty	0.26			Depth to bedrock	0.71
		Too acid	0.50				
38C:							
McClung---------	45	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.50
						Too acid	0.76
		Too acid	0.50				
Watahala--------	25	Fair		Poor		Poor	
		Organic matter content low	0.12	Low strength	0.00	Rock fragments	0.00
						Slope	0.50
		Too acid	0.50			Too acid	0.76

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
38C:							
Dekalb----------	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Slope	0.50
						Too acid	0.50
		Too acid	0.50				
38D:							
McClung---------	45	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Too acid	0.76
		Too acid	0.50				
Watahala--------	25	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Low strength	0.00	Rock fragments	0.00
		Too acid	0.50			Too acid	0.76
Dekalb----------	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Too acid	0.50
		Too acid	0.50				
39B:							
Murrill---------	85	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Rock fragments	0.12
						Too clayey	0.53
		Too acid	0.20			Too acid	0.76
		Too clayey	0.92				
39C:							
Murrill---------	85	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Rock fragments	0.12
						Slope	0.37
		Too acid	0.20			Too clayey	0.53
		Too clayey	0.92				
39D:							
Murrill---------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Low strength	0.00	Slope	0.00
				Slope	0.50	Rock fragments	0.12
		Too acid	0.20			Too clayey	0.53
		Too clayey	0.92				
40C:							
Murrill---------	95	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Rock fragments	0.12
						Slope	0.37
		Too acid	0.20			Too clayey	0.53
		Too clayey	0.92				
40D:							
Murrill---------	95	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Low strength	0.00	Rock fragments	0.12
		Too acid	0.20		0.00	Too clayey	0.53
		Too clayey	0.92				

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
40E:							
Murrill---------	95	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Low strength	0.00	Rock fragments	0.12
		Too acid	0.20			Too clayey	0.53
		Too clayey	0.92				
41B:							
Nicelytown------	80	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Wetness depth	0.14
				Wetness depth	0.14	Too acid	0.95
		Too acid	0.50				
		Water erosion	0.68				
42A:							
Ogles-----------	80	Poor		Poor		Poor	
		Droughty	0.00	Cobble content	0.00	Rock fragments	0.00
		Cobble content	0.43			Hard to reclaim (rock fragments)	0.00
		Too acid	0.50				
						Too acid	0.95
43B:							
Oriskany--------	85	Fair		Poor		Poor	
		Organic matter content low	0.08	Cobble content	0.00	Rock fragments	0.00
				Stone content	0.99	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.48				
		Too acid	0.50			Too acid	0.88
44C:							
Oriskany--------	75	Fair		Poor		Poor	
		Organic matter content low	0.08	Cobble content	0.00	Rock fragments	0.00
				Stone content	0.99	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.48				
		Too acid	0.50			Slope	0.37
44D:							
Oriskany--------	75	Fair		Poor		Poor	
		Organic matter content low	0.08	Cobble content	0.00	Slope	0.00
				Slope	0.00	Rock fragments	0.00
		Cobble content	0.48	Stone content	0.99	Hard to reclaim (rock fragments)	0.00
		Too acid	0.50				
44E:							
Oriskany--------	80	Fair		Poor		Poor	
		Organic matter content low	0.08	Slope	0.00	Slope	0.00
				Cobble content	0.00	Rock fragments	0.00
		Cobble content	0.48	Stone content	0.99	Hard to reclaim (rock fragments)	0.00
		Too acid	0.50				
45E:							
Oriskany--------	85	Fair		Poor		Poor	
		Organic matter content low	0.08	Slope	0.00	Slope	0.00
				Cobble content	0.00	Rock fragments	0.00
		Too acid	0.50	Stone content	0.20	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.55				

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
46C:							
Oriskany--------	55	Fair		Poor		Poor	
		Organic matter content low	0.08	Cobble content	0.00	Rock fragments	0.00
				Stone content	0.99	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.48				
		Too acid	0.50			Slope	0.37
Murrill---------	35	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Rock fragments	0.12
						Slope	0.37
		Too acid	0.20			Too clayey	0.53
		Too clayey	0.92				
46D:							
Oriskany--------	55	Fair		Poor		Poor	
		Organic matter content low	0.08	Cobble content	0.00	Slope	0.00
				Slope	0.00	Rock fragments	0.00
		Cobble content	0.48	Stone content	0.99	Hard to reclaim (rock fragments)	0.00
		Too acid	0.50				
Murrill---------	35	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Low strength	0.00	Rock fragments	0.12
		Too acid	0.20			Too clayey	0.53
		Too clayey	0.92				
47E:							
Oriskany--------	65	Fair		Poor		Poor	
		Organic matter content low	0.08	Slope	0.00	Slope	0.00
				Cobble content	0.00	Rock fragments	0.00
		Cobble content	0.48	Stone content	0.99	Hard to reclaim (rock fragments)	0.00
		Too acid	0.50				
Murrill---------	25	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Low strength	0.00	Rock fragments	0.12
		Too acid	0.20			Too clayey	0.53
		Too clayey	0.92				
48C:							
Paddyknob-------	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.21
						Slope	0.50
		Depth to bedrock	0.21				
Madsheep--------	35	Fair		Poor		Poor	
		Droughty	0.04	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Slope	0.50
						Depth to bedrock	0.54
		Too acid	0.50				
48D:							
Paddyknob-------	55	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	0.21
		Depth to bedrock	0.21				

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:							
Madsheep	35	Fair		Poor		Poor	
		Droughty	0.04	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.54
		Too acid	0.50				
48E:							
Paddyknob	55	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.21
		Depth to bedrock	0.21				
Madsheep	35	Fair		Poor		Poor	
		Droughty	0.04	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.54
		Too acid	0.50				
49A:							
Purdy	85	Poor		Poor		Poor	
		Too clayey	0.00	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.00
				Shrink-swell	0.87	Too acid	0.76
		Too acid	0.20				
50C:							
Shelocta	60	Fair		Good		Poor	
		Organic matter content low	0.12			Rock fragments	0.00
						Slope	0.37
		Too acid	0.32			Hard to reclaim (rock fragments)	0.84
Berks	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.29
						Slope	0.37
		Depth to bedrock	0.29				
50D:							
Shelocta	60	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Rock fragments	0.00
		Too acid	0.32			Hard to reclaim (rock fragments)	0.84
Berks	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.29
		Depth to bedrock	0.29				
50E:							
Shelocta	70	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Rock fragments	0.00
		Too acid	0.32			Hard to reclaim (rock fragments)	0.84

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
50E:							
Berks-----------	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.29
		Depth to bedrock	0.29				
51B:							
Sugarhol--------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.76
		Too acid	0.50				
51C:							
Sugarhol--------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12			Slope	0.37
						Too acid	0.76
		Too acid	0.50				
52:							
Udorthents, dams	95	Not rated		Not rated		Not rated	
53:							
Udorthents, smoothed-------	85	Not rated		Not rated		Not rated	
54:							
Udorthents------	65	Not rated		Not rated		Not rated	
Rock outcrop----	25	Not rated		Not rated		Not rated	
55E:							
Watahala--------	45	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Low strength	0.00	Rock fragments	0.00
		Too acid	0.50			Too acid	0.76
Frederick-------	35	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.00
				Shrink-swell	0.87	Too acid	0.98
		Too acid	0.54				
56E:							
Weikert---------	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
Berks-----------	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.29
		Depth to bedrock	0.29				

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
57D:							
Weikert---------	35	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
Berks-----------	34	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.29
		Depth to bedrock	0.29				
Rough-----------	10	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
57E:							
Weikert---------	40	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
Berks-----------	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.29
		Depth to bedrock	0.29				
Rough-----------	15	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
58F:							
Weikert---------	40	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
Berks-----------	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.29
		Depth to bedrock	0.29				
Rough-----------	15	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

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
59F:							
Weikert	40	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
Rock outcrop	25	Not rated		Not rated		Not rated	
Rough	20	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
60F:							
Weikert	65	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
Rough	25	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
61C:							
Wharton	55	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Slope	0.37
				Wetness depth	0.76	Wetness depth	0.76
		Too acid	0.20	Shrink-swell	0.87	Too acid	0.76
		Water erosion	0.68				
Blairton	40	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.00	Wetness depth	0.29
				Low strength	0.00	Slope	0.37
		Too acid	0.50	Wetness depth	0.29	Too acid	0.76
		Water erosion	0.90				
61D:							
Wharton	55	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Low strength	0.00	Wetness depth	0.76
		Too acid	0.20	Wetness depth	0.76	Too acid	0.76
		Water erosion	0.68				
Blairton	40	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.00	Wetness depth	0.29
		Too acid	0.50	Low strength	0.00	Too acid	0.76
		Water erosion	0.90				
62A:							
Wolfgap	95	Fair		Good		Good	
		Water erosion	0.99				
		Too acid	0.99				

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
63A:							
Wolfgap---------	95	Fair		Good		Good	
		Water erosion	0.99				
		Too acid	0.99				
64B:							
Zoar------------	85	Fair		Poor		Fair	
		Too clayey	0.08	Low strength	0.00	Too clayey	0.05
		Organic matter content low	0.12	Wetness depth	0.14	Wetness depth	0.14
				Shrink-swell	0.92	Too acid	0.88
		Too acid	0.32				
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
1A:							
Alonzville------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.93	Depth to water	1.00
2B:							
Alonzville------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.92	Depth to water	1.00
3C:							
Alticrest-------	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86	Seepage	0.04		
		Slope	0.01				
Dekalb----------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86	Seepage	0.03		
		Slope	0.01				
4A:							
Atkins----------	75	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Ponding	1.00		
				Piping	0.95		
5D:							
Berks-----------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
		Slope	0.28				
5E:							
Berks-----------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	0.97				
		Depth to bedrock	0.93				
6B:							
Berks-----------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
Weikert---------	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Seepage	0.70				
6C:							
Berks-----------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
		Slope	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
6C:							
Weikert---------	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Seepage	0.70				
		Slope	0.01				
7C:							
Berks-----------	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
		Slope	0.01				
Weikert---------	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Seepage	0.70				
		Slope	0.01				
7D:							
Berks-----------	70	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
		Slope	0.28				
Weikert---------	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Seepage	0.70				
		Slope	0.28				
8B:							
Blairton--------	50	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.56	Depth to saturated zone	1.00	Depth to water	1.00
		Seepage	0.03				
				Piping	0.95		
				Thin layer	0.56		
Wharton---------	30	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.02	Depth to saturated zone	0.95	Depth to water	1.00
				Piping	0.87		
9C:							
Caneyville------	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.88	Thin layer	0.88	Depth to water	1.00
		Slope	0.01	Hard to pack	0.18		
9D:							
Caneyville------	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.88	Thin layer	0.88	Depth to water	1.00
		Slope	0.28	Hard to pack	0.18		
9E:							
Caneyville------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.88	Depth to water	1.00
		Depth to bedrock	0.88	Hard to pack	0.18		
10B:							
Cottonbend------	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: 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
11A:							
Coursey----------	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.99	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.99	Depth to saturated zone	0.01
12D:							
Dekalb-----------	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86	Seepage	0.03		
		Slope	0.28				
Alticrest--------	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86	Seepage	0.04		
		Slope	0.28				
12E:							
Dekalb-----------	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	0.97	Seepage	0.03		
		Depth to bedrock	0.86				
Alticrest--------	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	0.97	Seepage	0.04		
		Depth to bedrock	0.86				
13D:							
Dekalb-----------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86	Seepage	0.03		
		Slope	0.28				
Lily-------------	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Depth to bedrock	0.81	Thin layer	0.81		
		Slope	0.28				
McClung----------	15	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.04	Depth to water	1.00
		Slope	0.28				
14E:							
Dekalb-----------	65	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	0.97	Seepage	0.03		
		Depth to bedrock	0.86				
Lily-------------	20	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	0.97	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
15D:							
Dekalb	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86	Seepage	0.03		
		Slope	0.28				
Rock outcrop	30	Not rated		Not rated		Not rated	
15E:							
Dekalb	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.86				
Rock outcrop	30	Not rated		Not rated		Not rated	
16E:							
Dekalb	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	0.97	Seepage	0.03		
		Depth to bedrock	0.86				
Watahala	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.65	Depth to water	1.00
		Slope	0.97				
McClung	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.04	Depth to water	1.00
		Seepage	0.70				
17A:							
Derroc	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.94	Cutbanks cave	1.00
				Seepage	0.10	Large stones content	0.94
				Depth to saturated zone	0.09	Depth to saturated zone	0.54
18B:							
Escatawba	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.90	Depth to water	1.00
				Depth to saturated zone	0.86		
18C:							
Escatawba	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.90	Depth to water	1.00
		Slope	0.01	Depth to saturated zone	0.86		
18D:							
Escatawba	75	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.90	Depth to water	1.00
		Slope	0.28	Depth to saturated zone	0.86		
19B:							
Escatawba	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Depth to saturated zone	0.86	Depth to water	1.00
				Piping	0.51		

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
19C:							
Escatawba-------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Depth to saturated zone	0.86	Depth to water	1.00
		Slope	0.01	Piping	0.51		
20C:							
Faywood---------	50	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.98	Thin layer	0.98	Depth to water	1.00
		Seepage	0.02	Hard to pack	0.01		
		Slope	0.01				
Poplimento------	40	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.03	Piping	0.18	Depth to water	1.00
		Slope	0.01				
20D:							
Faywood---------	50	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.98	Thin layer	0.98	Depth to water	1.00
		Slope	0.28	Hard to pack	0.01		
		Seepage	0.02				
Poplimento------	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.28	Piping	0.18	Depth to water	1.00
		Seepage	0.03				
20E:							
Faywood---------	45	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.98	Thin layer	0.98	Depth to water	1.00
		Slope	0.97	Hard to pack	0.01		
		Seepage	0.02				
Poplimento------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.18	Depth to water	1.00
		Seepage	0.03				
21A:							
Feedstone-------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Piping	1.00		
				Seepage	0.03		
22C:							
Frederick-------	75	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Hard to pack	0.09	Depth to water	1.00
		Slope	0.01				
22D:							
Frederick-------	75	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Hard to pack	0.09	Depth to water	1.00
		Slope	0.12				
23C:							
Frederick-------	50	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Hard to pack	0.09	Depth to water	1.00
		Slope	0.01				
Watahala--------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.65	Depth to water	1.00
		Slope	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
23D:							
Frederick-------	50	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Hard to pack	0.09	Depth to water	1.00
		Slope	0.28				
Watahala--------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.65	Depth to water	1.00
		Slope	0.28				
24B:							
Gilpin----------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.94	Depth to water	1.00
		Depth to bedrock	0.08	Thin layer	0.81		
24C:							
Gilpin----------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.94	Depth to water	1.00
		Depth to bedrock	0.08	Thin layer	0.81		
		Slope	0.01				
24D:							
Gilpin----------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.94	Depth to water	1.00
		Slope	0.12	Thin layer	0.81		
		Depth to bedrock	0.08				
25A:							
Gladehill-------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Seepage	0.01		
26A:							
Irongate--------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.03		
27C:							
Lehew-----------	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
		Slope	0.01				
Berks-----------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
		Slope	0.01				
27D:							
Lehew-----------	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
		Slope	0.28				
Berks-----------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
		Slope	0.28				

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
27E:							
Lehew-----------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	0.97				
		Depth to bedrock	0.93				
Berks-----------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	0.97				
		Depth to bedrock	0.93				
28F:							
Lehew-----------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.93				
Berks-----------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.93				
Rock outcrop----	10	Not rated		Not rated		Not rated	
29C:							
Lily------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Depth to bedrock	0.81	Thin layer	0.81		
		Slope	0.01				
30D:							
Lily------------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Depth to bedrock	0.81	Thin layer	0.81		
		Slope	0.28				
31C:							
Lily------------	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Depth to bedrock	0.81	Thin layer	0.81		
		Slope	0.01				
McClung---------	30	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.04	Depth to water	1.00
		Slope	0.01				
Dekalb----------	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86	Seepage	0.03		
		Slope	0.01				
32C:							
Macove----------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.03	Depth to water	1.00
		Slope	0.01				
32D:							
Macove----------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.03	Depth to water	1.00
		Slope	0.28				

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
33E:							
Macove----------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.51	Depth to water	1.00
		Slope	0.97				
34D:							
Macove----------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.03	Depth to water	1.00
		Slope	0.28				
Berks-----------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
		Slope	0.28				
34E:							
Macove----------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.03	Depth to water	1.00
		Slope	0.99				
Berks-----------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	0.99				
		Depth to bedrock	0.93				
35C:							
Mandy-----------	75	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.61	Depth to water	1.00
		Depth to bedrock	0.02	Seepage	0.15		
		Slope	0.01				
35D:							
Mandy-----------	75	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.61	Depth to water	1.00
		Slope	0.28	Seepage	0.15		
		Depth to bedrock	0.02				
35E:							
Mandy-----------	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.61	Depth to water	1.00
		Seepage	0.70	Seepage	0.15		
		Depth to bedrock	0.02				
36A:							
Maurertown------	70	Not limited		Very limited		Very limited	
				Ponding	1.00	Cutbanks cave	1.00
				Depth to saturated zone	1.00	Slow refill	0.97
37B:							
McClung---------	45	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.04	Depth to water	1.00
Lily------------	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Depth to bedrock	0.81	Thin layer	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
38C:							
McClung---------	45	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.04	Depth to water	1.00
		Slope	0.01				
Watahala--------	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.65	Depth to water	1.00
		Slope	0.01				
Dekalb----------	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86	Seepage	0.03		
		Slope	0.01				
38D:							
McClung---------	45	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.04	Depth to water	1.00
		Slope	0.28				
Watahala--------	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.65	Depth to water	1.00
		Slope	0.28				
Dekalb----------	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86	Seepage	0.03		
		Slope	0.28				
39B:							
Murrill---------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.31	Depth to water	1.00
39C:							
Murrill---------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.31	Depth to water	1.00
		Slope	0.01				
39D:							
Murrill---------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.31	Depth to water	1.00
		Slope	0.12				
40C:							
Murrill---------	95	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.31	Depth to water	1.00
		Slope	0.01				
40D:							
Murrill---------	95	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.31	Depth to water	1.00
		Slope	0.28				
40E:							
Murrill---------	95	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.31	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
41B:							
Nicelytown------	80	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
				Piping	0.89		
42A:							
Ogles-----------	80	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Large stones content	0.72	Large stones content	0.72
				Seepage	0.12	Depth to saturated zone	0.54
				Depth to saturated zone	0.09		
						Cutbanks cave	0.10
43B:							
Oriskany--------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.78	Depth to water	1.00
				Seepage	0.04		
44C:							
Oriskany--------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.78	Depth to water	1.00
		Slope	0.01				
				Seepage	0.04		
44D:							
Oriskany--------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.78	Depth to water	1.00
		Slope	0.28				
				Seepage	0.04		
44E:							
Oriskany--------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.78	Depth to water	1.00
		Slope	0.97				
				Seepage	0.04		
45E:							
Oriskany--------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.96	Depth to water	1.00
		Slope	0.88				
				Seepage	0.04		
46C:							
Oriskany--------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.78	Depth to water	1.00
		Slope	0.01				
				Seepage	0.04		
Murrill---------	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.31	Depth to water	1.00
		Slope	0.01				
46D:							
Oriskany--------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.78	Depth to water	1.00
		Slope	0.28				
				Seepage	0.04		

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:							
Murrill---------	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.31	Depth to water	1.00
		Slope	0.28				
47E:							
Oriskany--------	65	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.78	Depth to water	1.00
		Slope	0.97	Seepage	0.04		
Murrill---------	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.31	Depth to water	1.00
		Seepage	0.70				
48C:							
Paddyknob-------	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.95	Depth to water	1.00
		Depth to bedrock	0.95	Seepage	0.04		
		Slope	0.01				
Madsheep--------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86				
		Slope	0.01				
48D:							
Paddyknob-------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.95	Depth to water	1.00
		Depth to bedrock	0.95	Seepage	0.04		
		Slope	0.28				
Madsheep--------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86				
		Slope	0.28				
48E:							
Paddyknob-------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.95	Depth to water	1.00
		Slope	0.97	Seepage	0.04		
		Depth to bedrock	0.95				
Madsheep--------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	0.97				
		Depth to bedrock	0.86				
49A:							
Purdy-----------	85	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Slow refill	0.97
						Cutbanks cave	0.10
				Ponding	1.00		
				Hard to pack	0.17		
50C:							
Shelocta--------	60	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
		Slope	0.01				

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
50C:							
Berks-----------	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
		Slope	0.01				
50D:							
Shelocta--------	60	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
		Slope	0.28				
Berks-----------	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
		Slope	0.28				
50E:							
Shelocta--------	70	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Piping	1.00	Depth to water	1.00
		Seepage	0.70				
Berks-----------	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	0.97				
		Depth to bedrock	0.93				
51B:							
Sugarhol--------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.04	Depth to water	1.00
51C:							
Sugarhol--------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.04	Depth to water	1.00
		Slope	0.01				
52:							
Udorthents, dams	95	Not rated		Not rated		Not rated	
53:							
Udorthents, smoothed-------	85	Not rated		Not rated		Not rated	
54:							
Udorthents------	65	Not rated		Not rated		Not rated	
Rock outcrop----	25	Not rated		Not rated		Not rated	
55E:							
Watahala--------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.65	Depth to water	1.00
		Slope	0.97				
Frederick-------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Hard to pack	0.09	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
56E:							
Weikert----------	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97				
		Seepage	0.70				
Berks------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	0.97				
		Depth to bedrock	0.93				
57D:							
Weikert----------	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Seepage	0.70				
		Slope	0.28				
Berks------------	34	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Depth to bedrock	0.93				
		Slope	0.28				
Rough------------	10	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.28	Seepage	0.38		
57E:							
Weikert----------	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97				
		Seepage	0.70				
Berks------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	0.97				
		Depth to bedrock	0.93				
Rough------------	15	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Seepage	0.38		
58F:							
Weikert----------	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	0.70				
Berks------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.93				
Rough------------	15	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: 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
59F:							
Weikert---------	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	0.70				
Rock outcrop----	25	Not rated		Not rated		Not rated	
Rough-----------	20	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		
60F:							
Weikert---------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00				
		Seepage	0.70				
Rough-----------	25	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		
61C:							
Wharton---------	55	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.02	Depth to saturated zone	0.95	Depth to water	1.00
		Slope	0.01				
				Piping	0.87		
Blairton--------	40	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.56	Depth to saturated zone	1.00	Depth to water	1.00
		Seepage	0.03				
		Slope	0.01	Piping	0.95		
				Thin layer	0.56		
61D:							
Wharton---------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.28	Depth to saturated zone	0.95	Depth to water	1.00
		Seepage	0.02				
				Piping	0.87		
Blairton--------	40	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.56	Depth to saturated zone	1.00	Depth to water	1.00
		Slope	0.28				
		Seepage	0.03	Piping	0.95		
				Thin layer	0.56		
62A:							
Wolfgap---------	95	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
				Seepage	0.04		
63A:							
Wolfgap---------	95	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
				Seepage	0.04		

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
64B:							
Zoar------------	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	1.00	Slow refill	0.98
				Piping	0.45	Cutbanks cave	0.10
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		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1A:												
Alonzville------	0-5	Loam	CL, CL-ML	A-4	0	0	85-100	80-100	65-95	45-75	21-31	6-11
	5-15	Loam, silt loam, fine sandy loam	CL, ML, CL-ML	A-4, A-2-4	0	0	85-100	80-100	55-100	30-90	16-31	3-11
	15-55	Clay loam, silty clay loam, loam, silt loam	CL, CL-ML	A-6, A-4	0	0	85-100	80-100	65-100	45-95	23-38	7-15
	55-65	Gravelly loam, clay loam, gravelly sandy clay loam	SC, SC-SM, SM, CL, ML, CL-ML	A-4, A-1, A-2-4, A-6	0	0	65-100	55-100	45-100	20-80	16-38	3-15
2B:												
Alonzville------	0-6	Cobbly loam	CL, CL-ML, SC, SC-SM	A-4	0	8-20	75-85	65-85	55-80	40-65	21-31	6-11
	6-16	Cobbly loam, silt loam, gravelly fine sandy loam	CL, ML, CL-ML, SC, SC-SM, SM	A-4, A-2-4	0	0-20	75-100	65-100	45-100	25-90	16-31	3-11
	16-57	Cobbly loam, gravelly silt loam, clay loam, silty clay loam	CL, SC	A-6, A-4	0	0-20	75-100	65-100	55-100	40-95	23-38	7-15
	57-65	Cobbly loam, gravelly loam, clay loam, cobbly sandy clay loam	SC, SC-SM, SM, CL, ML, CL-ML	A-4, A-2-4, A-6	0	0-20	75-100	65-100	55-100	20-80	16-38	3-15
3C:												
Alticrest-------	0-4	Channery sandy loam	SC-SM, SM	A-2-4, A-1	0	0-10	70-85	60-80	35-55	15-35	14-23	2-7
	4-30	Channery sandy loam, channery fine sandy loam	SC-SM, SM	A-1, A-2-4, A-4	0	0-10	70-85	60-80	35-65	15-45	14-23	2-7
	30-40	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	
3C:												
Dekalb----------	0-2	Channery sandy loam	SC-SM, SM, SC	A-2-4, A-1	0	10-25	70-90	60-85	35-60	20-35	14-25	NP-8
	2-30	Very channery sandy loam, very channery fine sandy loam, very channery loam	SC-SM, SM, SC	A-1, A-2-4, A-4	0	12-25	55-65	35-55	20-55	10-40	14-25	NP-8
	30-40	Bedrock			---	---	---	---	---	---	---	---
4A:												
Atkins----------	0-4	Silt loam	CL	A-4, A-6	0	0	80-100	75-100	70-100	55-90	23-31	7-11
	4-29	Silt loam, silty clay loam, loam	CL	A-4, A-6	0	0-10	85-100	80-100	70-100	50-95	23-34	7-13
	29-47	Silty clay loam, silt loam, loam	CL, CL-ML	A-6, A-4	0	0-15	85-100	80-100	70-100	50-95	16-39	3-16
	47-65	Very gravelly silty clay loam, silt loam, very gravelly loam, stratified silty clay loam to gravelly sandy loam	SC, SC-SM, CL, CL-ML, SP-SC	A-6, A-4, A-2-4, A-1	0	0-15	50-100	30-100	20-100	10-95	16-39	3-16

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	
5D:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	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	
5E:												
Berks	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	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	
6B:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
Weikert---------	0-4	Channery silt loam	CL, CL-ML, SC-SM, SC	A-4	0	0-5	65-80	50-75	45-75	35-70	16-31	2-11
	4-16	Very channery silt loam, very channery loam	SC, SC-SM, GC, GC-GM	A-2-4, A-4	0	0-15	45-60	30-50	25-50	15-45	16-31	2-11
	16-26	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	
6C:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
Weikert---------	0-4	Channery silt loam	CL, CL-ML, SC-SM, SC	A-4	0	0-5	65-80	50-75	45-75	35-70	16-31	2-11
	4-16	Very channery silt loam, very channery loam	SC, SC-SM, GC, GC-GM	A-2-4, A-4	0	0-15	45-60	30-50	25-50	15-45	16-31	2-11
	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	Plasticity index
	In				Pct	Pct					Pct	
7C:												
Berks	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
Weikert	0-4	Channery silt loam	CL, CL-ML, SC-SM, SC	A-4	0	0-5	65-80	50-75	45-75	35-70	16-31	2-11
	4-16	Very channery silt loam, very channery loam	SC, SC-SM, GC, GC-GM	A-2-4, A-4	0	0-15	45-60	30-50	25-50	15-45	16-31	2-11
	16-26	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	
7D:												
Berks	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
Weikert	0-4	Channery silt loam	CL, CL-ML, SC-SM, SC	A-4	0	0-5	65-80	50-75	45-75	35-70	16-31	2-11
	4-16	Very channery silt loam, very channery loam	SC, SC-SM, GC, GC-GM	A-2-4, A-4	0	0-15	45-60	30-50	25-50	15-45	16-31	2-11
	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	Plasticity index
	In				Pct	Pct					Pct	
8B:												
Blairton--------	0-9	Silt loam	CL-ML, CL, ML	A-4	0	0	80-100	75-100	70-100	55-90	16-31	3-11
	9-31	Silty clay loam, channery silt loam	CL-ML, CL	A-6, A-4	0	0-5	80-100	75-100	70-100	55-95	23-39	7-16
	31-38	Very channery silt loam, channery silty clay, channery silty clay loam	SC, CL	A-6, A-7-6, A-2-4	0	0-10	55-85	40-80	35-80	30-75	25-52	8-23
	38-48	Bedrock			---	---	---	---	---	---	---	---
Wharton---------	0-3	Silt loam	CL, CL-ML	A-4	0	0-5	80-100	75-100	65-100	50-90	16-30	2-11
	3-8	Silt loam, silty clay loam, channery silt loam	CL, CL-ML	A-6, A-4	0	0-5	75-100	70-100	60-100	45-95	21-34	6-13
	8-44	Silty clay loam, channery silty clay, clay	CL	A-6, A-4	0	0-5	80-100	70-100	65-100	55-95	25-52	7-22
	44-62	Silty clay loam, very channery silt loam, channery clay loam	CL, SC	A-6, A-2-4	0	0-10	55-100	40-100	35-100	30-95	25-52	7-22
9C:												
Caneyville------	0-10	Silt loam	CL	A-4, A-6	0	0-3	90-100	85-100	75-100	60-90	21-35	4-15
	10-16	Silty clay, clay, silty clay loam	CH, CL	A-7-6	0	0-3	85-100	80-100	70-100	60-95	44-66	22-39
	16-29	Clay, silty clay	CH	A-7-6	0	0-8	85-100	80-100	75-100	60-95	48-66	25-39
	29-39	Bedrock			---	---	---	---	---	---	---	---
9D:												
Caneyville------	0-10	Silt loam	CL	A-4, A-6	0	0-3	90-100	85-100	75-100	60-90	21-35	4-15
	10-16	Silty clay, clay, silty clay loam	CH, CL	A-7-6	0	0-3	85-100	80-100	70-100	60-95	44-66	22-39
	16-29	Clay, silty clay	CH	A-7-6	0	0-8	85-100	80-100	75-100	60-95	48-66	25-39
	29-39	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	
9E:												
Caneyville------	0-10	Silt loam	CL	A-4, A-6	0	0-3	90-100	85-100	75-100	60-90	21-35	4-15
	10-16	Silty clay, clay, silty clay loam	CH, CL	A-7-6	0	0-3	85-100	80-100	70-100	60-95	44-66	22-39
	16-29	Clay, silty clay	CH	A-7-6	0	0-8	85-100	80-100	75-100	60-95	48-66	25-39
	29-39	Bedrock			---	---	---	---	---	---	---	---
10B:												
Cottonbend------	0-8	Silt loam	CL, CL-ML, ML	A-4	0	0	80-100	75-100	70-100	55-90	16-31	3-11
	8-17	Fine sandy loam, loam, silt loam	SC-SM, SC, SM, CL-ML, CL, ML	A-4	0	0-5	85-100	80-100	55-100	30-90	16-31	3-11
	17-52	Loam, silty clay loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4, A-6	0	0-5	85-100	80-100	65-100	30-95	23-39	7-16
	52-72	Gravelly loam, clay, very gravelly sandy clay loam	SC, SC-SM, CL, CL-ML	A-4, A-2-4, A-6, A-7-6	0	0-15	65-100	55-100	45-100	20-95	23-52	7-23
11A:												
Coursey---------	0-5	Silt loam	CL, CL-ML	A-4	0	0-5	80-100	80-100	75-100	55-90	23-31	7-11
	5-12	Loam, gravelly loam	CL, CL-ML, SC, SC-SM	A-4	0	0-5	65-100	55-100	45-95	35-75	21-31	6-11
	12-60	Loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0-10	70-100	60-100	50-100	35-80	23-39	7-16
12D:												
Dekalb----------	0-2	Channery sandy loam	SC-SM, SM, SC	A-2-4, A-1	0	10-25	70-90	60-85	35-60	20-35	14-25	NP-8
	2-30	Very channery sandy loam, very channery fine sandy loam, very channery loam	SC-SM, SM, SC	A-1, A-2-4, A-4	0	12-25	55-65	35-55	20-55	10-40	14-25	NP-8
	30-40	Bedrock			---	---	---	---	---	---	---	---
Alticrest-------	0-4	Channery sandy loam	SC-SM, SM	A-2-4, A-1	0	0-10	70-85	60-80	35-55	15-35	14-23	2-7
	4-30	Channery sandy loam, channery fine sandy loam	SC-SM, SM	A-1, A-2-4, A-4	0	0-10	70-85	60-80	35-65	15-45	14-23	2-7
	30-40	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	
12E:												
Dekalb----------	0-2	Channery sandy loam	SC-SM, SM, SC	A-2-4, A-1	0	10-25	70-90	60-85	35-60	20-35	14-25	NP-8
	2-30	Very channery sandy loam, very channery fine sandy loam, very channery loam	SC-SM, SM, SC	A-1, A-2-4, A-4	0	12-25	55-65	35-55	20-55	10-40	14-25	NP-8
	30-40	Bedrock			---	---	---	---	---	---	---	---
Alticrest-------	0-4	Channery sandy loam	SC-SM, SM	A-2-4, A-1	0	0-10	70-85	60-80	35-55	15-35	14-23	2-7
	4-30	Channery sandy loam, channery fine sandy loam	SC-SM, SM	A-1, A-2-4, A-4	0	0-10	70-85	60-80	35-65	15-45	14-23	2-7
	30-40	Bedrock			---	---	---	---	---	---	---	---
13D:												
Dekalb----------	0-2	Channery sandy loam	SC-SM, SM, SC	A-2-4, A-1	0	10-25	70-90	60-85	35-60	20-35	14-25	NP-8
	2-30	Very channery sandy loam, very channery fine sandy loam, very channery loam	SC-SM, SM, SC	A-1, A-2-4, A-4	0	12-25	55-65	35-55	20-55	10-40	14-25	NP-8
	30-40	Bedrock			---	---	---	---	---	---	---	---
Lily------------	0-3	Sandy loam	SC-SM, SM, SC	A-2-4	0	0-2	80-95	75-90	45-65	25-35	13-25	1-8
	3-17	Loam, gravelly sandy loam, gravelly fine sandy loam	CL, CL-ML, ML, SM, SC, SC-SM	A-4, A-1, A-2-4	0	0	65-90	55-90	30-85	15-70	13-25	1-8
	17-32	Clay loam, sandy clay loam, gravelly loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-6, A-2-4	0	0	60-90	50-90	40-90	15-70	23-39	7-16
	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	
13D:												
McClung---------	0-3	Sandy loam	SM, SC, SC-SM	A-2-4, A-4	0	0	85-100	75-100	45-70	20-40	12-25	1-8
	3-11	Sandy loam, fine sandy loam, gravelly loam	SC-SM, SC, SM, ML, CL-ML, CL	A-2-4, A-4, A-1	0	0	65-100	50-100	30-95	15-75	16-30	1-11
	11-19	Sandy loam, loam, gravelly loam	SC, SC-SM, SM, CL, CL-ML, ML	A-2-4, A-4, A-1	0	0	65-100	50-100	30-95	15-75	16-31	1-11
	19-65	Sandy clay loam, sandy clay, gravelly clay loam	SC, CL	A-6, A-2-4, A-4	0	0	65-100	50-100	50-100	20-80	23-43	1-18
14E:												
Dekalb----------	0-2	Channery sandy loam	SC-SM, SM, SC	A-2-4, A-1	0	10-25	70-90	60-85	35-60	20-35	14-25	NP-8
	2-30	Very channery sandy loam, very channery fine sandy loam, very channery loam	SC-SM, SM, SC	A-1, A-2-4, A-4	0	12-25	55-65	35-55	20-55	10-40	14-25	NP-8
	30-40	Bedrock			---	---	---	---	---	---	---	---
Lily------------	0-3	Sandy loam	SC-SM, SM, SC	A-2-4	0	0-2	80-95	75-90	45-65	25-35	13-25	1-8
	3-17	Loam, gravelly sandy loam, gravelly fine sandy loam	CL, CL-ML, ML, SM, SC, SC-SM	A-4, A-1, A-2-4	0	0	65-90	55-90	30-85	15-70	13-25	1-8
	17-32	Clay loam, sandy clay loam, gravelly loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-6, A-2-4	0	0	60-90	50-90	40-90	15-70	23-39	7-16
	32-42	Bedrock			---	---	---	---	---	---	---	---
15D:												
Dekalb----------	0-2	Channery sandy loam	SC-SM, SM, SC	A-2-4, A-1	0	10-25	70-90	60-85	35-60	20-35	14-25	NP-8
	2-30	Very channery sandy loam, very channery fine sandy loam, very channery loam	SC-SM, SM, SC	A-1, A-2-4, A-4	0	12-25	55-65	35-55	20-55	10-40	14-25	NP-8
	30-40	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	
15D:												
Rock outcrop.												
15E:												
Dekalb----------	0-2	Channery sandy loam	SC-SM, SM, SC	A-2-4, A-1	0	10-25	70-90	60-85	35-60	20-35	14-25	NP-8
	2-30	Very channery sandy loam, very channery fine sandy loam, very channery loam	SC-SM, SM, SC	A-1, A-2-4, A-4	0	12-25	55-65	35-55	20-55	10-40	14-25	NP-8
	30-40	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
16E:												
Dekalb----------	0-2	Channery sandy loam	SC-SM, SM, SC	A-2-4, A-1	0	10-25	70-90	60-85	35-60	20-35	14-25	NP-8
	2-30	Very channery sandy loam, very channery fine sandy loam, very channery loam	SC-SM, SM, SC	A-1, A-2-4, A-4	0	12-25	55-65	35-55	20-55	10-40	14-25	NP-8
	30-40	Bedrock			---	---	---	---	---	---	---	---
Watahala--------	0-3	Very gravelly sandy loam	SC-SM, SC	A-2-4, A-1	0	0-7	55-60	40-45	25-35	10-20	16-25	3-8
	3-27	Gravelly silt loam, very gravelly loam, gravelly loam, very gravelly silt loam	SC-SM, SC, CL-ML, CL	A-4, A-2-4	0	0-15	60-80	45-75	40-75	30-65	16-30	3-11
	27-37	Gravelly loam, gravelly silt loam, gravelly silty clay loam, gravelly clay loam	SC, SC-SM, CL, CL-ML	A-4, A-6	0	0-15	70-80	60-75	50-75	35-70	23-39	7-16
	37-61	Gravelly clay, silty clay, clay	MH, CH, CL, SC, SM	A-7	0	0-10	65-100	55-100	50-100	40-95	45-70	20-33

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	
16E:												
McClung---------	0-3	Sandy loam	SM, SC, SC-SM	A-2-4, A-4	0	0	85-100	75-100	45-70	20-40	12-25	1-8
	3-11	Sandy loam, fine sandy loam, gravelly loam	SC-SM, SC, SM, ML, CL-ML, CL	A-2-4, A-4, A-1	0	0	65-100	50-100	30-95	15-75	16-30	1-11
	11-19	Sandy loam, loam, gravelly loam	SC, SC-SM, SM, CL, CL-ML, ML	A-2-4, A-4, A-1	0	0	65-100	50-100	30-95	15-75	16-31	1-11
	19-65	Sandy clay loam, sandy clay, gravelly clay loam	SC, CL	A-6, A-2-4, A-4	0	0	65-100	50-100	50-100	20-80	23-43	1-18
17A:												
Derroc----------	0-4	Very cobbly loam	SM, SC-SM	A-4, A-2-4	0-5	30-35	60-80	50-70	40-65	30-50	12-21	1-6
	4-17	Very cobbly sandy loam, extremely cobbly sandy loam, very gravelly sandy loam	SM, SC-SM, SP-SM, GM, GC-GM, GP-GM	A-1, A-2-4, A-4	0-5	20-45	45-80	25-75	15-70	10-55	12-21	1-6
	17-38	Extremely cobbly sandy loam, very cobbly sandy loam, very gravelly loam	SM, SC-SM, SP-SM, GM, GC-GM, GP-GM	A-1, A-2-4, A-4	0-10	20-45	45-80	30-75	15-70	10-55	12-21	1-6
	38-48	Extremely cobbly sandy loam, very cobbly sandy loam, extremely cobbly loamy sand	SM, SP-SM, GM, GP-GM	A-1, A-2-4	0-10	20-45	45-80	30-75	15-55	5-30	12-16	1-3
	48-60	Extremely cobbly loamy sand, extremely cobbly sandy loam, very cobbly sandy loam	SP-SM, SM, GM, GP-GM	A-1, A-2-4	0-10	20-45	45-80	30-75	15-55	5-30	12-16	1-3

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	
18B:												
Escatawba-------	0-3	Loam	CL, CL-ML, ML	A-4	0	0-10	85-100	80-100	70-95	50-75	16-30	3-11
	3-17	Loam, silt loam, cobbly fine sandy loam	CL, CL-ML, ML, SM, SC, SC-SM	A-4, A-2-4	0	0-15	80-100	75-100	50-100	30-90	14-30	2-11
	17-30	Loam, gravelly silty clay loam, cobbly clay loam, silt loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0-15	70-100	60-100	50-100	35-95	23-38	7-15
	30-50	Clay loam, gravelly clay loam, cobbly clay, gravelly silty clay loam	CL, SC	A-6, A-7-6	0-5	0-15	70-85	60-85	55-85	45-80	39-52	16-23
	50-60	Cobbly clay loam, very gravelly silty clay loam, gravelly clay	CL, CH, MH, SC, SM	A-6, A-7	0-5	10-20	60-85	50-80	45-80	35-75	39-66	16-31
18C:												
Escatawba-------	0-3	Loam	CL, CL-ML, ML	A-4	0	0-10	85-100	80-100	70-95	50-75	16-30	3-11
	3-17	Loam, silt loam, cobbly fine sandy loam	CL, CL-ML, ML, SM, SC, SC-SM	A-4, A-2-4	0	0-15	80-100	75-100	50-100	30-90	14-30	2-11
	17-30	Loam, gravelly silty clay loam, cobbly clay loam, silt loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0-15	70-100	60-100	50-100	35-95	23-38	7-15
	30-50	Clay loam, gravelly clay loam, cobbly clay, gravelly silty clay loam	CL, SC	A-6, A-7-6	0-5	0-15	70-85	60-85	55-85	45-80	39-52	16-23
	50-60	Cobbly clay loam, very gravelly silty clay loam, gravelly clay	CL, CH, MH, SC, SM	A-6, A-7	0-5	10-20	60-85	50-80	45-80	35-75	39-66	16-31

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	
18D:												
Escatawba-------	0-3	Loam	CL, CL-ML, ML	A-4	0	0-10	85-100	80-100	70-95	50-75	16-30	3-11
	3-17	Loam, silt loam, cobbly fine sandy loam	CL, CL-ML, ML, SM, SC, SC-SM	A-4, A-2-4	0	0-15	80-100	75-100	50-100	30-90	14-30	2-11
	17-30	Loam, gravelly silty clay loam, cobbly clay loam, silt loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0-15	70-100	60-100	50-100	35-95	23-38	7-15
	30-50	Clay loam, gravelly clay loam, cobbly clay, gravelly silty clay loam	CL, SC	A-6, A-7-6	0-5	0-15	70-85	60-85	55-85	45-80	39-52	16-23
	50-60	Cobbly clay loam, very gravelly silty clay loam, gravelly clay	CL, CH, MH, SC, SM	A-6, A-7	0-5	10-20	60-85	50-80	45-80	35-75	39-66	16-31
19B:												
Escatawba-------	0-4	Silt loam	CL, CL-ML, ML	A-4	0	0-10	90-100	80-100	75-100	55-90	16-30	3-11
	4-9	Silt loam, loam	CL, CL-ML, ML	A-4	0	0-10	90-100	80-100	70-100	50-90	14-30	2-11
	9-36	Silt loam, silty clay loam, gravelly silt loam, cobbly loam	CL, SC	A-6, A-4	0	0-15	80-100	75-100	60-100	45-95	23-39	7-16
	36-53	Gravelly silty clay loam, clay, cobbly clay loam	CL	A-6, A-7	0	0-15	75-85	65-85	60-85	45-80	39-52	16-23
	53-75	Gravelly clay, gravelly silty clay loam, very cobbly clay loam	GC, SC, CH, MH, SM	A-7	0	0-20	60-80	45-75	40-75	30-70	39-66	16-31

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	
19C:												
Escatawba-------	0-4	Silt loam	CL, CL-ML, ML	A-4	0	0-10	90-100	80-100	75-100	55-90	16-30	3-11
	4-9	Silt loam, loam	CL, CL-ML, ML	A-4	0	0-10	90-100	80-100	70-100	50-90	14-30	2-11
	9-36	Silt loam, silty clay loam, gravelly silt loam, cobbly loam	CL, SC	A-6, A-4	0	0-15	80-100	75-100	60-100	45-95	23-39	7-16
	36-53	Gravelly silty clay loam, clay, cobbly clay loam	CL	A-6, A-7	0	0-15	75-85	65-85	60-85	45-80	39-52	16-23
	53-75	Gravelly clay, gravelly silty clay loam, very cobbly clay loam	SC, CH, MH, SM	A-7	0	0-20	60-80	45-75	40-75	30-70	39-66	16-31
20C:												
Faywood---------	0-6	Silty clay loam	CL	A-6	0	0-2	80-100	75-100	70-100	65-95	31-43	11-18
	6-24	Clay, silty clay, silty clay loam	MH, CL, CH	A-7	0	0-2	80-100	75-100	70-100	55-95	39-61	16-28
	24-34	Bedrock			---	---	---	---	---	---	---	---
Poplimento------	0-5	Silty clay loam	CL	A-6	0	0-5	85-100	80-100	75-100	70-95	31-43	11-18
	5-20	Silty clay, clay, silty clay loam	CL, ML, CH, MH	A-7	0	0-5	85-100	80-100	75-100	60-95	39-61	16-28
	20-35	Silty clay, channery clay, very channery silty clay loam	CL, CH, MH, ML, SM, SC	A-7, A-2-7	0	0-10	50-100	35-100	35-100	30-95	39-61	16-28
	35-60	Silty clay loam, channery silty clay, very channery silty clay loam	CL, SC	A-6, A-7, A-2-6	0	0-15	50-100	35-100	35-100	30-95	31-52	11-23
20D:												
Faywood---------	0-6	Silty clay loam	CL	A-6	0	0-2	80-100	75-100	70-100	65-95	31-43	11-18
	6-24	Clay, silty clay, silty clay loam	MH, CL, CH	A-7	0	0-2	80-100	75-100	70-100	55-95	39-61	16-28
	24-34	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	
20D:												
Poplimento------	0-5	Silty clay loam	CL	A-6	0	0-5	85-100	80-100	75-100	70-95	31-43	11-18
	5-20	Silty clay, clay, silty clay loam	CL, ML, CH, MH	A-7	0	0-5	85-100	80-100	75-100	60-95	39-61	16-28
	20-35	Silty clay, channery clay, very channery silty clay loam	CL, CH, MH, ML, SM, SC	A-7, A-2-7	0	0-10	50-100	35-100	35-100	30-95	39-61	16-28
	35-60	Silty clay loam, channery silty clay, very channery silty clay loam	CL, SC	A-6, A-7, A-2-6	0	0-15	50-100	35-100	35-100	30-95	31-52	11-23
20E:												
Faywood---------	0-6	Silty clay loam	CL	A-6	0	0-2	80-100	75-100	70-100	65-95	31-43	11-18
	6-24	Clay, silty clay, silty clay loam	MH, CL, CH	A-7	0	0-2	80-100	75-100	70-100	55-95	39-61	16-28
	24-34	Bedrock			---	---	---	---	---	---	---	---
Poplimento------	0-5	Silty clay loam	CL	A-6	0	0-5	85-100	80-100	75-100	70-95	31-43	11-18
	5-20	Silty clay, clay, silty clay loam	CL, ML, CH, MH	A-7	0	0-5	85-100	80-100	75-100	60-95	39-61	16-28
	20-35	Silty clay, channery clay, very channery silty clay loam	CL, CH, MH, ML, SM, SC	A-7, A-2-7	0	0-10	50-100	35-100	35-100	30-95	39-61	16-28
	35-60	Silty clay loam, channery silty clay, very channery silty clay loam	CL, SC	A-6, A-7, A-2-6	0	0-15	50-100	35-100	35-100	30-95	31-52	11-23

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	
21A:												
Feedstone-------	0-21	Silt loam	CL-ML, CL	A-4	0	0	80-100	75-100	65-100	50-90	18-25	4-8
	21-26	Silt loam, loam, fine sandy loam	CL-ML, CL, SC, SC-SM	A-4, A-2-4	0	0	80-100	75-100	55-100	30-90	18-25	4-8
	26-47	Loam, clay loam, silt loam, gravelly sandy clay loam	CL, SC	A-4, A-6, A-2-4	0	0-5	65-100	55-100	45-100	20-90	23-39	7-16
	47-50	Sandy loam, gravelly loam, fine sandy loam	SC-SM, SC, CL-ML, CL	A-2-4, A-4, A-1	0	0-5	65-100	55-100	30-95	15-75	16-30	3-11
	50-65	Very gravelly sandy loam, cobbly loam, fine sandy loam	SM, SC, SC-SM, ML, CL, CL-ML, GW-GC, GW-GM, GM, GC, GC-GM	A-2-4, A-4, A-1	0	0-15	45-85	30-80	15-75	10-60	14-30	2-11
22C:												
Frederick-------	0-3	Silt loam	CL, CL-ML	A-4	0	0-3	85-100	80-100	70-100	60-90	19-31	5-11
	3-8	Silt loam, silty clay loam, loam, gravelly silty clay loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4, A-6	0	0-13	60-100	45-100	40-100	30-95	21-43	6-18
	8-20	Silty clay, silty clay loam, clay, gravelly silty clay loam	CL, MH, CH, SC, SM	A-7, A-6	0	0-7	65-100	55-100	50-100	40-95	39-61	16-28
	20-72	Silty clay, clay, gravelly clay	MH, CH, CL, SC, SM	A-7	0	0-7	65-100	55-100	50-100	40-95	43-79	17-38

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	
22D:												
Frederick-------	0-3	Silt loam	CL, CL-ML	A-4	0	0-3	85-100	80-100	70-100	60-90	19-31	5-11
	3-8	Silt loam, silty clay loam, loam, gravelly silty clay loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4, A-6	0	0-13	60-100	45-100	40-100	30-95	21-43	6-18
	8-20	Silty clay, silty clay loam, clay, gravelly silty clay loam	CL, MH, CH, SC, SM	A-7, A-6	0	0-7	65-100	55-100	50-100	40-95	39-61	16-28
	20-72	Silty clay, clay, gravelly clay	MH, CH, CL, SC, SM	A-7	0	0-7	65-100	55-100	50-100	40-95	43-79	17-38
23C:												
Frederick-------	0-3	Gravelly silt loam	SC, SC-SM, CL, CL-ML	A-4	0	0-7	65-80	55-75	50-75	40-65	19-31	5-11
	3-8	Silt loam, silty clay loam, loam, gravelly silty clay loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4, A-6	0	0-13	60-100	45-100	40-100	30-95	21-43	6-18
	8-20	Silty clay, silty clay loam, clay, gravelly silty clay loam	CL, MH, CH, SC, SM	A-7, A-6	0	0-7	65-100	55-100	50-100	40-95	39-61	16-28
	20-72	Silty clay, clay, gravelly clay	MH, CH, CL, SC, SM	A-7	0	0-7	65-100	55-100	50-100	40-95	43-79	17-38

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:												
Watahala	0-3	Very gravelly sandy loam	SC-SM, SC	A-2-4, A-1	0	0-7	55-60	40-45	25-35	10-20	16-25	3-8
	3-27	Gravelly silt loam, very gravelly loam, gravelly loam, very gravelly silt loam	SC-SM, SC, CL-ML, CL	A-4, A-2-4	0	0-15	60-80	45-75	40-75	30-65	16-30	3-11
	27-37	Gravelly loam, gravelly silt loam, gravelly silty clay loam, gravelly clay loam	SC, SC-SM, CL, CL-ML	A-4, A-6	0	0-15	70-80	60-75	50-75	35-70	23-39	7-16
	37-61	Gravelly clay, silty clay, clay	MH, CH, CL, SC, SM	A-7	0	0-10	65-100	55-100	50-100	40-95	45-70	20-33
23D:												
Frederick	0-3	Gravelly silt loam	SC, SC-SM, CL, CL-ML	A-4	0	0-7	65-80	55-75	50-75	40-65	19-31	5-11
	3-8	Silt loam, silty clay loam, loam, gravelly silty clay loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4, A-6	0	0-13	60-100	45-100	40-100	30-95	21-43	6-18
	8-20	Silty clay, silty clay loam, clay, gravelly silty clay loam	CL, MH, CH, SC, SM	A-7, A-6	0	0-7	65-100	55-100	50-100	40-95	39-61	16-28
	20-72	Silty clay, clay, gravelly clay	MH, CH, CL, SC, SM	A-7	0	0-7	65-100	55-100	50-100	40-95	43-79	17-38

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	
23D:												
Watahala--------	0-3	Very gravelly sandy loam	SC-SM, SC	A-2-4, A-1	0	0-7	55-60	40-45	25-35	10-20	16-25	3-8
	3-27	Gravelly silt loam, very gravelly loam, gravelly loam, very gravelly silt loam	SC-SM, SC, CL-ML, CL	A-4, A-2-4	0	0-15	60-80	45-75	40-75	30-65	16-30	3-11
	27-37	Gravelly loam, gravelly silt loam, gravelly silty clay loam, gravelly clay loam	SC, SC-SM, CL, CL-ML	A-4, A-6	0	0-15	70-80	60-75	50-75	35-70	23-39	7-16
	37-61	Gravelly clay, silty clay, clay	MH, CH, CL, SC, SM	A-7	0	0-10	65-100	55-100	50-100	40-95	45-70	20-33
24B:												
Gilpin----------	0-2	Silt loam	CL, CL-ML	A-4	0	0-2	80-95	75-90	70-90	55-80	21-31	6-11
	2-7	Channery silt loam, silt loam, channery loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4	0	0-2	60-95	50-90	45-90	30-80	21-31	6-11
	7-26	Channery silty clay loam, silt loam, channery loam	CL, SC	A-6, A-2-4	0	0-5	60-95	50-90	45-90	30-85	23-39	7-16
	26-32	Very channery silty clay loam, channery silt loam, very channery loam	SC, SC-SM	A-6, A-2-4, A-2-6	0	0-5	50-65	35-50	30-50	20-50	21-39	6-16
	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	
24C:												
Gilpin	0-2	Silt loam	CL, CL-ML	A-4	0	0-2	80-95	75-90	70-90	55-80	21-31	6-11
	2-7	Channery silt loam, silt loam, channery loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4	0	0-2	60-95	50-90	45-90	30-80	21-31	6-11
	7-26	Channery silty clay loam, silt loam, channery loam	CL, SC	A-6, A-2-4	0	0-5	60-95	50-90	45-90	30-85	23-39	7-16
	26-32	Very channery silty clay loam, channery silt loam, very channery loam	SC, SC-SM	A-6, A-2-4, A-2-6	0	0-5	50-65	35-50	30-50	20-50	21-39	6-16
	32-42	Bedrock			---	---	---	---	---	---	---	---
24D:												
Gilpin	0-2	Silt loam	CL, CL-ML	A-4	0	0-2	80-95	75-90	70-90	55-80	21-31	6-11
	2-7	Channery silt loam, silt loam, channery loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4	0	0-2	60-95	50-90	45-90	30-80	21-31	6-11
	7-26	Channery silty clay loam, silt loam, channery loam	CL, SC	A-6, A-2-4	0	0-5	60-95	50-90	45-90	30-85	23-39	7-16
	26-32	Very channery silty clay loam, channery silt loam, very channery loam	SC, SC-SM	A-6, A-2-4, A-2-6	0	0-5	50-65	35-50	30-50	20-50	21-39	6-16
	32-42	Bedrock			---	---	---	---	---	---	---	---
25A:												
Gladehill	0-20	Loam	CL-ML, ML	A-4	0	0-5	85-100	80-100	70-95	50-75	13-23	1-7
	20-33	Loam, fine sandy loam, sandy loam	CL-ML, SC-SM, ML, SM	A-4, A-2-4	0	0-5	85-100	80-100	50-95	25-75	12-23	1-7
	33-60	Fine sandy loam, loam, gravelly sandy loam, sandy clay loam	SM, SC-SM, SC, ML, CL, CL-ML	A-4, A-2-4, A-1	0	0-15	70-100	60-100	35-95	20-75	12-30	1-11

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	
26A:												
Irongate--------	0-21	Fine sandy loam	SC-SM	A-4	0	0-10	85-100	80-100	55-85	30-55	16-23	3-7
	21-42	Sandy loam, loam, fine sandy loam	SC-SM, CL-ML	A-2-4, A-4	0	0-10	85-100	80-100	50-95	25-75	16-23	3-7
	42-55	Sandy loam, loam, fine sandy loam, gravelly sandy loam	SC-SM, SM, CL-ML, ML	A-2-4, A-1, A-4	0	0-10	65-100	50-100	30-95	15-75	12-23	1-7
	55-62	Gravelly sandy loam, loam, fine sandy loam, sandy loam	SC-SM, SM, CL-ML, ML	A-1, A-2-4, A-4	0	0-10	65-100	50-100	30-95	15-75	12-23	1-7
27C:												
Lehew-----------	0-2	Channery sandy loam	SM, SC-SM	A-1, A-2-4	0	5-10	65-80	55-75	30-55	15-30	11-21	NP-6
	2-15	Very channery loam, channery sandy loam	SC-SM, SM	A-2-4, A-1, A-4	0	5-10	60-75	45-65	30-65	15-50	12-23	1-7
	15-27	Very channery loam, extremely channery sandy loam	SC-SM, SM, GM, GC-GM	A-2-4, A-1	0	5-15	40-60	20-50	15-50	5-40	12-23	1-7
	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	Plas- ticity index
	In				Pct	Pct					Pct	
27C:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
27D:												
Lehew-----------	0-2	Channery sandy loam	SM, SC-SM	A-1, A-2-4	0	5-10	65-80	55-75	30-55	15-30	11-21	NP-6
	2-15	Very channery loam, channery sandy loam	SC-SM, SM	A-2-4, A-1, A-4	0	5-10	60-75	45-65	30-65	15-50	12-23	1-7
	15-27	Very channery loam, extremely channery sandy loam	SC-SM, SM, GM, GC-GM	A-2-4, A-1	0	5-15	40-60	20-50	15-50	5-40	12-23	1-7
	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	
27D:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
27E:												
Lehew-----------	0-2	Channery sandy loam	SM, SC-SM	A-1, A-2-4	0	5-10	65-80	55-75	30-55	15-30	11-21	NP-6
	2-15	Very channery loam, channery sandy loam	SC-SM, SM	A-2-4, A-1, A-4	0	5-10	60-75	45-65	30-65	15-50	12-23	1-7
	15-27	Very channery loam, extremely channery sandy loam	SC-SM, SM, GM, GC-GM	A-2-4, A-1	0	5-15	40-60	20-50	15-50	5-40	12-23	1-7
	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	Plas- ticity index
	In				Pct	Pct					Pct	
27E:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
28F:												
Lehew-----------	0-2	Channery sandy loam	SM, SC-SM	A-1, A-2-4	0	5-10	65-80	55-75	30-55	15-30	11-21	NP-6
	2-15	Very channery loam, channery sandy loam	SC-SM, SM	A-2-4, A-1, A-4	0	5-10	60-75	45-65	30-65	15-50	12-23	1-7
	15-27	Very channery loam, extremely channery sandy loam	SC-SM, SM, GM, GC-GM	A-2-4, A-1	0	5-15	40-60	20-50	15-50	5-40	12-23	1-7
	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	
28F:												
Berks	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
29C:												
Lily	0-3	Sandy loam	SC-SM, SM, SC	A-2-4	0	0-2	80-95	75-90	45-65	25-35	13-25	1-8
	3-17	Loam, gravelly sandy loam, gravelly fine sandy loam	CL, CL-ML, ML, SM, SC, SC-SM	A-4, A-1, A-2-4	0	0	65-90	55-90	30-85	15-70	13-25	1-8
	17-32	Clay loam, sandy clay loam, gravelly loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-6, A-2-4	0	0	60-90	50-90	40-90	15-70	23-39	7-16
	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	
30D:												
Lily------------	0-3	Sandy loam	SC-SM, SM, SC	A-2-4	0	0-2	80-95	75-90	45-65	25-35	13-25	1-8
	3-17	Loam, gravelly sandy loam, gravelly fine sandy loam	CL, CL-ML, ML, SM, SC, SC-SM	A-4, A-1, A-2-4	0	0	65-90	55-90	30-85	15-70	13-25	1-8
	17-32	Clay loam, sandy clay loam, gravelly loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-6, A-2-4	0	0	60-90	50-90	40-90	15-70	23-39	7-16
	32-42	Bedrock			---	---	---	---	---	---	---	---
31C:												
Lily------------	0-3	Sandy loam	SC-SM, SM, SC	A-2-4	0	0-2	80-95	75-90	45-65	25-35	13-25	1-8
	3-17	Loam, gravelly sandy loam, gravelly fine sandy loam	CL, CL-ML, ML, SM, SC, SC-SM	A-4, A-1, A-2-4	0	0	65-90	55-90	30-85	15-70	13-25	1-8
	17-32	Clay loam, sandy clay loam, gravelly loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-6, A-2-4	0	0	60-90	50-90	40-90	15-70	23-39	7-16
	32-42	Bedrock			---	---	---	---	---	---	---	---
McClung---------	0-3	Sandy loam	SM, SC, SC-SM	A-2-4, A-4	0	0	85-100	75-100	45-70	20-40	12-25	1-8
	3-11	Sandy loam, fine sandy loam, gravelly loam	SC-SM, SC, SM, ML, CL-ML, CL	A-2-4, A-4, A-1	0	0	65-100	50-100	30-95	15-75	16-30	1-11
	11-19	Sandy loam, loam, gravelly loam	SC, SC-SM, SM, CL, CL-ML, ML	A-2-4, A-4, A-1	0	0	65-100	50-100	30-95	15-75	16-31	1-11
	19-65	Sandy clay loam, sandy clay, gravelly clay loam	SC, CL	A-6, A-2-4, A-4	0	0	65-100	50-100	50-100	20-80	23-43	1-18
Dekalb----------	0-2	Channery sandy loam	SC-SM, SM, SC	A-2-4, A-1	0	10-25	70-90	60-85	35-60	20-35	14-25	NP-8
	2-30	Very channery sandy loam, very channery fine sandy loam, very channery loam	SC-SM, SM, SC	A-1, A-2-4, A-4	0	12-25	55-65	35-55	20-55	10-40	14-25	NP-8
	30-40	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	
32C:												
Macove----------	0-1	Channery silt loam	CL, ML, CL-ML, SC, SM, SC-SM	A-4	0-10	0-10	65-80	55-75	50-70	40-65	16-30	3-11
	1-4	Channery loam, very channery silt loam	SC, SM, SC-SM, CL, ML, CL-ML	A-4	0-10	0-15	65-85	55-80	50-80	35-70	16-30	3-11
	4-7	Channery silt loam, very channery loam	SC, SM, SC-SM, CL, ML, CL-ML	A-4, A-2-4, A-1	0-10	0-15	50-85	35-75	30-75	20-65	16-30	3-11
	7-65	Very channery silty clay loam, very bouldery loam, extremely channery silt loam	SC, SM, SC-SM, CL, ML, CL-ML	A-6, A-4, A-2-4	0-30	10-15	55-85	40-80	35-80	25-75	16-39	3-16
32D:												
Macove----------	0-1	Channery silt loam	CL, ML, CL-ML, SC, SM, SC-SM	A-4	0-10	0-10	65-80	55-75	50-70	40-65	16-30	3-11
	1-4	Channery loam, very channery silt loam	SC, SM, SC-SM, CL, ML, CL-ML	A-4	0-10	0-15	65-85	55-80	50-80	35-70	16-30	3-11
	4-7	Channery silt loam, very channery loam	SC, SM, SC-SM, CL, ML, CL-ML	A-4, A-2-4, A-1	0-10	0-15	50-85	35-75	30-75	20-65	16-30	3-11
	7-65	Very channery silty clay loam, very bouldery loam, extremely channery silt loam	SC, SM, SC-SM, CL, ML, CL-ML	A-6, A-4, A-2-4	0-30	10-15	55-85	40-80	35-80	25-75	16-39	3-16

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	
33E:												
Macove----------	0-5	Extremely stony loam	SC, SM, SC-SM	A-2-4, A-4	25-30	30-35	55-65	40-55	35-50	25-40	16-30	3-11
	5-12	Very stony loam, very channery silt loam, extremely stony loam	SC, SM, SC-SM, CL, ML, CL-ML	A-4, A-2-4	15-30	20-35	55-80	40-70	35-70	25-65	16-30	3-11
	12-20	Very stony silt loam, channery silt loam, very channery loam	CL, CL-ML, SC, SC-SM	A-4	10-20	10-30	75-95	60-95	50-90	35-85	16-30	3-11
	20-65	Very channery silty clay loam, very bouldery loam, extremely channery silt loam	SC, SM, SC-SM, CL, ML, CL-ML	A-6, A-4, A-2-4	0-30	10-15	55-85	40-80	35-80	25-75	16-39	3-16
34D:												
Macove----------	0-1	Channery silt loam	CL, ML, CL-ML, SC, SM, SC-SM	A-4	0-10	0-10	65-80	55-75	50-70	40-65	16-30	3-11
	1-4	Channery loam, very channery silt loam	SC, SM, SC-SM, CL, ML, CL-ML	A-4	0-10	0-15	65-85	55-80	50-80	35-70	16-30	3-11
	4-7	Channery silt loam, very channery loam	SC, SM, SC-SM, CL, ML, CL-ML	A-4, A-2-4, A-1	0-10	0-15	50-85	35-75	30-75	20-65	16-30	3-11
	7-65	Very channery silty clay loam, very bouldery loam, extremely channery silt loam	SC, SM, SC-SM, CL, ML, CL-ML	A-6, A-4, A-2-4	0-30	10-15	55-85	40-80	35-80	25-75	16-39	3-16

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	
34D:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	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	
34E:												
Macove	0-1	Channery silt loam	CL, ML, CL-ML, SC, SM, SC-SM	A-4	0-10	0-10	65-80	55-75	50-70	40-65	16-30	3-11
	1-4	Channery loam, very channery silt loam	SC, SM, SC-SM, CL, ML, CL-ML	A-4	0-10	0-15	65-85	55-80	50-80	35-70	16-30	3-11
	4-7	Channery silt loam, very channery loam	SC, SM, SC-SM, CL, ML, CL-ML	A-4, A-2-4, A-1	0-10	0-15	50-85	35-75	30-75	20-65	16-30	3-11
	7-65	Very channery silty clay loam, very bouldery loam, extremely channery silt loam	SC, SM, SC-SM, CL, ML, CL-ML	A-6, A-4, A-2-4	0-30	10-15	55-85	40-80	35-80	25-75	16-39	3-16
Berks	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	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	
35C:												
Mandy-----------	0-4	Channery silt loam	CL-ML, CL, ML	A-4	0	1-5	80-85	75-85	70-85	55-75	13-30	1-11
	4-6	Channery silt loam, channery loam	CL-ML, CL, ML, SM, SC, SC-SM	A-4	0	1-5	80-85	70-85	60-85	40-75	13-30	1-11
	6-10	Channery silt loam, very channery loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4	0	5-10	55-75	40-65	35-60	25-55	16-31	3-11
	10-29	Very channery silt loam, very channery loam	SC, SC-SM, CL, CL-ML	A-4, A-2-4	0	8-15	55-75	45-65	35-65	25-55	16-31	3-11
	29-37	Extremely channery silt loam, extremely channery loam	GC, GC-GM	A-2-4, A-1	0	15-20	30-45	5-30	5-25	5-25	16-31	3-11
	37-47	Bedrock			---	---	---	---	---	---	---	---
35D:												
Mandy-----------	0-4	Channery silt loam	CL-ML, CL, ML	A-4	0	1-5	80-85	75-85	70-85	55-75	13-30	1-11
	4-6	Channery silt loam, channery loam	CL-ML, CL, ML, SM, SC, SC-SM	A-4	0	1-5	80-85	70-85	60-85	40-75	13-30	1-11
	6-10	Channery silt loam, very channery loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4	0	5-10	55-75	40-65	35-60	25-55	16-31	3-11
	10-29	Very channery silt loam, very channery loam	SC, SC-SM, CL, CL-ML	A-4, A-2-4	0	8-15	55-75	45-65	35-65	25-55	16-31	3-11
	29-37	Extremely channery silt loam, extremely channery loam	GC, GC-GM	A-2-4, A-1	0	15-20	30-45	5-30	5-25	5-25	16-31	3-11
	37-47	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	
35E:												
Mandy-----------	0-4	Channery silt loam	CL-ML, CL, ML	A-4	0	1-5	80-85	75-85	70-85	55-75	13-30	1-11
	4-6	Channery silt loam, channery loam	CL-ML, CL, ML, SM, SC, SC-SM	A-4	0	1-5	80-85	70-85	60-85	40-75	13-30	1-11
	6-10	Channery silt loam, very channery loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4	0	5-10	55-75	40-65	35-60	25-55	16-31	3-11
	10-29	Very channery silt loam, very channery loam	SC, SC-SM, CL, CL-ML	A-4, A-2-4	0	8-15	55-75	45-65	35-65	25-55	16-31	3-11
	29-37	Extremely channery silt loam, extremely channery loam	GC, GC-GM	A-2-4, A-1	0	15-20	30-45	5-30	5-25	5-25	16-31	3-11
	37-47	Bedrock			---	---	---	---	---	---	---	---
36A:												
Maurertown------	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	36-48	16-25
	8-26	Silty clay, clay, silty clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	44-66	22-39
	26-36	Silty clay, clay, silty clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	44-66	22-39
	36-44	Silty clay loam, clay, silty clay	CL, CH	A-7	0	0	100	100	90-100	75-95	44-66	22-39
	44-58	Silty clay loam, clay, silty clay	CL, CH	A-7	0	0-10	85-100	80-100	75-100	60-95	44-66	22-39
	58-63	Gravelly silty clay loam, gravelly silty clay, clay	CH, SC	A-7	0	0-10	65-100	55-100	50-100	40-95	44-66	22-39

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	
37B:												
McClung	0-3	Sandy loam	SM, SC, SC-SM	A-2-4, A-4	0	0	85-100	75-100	45-70	20-40	12-25	1-8
	3-11	Sandy loam, fine sandy loam, gravelly loam	SC-SM, SC, SM, ML, CL-ML, CL	A-2-4, A-4, A-1	0	0	65-100	50-100	30-95	15-75	16-30	1-11
	11-19	Sandy loam, loam, gravelly loam	SC, SC-SM, SM, CL, CL-ML, ML	A-2-4, A-4, A-1	0	0	65-100	50-100	30-95	15-75	16-31	1-11
	19-65	Sandy clay loam, sandy clay, gravelly clay loam	SC, CL	A-6, A-2-4, A-4	0	0	65-100	50-100	50-100	20-80	23-43	1-18
Lily	0-3	Sandy loam	SC-SM, SM, SC	A-2-4	0	0-2	80-95	75-90	45-65	25-35	13-25	1-8
	3-17	Loam, gravelly sandy loam, gravelly fine sandy loam	CL, CL-ML, ML, SM, SC, SC-SM	A-4, A-1, A-2-4	0	0	65-90	55-90	30-85	15-70	13-25	1-8
	17-32	Clay loam, sandy clay loam, gravelly loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-6, A-2-4	0	0	60-90	50-90	40-90	15-70	23-39	7-16
	32-42	Bedrock			---	---	---	---	---	---	---	---
38C:												
McClung	0-3	Sandy loam	SM, SC, SC-SM	A-2-4, A-4	0	0	85-100	75-100	45-70	20-40	12-25	1-8
	3-11	Sandy loam, fine sandy loam, gravelly loam	SC-SM, SC, SM, ML, CL-ML, CL	A-2-4, A-4, A-1	0	0	65-100	50-100	30-95	15-75	16-30	1-11
	11-19	Sandy loam, loam, gravelly loam	SC, SC-SM, SM, CL, CL-ML, ML	A-2-4, A-4, A-1	0	0	65-100	50-100	30-95	15-75	16-31	1-11
	19-65	Sandy clay loam, sandy clay, gravelly clay loam	SC, CL	A-6, A-2-4, A-4	0	0	65-100	50-100	50-100	20-80	23-43	1-18

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	
38C:												
Watahala--------	0-3	Very gravelly sandy loam	SC-SM, SC	A-2-4, A-1	0	0-7	55-60	40-45	25-35	10-20	16-25	3-8
	3-27	Gravelly silt loam, very gravelly loam, gravelly loam, very gravelly silt loam	SC-SM, SC, CL-ML, CL	A-4, A-2-4	0	0-15	60-80	45-75	40-75	30-65	16-30	3-11
	27-37	Gravelly loam, gravelly silt loam, gravelly silty clay loam, gravelly clay loam	SC, SC-SM, CL, CL-ML	A-4, A-6	0	0-15	70-80	60-75	50-75	35-70	23-39	7-16
	37-61	Gravelly clay, silty clay, clay	MH, CH, CL, SC, SM	A-7	0	0-10	65-100	55-100	50-100	40-95	45-70	20-33
Dekalb----------	0-2	Channery sandy loam	SC-SM, SM, SC	A-2-4, A-1	0	10-25	70-90	60-85	35-60	20-35	14-25	NP-8
	2-30	Very channery sandy loam, very channery fine sandy loam, very channery loam	SC-SM, SM, SC	A-1, A-2-4, A-4	0	12-25	55-65	35-55	20-55	10-40	14-25	NP-8
	30-40	Bedrock			---	---	---	---	---	---	---	---
38D:												
McClung---------	0-3	Sandy loam	SM, SC, SC-SM	A-2-4, A-4	0	0	85-100	75-100	45-70	20-40	12-25	1-8
	3-11	Sandy loam, fine sandy loam, gravelly loam	SC-SM, SC, SM, ML, CL-ML, CL	A-2-4, A-4, A-1	0	0	65-100	50-100	30-95	15-75	16-30	1-11
	11-19	Sandy loam, loam, gravelly loam	SC, SC-SM, SM, CL, CL-ML, ML	A-2-4, A-4, A-1	0	0	65-100	50-100	30-95	15-75	16-31	1-11
	19-65	Sandy clay loam, sandy clay, gravelly clay loam	SC, CL	A-6, A-2-4, A-4	0	0	65-100	50-100	50-100	20-80	23-43	1-18

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	
38D:												
Watahala	0-3	Very gravelly sandy loam	SC-SM, SC	A-2-4, A-1	0	0-7	55-60	40-45	25-35	10-20	16-25	3-8
	3-27	Gravelly silt loam, very gravelly loam, gravelly loam, very gravelly silt loam	SC-SM, SC, CL-ML, CL	A-4, A-2-4	0	0-15	60-80	45-75	40-75	30-65	16-30	3-11
	27-37	Gravelly loam, gravelly silt loam, gravelly silty clay loam, gravelly clay loam	SC, SC-SM, CL, CL-ML	A-4, A-6	0	0-15	70-80	60-75	50-75	35-70	23-39	7-16
	37-61	Gravelly clay, silty clay, clay	MH, CH, CL, SC, SM	A-7	0	0-10	65-100	55-100	50-100	40-95	45-70	20-33
Dekalb	0-2	Channery sandy loam	SC-SM, SM, SC	A-2-4, A-1	0	10-25	70-90	60-85	35-60	20-35	14-25	NP-8
	2-30	Very channery sandy loam, very channery fine sandy loam, very channery loam	SC-SM, SM, SC	A-1, A-2-4, A-4	0	12-25	55-65	35-55	20-55	10-40	14-25	NP-8
	30-40	Bedrock			---	---	---	---	---	---	---	---
39B:												
Murrill	0-4	Loam	CL, CL-ML	A-4	0	0	80-90	75-85	65-80	45-60	16-25	3-8
	4-10	Channery silt loam, channery sandy loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-2-4, A-1	0	0-7	75-85	65-85	40-85	20-75	16-30	3-11
	10-40	Channery silty clay loam, silty clay loam, channery silt loam, channery clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4	0	0-7	75-85	65-85	55-85	40-80	23-39	7-16
	40-65	Silty clay, silty clay loam, channery clay loam	CL	A-7, A-6	0	0-7	80-100	70-100	65-100	50-95	31-57	11-26

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	
39C:												
Murrill---------	0-4	Loam	CL, CL-ML	A-4	0	0	80-90	75-85	65-80	45-60	16-25	3-8
	4-10	Channery silt loam, channery sandy loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-2-4, A-1	0	0-7	75-85	65-85	40-85	20-75	16-30	3-11
	10-40	Channery silty clay loam, silty clay loam, channery silt loam, channery clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4	0	0-7	75-85	65-85	55-85	40-80	23-39	7-16
	40-65	Silty clay, silty clay loam, channery clay loam	CL	A-7, A-6	0	0-7	80-100	70-100	65-100	50-95	31-57	11-26
39D:												
Murrill---------	0-4	Loam	CL, CL-ML	A-4	0	0	80-90	75-85	65-80	45-60	16-25	3-8
	4-10	Channery silt loam, channery sandy loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-2-4, A-1	0	0-7	75-85	65-85	40-85	20-75	16-30	3-11
	10-40	Channery silty clay loam, silty clay loam, channery silt loam, channery clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4	0	0-7	75-85	65-85	55-85	40-80	23-39	7-16
	40-65	Silty clay, silty clay loam, channery clay loam	CL	A-7, A-6	0	0-7	80-100	70-100	65-100	50-95	31-57	11-26

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	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
40C:												
Murrill----------	0-4	Cobbly loam	CL, CL-ML	A-4	0	25-40	90-100	90-100	75-95	50-75	16-25	3-8
	4-10	Channery silt loam, channery sandy loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-2-4, A-1	0	0-7	75-85	65-85	40-85	20-75	16-30	3-11
	10-40	Channery silty clay loam, silty clay loam, channery silt loam, channery clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4	0	0-7	75-85	65-85	55-85	40-80	23-39	7-16
	40-65	Silty clay, silty clay loam, channery clay loam	CL	A-7, A-6	0	0-7	80-100	70-100	65-100	50-95	31-57	11-26
40D:												
Murrill----------	0-4	Cobbly loam	CL, CL-ML	A-4	0	25-40	90-100	90-100	75-95	50-75	16-25	3-8
	4-10	Channery silt loam, channery sandy loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-2-4, A-1	0	0-7	75-85	65-85	40-85	20-75	16-30	3-11
	10-40	Channery silty clay loam, silty clay loam, channery silt loam, channery clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4	0	0-7	75-85	65-85	55-85	40-80	23-39	7-16
	40-65	Silty clay, silty clay loam, channery clay loam	CL	A-7, A-6	0	0-7	80-100	70-100	65-100	50-95	31-57	11-26

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	
40E:												
Murrill---------	0-4	Cobbly loam	CL, CL-ML	A-4	0	25-40	90-100	90-100	75-95	50-75	16-25	3-8
	4-10	Channery silt loam, channery sandy loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-2-4, A-1	0	0-7	75-85	65-85	40-85	20-75	16-30	3-11
	10-40	Channery silty clay loam, silty clay loam, channery silt loam, channery clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4	0	0-7	75-85	65-85	55-85	40-80	23-39	7-16
	40-65	Silty clay, silty clay loam, channery clay loam	CL	A-7, A-6	0	0-7	80-100	70-100	65-100	50-95	31-57	11-26
41B:												
Nicelytown------	0-5	Silt loam	CL, CL-ML	A-4	0	0-10	85-100	80-100	75-100	60-90	13-31	1-11
	5-8	Silt loam, loam, fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0-10	85-100	80-100	60-100	35-90	13-31	1-11
	8-34	Clay loam, silty clay loam, gravelly silt loam	CL, SC	A-6, A-4	0	0-15	70-100	60-100	50-100	35-95	23-39	7-16
	34-65	Silty clay loam, gravelly silty clay loam, very gravelly loam	CL, SC	A-6, A-2-4	0	0-15	60-100	45-100	40-100	25-95	23-39	7-16
42A:												
Ogles-----------	0-5	Very cobbly loam	SC, SC-SM	A-2-4, A-4	0	30-45	60-75	45-65	40-65	30-50	21-31	6-11
	5-28	Extremely cobbly sandy loam, very cobbly loam	SC-SM, SC	A-1, A-2-4	0	30-45	55-75	35-70	25-65	10-50	16-31	3-11
	28-60	Extremely cobbly sandy loam, extremely cobbly loamy sand, very cobbly sandy loam	GW-GC, SC-SM, SC	A-1, A-2-4	0	20-40	40-75	20-65	10-50	5-25	16-25	3-8

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	
43B:												
Oriskany--------	0-6	Cobbly sandy loam	SC-SM	A-2-4	0-10	20-30	85-95	75-90	45-65	20-35	12-21	1-6
	6-11	Cobbly sandy loam, stony sandy loam, extremely cobbly loam	SC-SM, SC, CL-ML, CL	A-2-4, A-4, A-1	0-15	20-35	55-90	40-90	25-85	10-65	12-30	1-11
	11-65	Very cobbly loam, extremely cobbly loam, very stony clay loam, extremely cobbly sandy clay loam	SC, SC-SM	A-4, A-6, A-2-6, A-2-4	5-20	20-40	50-75	30-70	25-65	10-55	21-39	6-16
44C:												
Oriskany--------	0-6	Cobbly sandy loam	SC-SM	A-2-4	0-10	20-30	85-95	75-90	45-65	20-35	12-21	1-6
	6-11	Cobbly sandy loam, stony sandy loam, extremely cobbly loam	SC-SM, SC, CL-ML, CL	A-2-4, A-4, A-1	0-15	20-35	55-90	40-90	25-85	10-65	12-30	1-11
	11-65	Very cobbly loam, extremely cobbly loam, very stony clay loam, extremely cobbly sandy clay loam	SC, SC-SM	A-4, A-6, A-2-6, A-2-4	5-20	20-40	50-75	30-70	25-65	10-55	21-39	6-16

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	
44D:												
Oriskany--------	0-6	Cobbly sandy loam	SC-SM	A-2-4	0-10	20-30	85-95	75-90	45-65	20-35	12-21	1-6
	6-11	Cobbly sandy loam, stony sandy loam, extremely cobbly loam	SC-SM, SC, CL-ML, CL	A-2-4, A-4, A-1	0-15	20-35	55-90	40-90	25-85	10-65	12-30	1-11
	11-65	Very cobbly loam, extremely cobbly loam, very stony clay loam, extremely cobbly sandy clay loam	SC, SC-SM	A-4, A-6, A-2-6, A-2-4	5-20	20-40	50-75	30-70	25-65	10-55	21-39	6-16
44E:												
Oriskany--------	0-6	Cobbly sandy loam	SC-SM	A-2-4	0-10	20-30	85-95	75-90	45-65	20-35	12-21	1-6
	6-11	Cobbly sandy loam, stony sandy loam, extremely cobbly loam	SC-SM, SC, CL-ML, CL	A-2-4, A-4, A-1	0-15	20-35	55-90	40-90	25-85	10-65	12-30	1-11
	11-65	Very cobbly loam, extremely cobbly loam, very stony clay loam, extremely cobbly sandy clay loam	SC, SC-SM	A-4, A-6, A-2-6, A-2-4	5-20	20-40	50-75	30-70	25-65	10-55	21-39	6-16

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	
45E:												
Oriskany--------	0-6	Extremely bouldery sandy loam	SC-SM	A-1	50-55	10-15	70-80	60-70	40-45	20-25	12-21	1-6
	6-11	Cobbly sandy loam, stony sandy loam, extremely cobbly loam	SC-SM, SC, CL-ML, CL	A-2-4, A-4, A-1	0-15	20-35	55-90	40-90	25-85	10-65	12-30	1-11
	11-65	Very cobbly loam, extremely cobbly loam, very stony clay loam, extremely cobbly sandy clay loam	SC, SC-SM	A-4, A-6, A-2-6, A-2-4	5-20	20-40	50-75	30-70	25-65	10-55	21-39	6-16
46C:												
Oriskany--------	0-6	Cobbly sandy loam	SC-SM	A-2-4	0-10	20-30	85-95	75-90	45-65	20-35	12-21	1-6
	6-11	Cobbly sandy loam, stony sandy loam, extremely cobbly loam	SC-SM, SC, CL-ML, CL	A-2-4, A-4, A-1	0-15	20-35	55-90	40-90	25-85	10-65	12-30	1-11
	11-65	Very cobbly loam, extremely cobbly loam, very stony clay loam, extremely cobbly sandy clay loam	SC, SC-SM	A-4, A-6, A-2-6, A-2-4	5-20	20-40	50-75	30-70	25-65	10-55	21-39	6-16

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	
46C:												
Murrill---------	0-4	Cobbly loam	CL, CL-ML	A-4	0	25-40	90-100	90-100	75-95	50-75	16-25	3-8
	4-10	Channery silt loam, channery sandy loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-2-4, A-1	0	0-7	75-85	65-85	40-85	20-75	16-30	3-11
	10-40	Channery silty clay loam, silty clay loam, channery silt loam, channery clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4	0	0-7	75-85	65-85	55-85	40-80	23-39	7-16
	40-65	Silty clay, silty clay loam, channery clay loam	CL	A-7, A-6	0	0-7	80-100	70-100	65-100	50-95	31-57	11-26
46D:												
Oriskany--------	0-6	Cobbly sandy loam	SC-SM	A-2-4	0-10	20-30	85-95	75-90	45-65	20-35	12-21	1-6
	6-11	Cobbly sandy loam, stony sandy loam, extremely cobbly loam	SC-SM, SC, CL-ML, CL	A-2-4, A-4, A-1	0-15	20-35	55-90	40-90	25-85	10-65	12-30	1-11
	11-65	Very cobbly loam, extremely cobbly loam, very stony clay loam, extremely cobbly sandy clay loam	SC, SC-SM	A-4, A-6, A-2-6, A-2-4	5-20	20-40	50-75	30-70	25-65	10-55	21-39	6-16

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	
46D:												
Murrill	0-4	Cobbly loam	CL, CL-ML	A-4	0	25-40	90-100	90-100	75-95	50-75	16-25	3-8
	4-10	Channery silt loam, channery sandy loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-2-4, A-1	0	0-7	75-85	65-85	40-85	20-75	16-30	3-11
	10-40	Channery silty clay loam, silty clay loam, channery silt loam, channery clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4	0	0-7	75-85	65-85	55-85	40-80	23-39	7-16
	40-65	Silty clay, silty clay loam, channery clay loam	CL	A-7, A-6	0	0-7	80-100	70-100	65-100	50-95	31-57	11-26
47E:												
Oriskany	0-6	Cobbly sandy loam	SC-SM	A-2-4	0-10	20-30	85-95	75-90	45-65	20-35	12-21	1-6
	6-11	Cobbly sandy loam, stony sandy loam, extremely cobbly loam	SC-SM, SC, CL-ML, CL	A-2-4, A-4, A-1	0-15	20-35	55-90	40-90	25-85	10-65	12-30	1-11
	11-65	Very cobbly loam, extremely cobbly loam, very stony clay loam, extremely cobbly sandy clay loam	SC, SC-SM	A-4, A-6, A-2-6, A-2-4	5-20	20-40	50-75	30-70	25-65	10-55	21-39	6-16

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	
47E:												
Murrill---------	0-4	Cobbly loam	CL, CL-ML	A-4	0	25-40	90-100	90-100	75-95	50-75	16-25	3-8
	4-10	Channery silt loam, channery sandy loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-2-4, A-1	0	0-7	75-85	65-85	40-85	20-75	16-30	3-11
	10-40	Channery silty clay loam, silty clay loam, channery silt loam, channery clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4	0	0-7	75-85	65-85	55-85	40-80	23-39	7-16
	40-65	Silty clay, silty clay loam, channery clay loam	CL	A-7, A-6	0	0-7	80-100	70-100	65-100	50-95	31-57	11-26
48C:												
Paddyknob-------	0-3	Very channery loam	SC-SM, SC	A-4, A-2-4	0-2	10-30	55-65	45-55	35-50	25-40	16-25	3-8
	3-6	Very channery loam, channery fine sandy loam, very channery sandy loam	SC-SM, SC, SM	A-4, A-2-4, A-1	0-2	10-30	55-80	40-70	20-65	15-50	14-27	2-9
	6-26	Very channery sandy loam, very channery loam, channery fine sandy loam	SC-SM, SC, SM	A-2-4, A-1, A-4	0-2	10-35	55-80	40-75	25-70	15-55	14-27	2-9
	26-36	Bedrock			---	---	---	---	---	---	---	---
Madsheep--------	0-4	Channery loam	SC-SM, SC, CL-ML, CL	A-4	0	3-20	70-80	60-75	50-70	35-55	18-30	4-11
	4-17	Channery loam, channery silt loam, very channery loam	SC-SM, SC, CL-ML, CL	A-4, A-2-4	0	3-20	55-80	40-70	35-70	25-65	18-30	4-11
	17-30	Very channery loam, channery silt loam	SC-SM, SC, CL-ML, CL	A-4, A-2-4	0-1	3-25	55-80	40-70	35-70	25-65	18-30	4-11
	30-40	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	
48D:												
Paddyknob-------	0-3	Very channery loam	SC-SM, SC	A-4, A-2-4	0-2	10-30	55-65	45-55	35-50	25-40	16-25	3-8
	3-6	Very channery loam, channery fine sandy loam, very channery sandy loam	SC-SM, SC, SM	A-4, A-2-4, A-1	0-2	10-30	55-80	40-70	20-65	15-50	14-27	2-9
	6-26	Very channery sandy loam, very channery loam, channery fine sandy loam	SC-SM, SC, SM	A-2-4, A-1, A-4	0-2	10-35	55-80	40-75	25-70	15-55	14-27	2-9
	26-36	Bedrock			---	---	---	---	---	---	---	---
Madsheep--------	0-4	Channery loam	SC-SM, SC, CL-ML, CL	A-4	0	3-20	70-80	60-75	50-70	35-55	18-30	4-11
	4-17	Channery loam, channery silt loam, very channery loam	SC-SM, SC, CL-ML, CL	A-4, A-2-4	0	3-20	55-80	40-70	35-70	25-65	18-30	4-11
	17-30	Very channery loam, channery silt loam	SC-SM, SC, CL-ML, CL	A-4, A-2-4	0-1	3-25	55-80	40-70	35-70	25-65	18-30	4-11
	30-40	Bedrock			---	---	---	---	---	---	---	---
48E:												
Paddyknob-------	0-3	Very channery loam	SC-SM, SC	A-4, A-2-4	0-2	10-30	55-65	45-55	35-50	25-40	16-25	3-8
	3-6	Very channery loam, channery fine sandy loam, very channery sandy loam	SC-SM, SC, SM	A-4, A-2-4, A-1	0-2	10-30	55-80	40-70	20-65	15-50	14-27	2-9
	6-26	Very channery sandy loam, very channery loam, channery fine sandy loam	SC-SM, SC, SM	A-2-4, A-1, A-4	0-2	10-35	55-80	40-75	25-70	15-55	14-27	2-9
	26-36	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	
48E:												
Madsheep--------	0-4	Channery loam	SC-SM, SC, CL-ML, CL	A-4	0	3-20	70-80	60-75	50-70	35-55	18-30	4-11
	4-17	Channery loam, channery silt loam, very channery loam	SC-SM, SC, CL-ML, CL	A-4, A-2-4	0	3-20	55-80	40-70	35-70	25-65	18-30	4-11
	17-30	Very channery loam, channery silt loam	SC-SM, SC, CL-ML, CL	A-4, A-2-4	0-1	3-25	55-80	40-70	35-70	25-65	18-30	4-11
	30-40	Bedrock			---	---	---	---	---	---	---	---
49A:												
Purdy-----------	0-5	Silty clay loam	CL	A-6	0	0	90-100	85-100	80-100	70-95	31-43	11-18
	5-12	Silty clay, silty clay loam	CL	A-7, A-6	0	0	90-100	85-100	80-100	70-95	31-52	11-23
	12-32	Clay, silty clay loam, silty clay	CH, MH, CL	A-7	0	0	90-100	85-100	75-100	65-95	39-61	16-28
	32-48	Clay, silty clay loam, silty clay	MH, CH, CL	A-7	0	0-3	90-100	85-100	75-100	65-95	39-70	16-33
	48-62	Clay, silty clay, gravelly silty clay loam, cobbly clay loam	MH, CH, CL	A-7	0	0-20	75-100	65-100	60-100	45-95	39-70	16-33
50C:												
Shelocta--------	0-2	Silt loam	CL, CL-ML	A-4	0	0-10	85-95	80-95	70-95	55-85	16-30	3-11
	2-7	Channery silt loam, silt loam, channery loam	CL, CL-ML, SC, SC-SM	A-4	0	0-10	65-95	55-90	45-90	35-80	16-30	3-11
	7-60	Channery silt loam, silty clay loam, channery loam	CL, SC	A-4, A-6	0	0-10	65-95	55-90	45-90	35-85	23-39	7-16
	60-65	Channery silt loam, channery silty clay loam, extremely channery loam	SC, CL, GC	A-4, A-2-4, A-6	0	0-10	40-80	25-75	20-75	15-70	23-39	7-16

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	
50C:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
50D:												
Shelocta--------	0-2	Silt loam	CL, CL-ML	A-4	0	0-10	85-95	80-95	70-95	55-85	16-30	3-11
	2-7	Channery silt loam, silt loam, channery loam	CL, CL-ML, SC, SC-SM	A-4	0	0-10	65-95	55-90	45-90	35-80	16-30	3-11
	7-60	Channery silt loam, silty clay loam, channery loam	CL, SC	A-4, A-6	0	0-10	65-95	55-90	45-90	35-85	23-39	7-16
	60-65	Channery silt loam, channery silty clay loam, extremely channery loam	SC, CL, GC	A-4, A-2-4, A-6	0	0-10	40-80	25-75	20-75	15-70	23-39	7-16

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	
50D:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
50E:												
Shelocta--------	0-2	Silt loam	CL, CL-ML	A-4	0	0-10	85-95	80-95	70-95	55-85	16-30	3-11
	2-7	Channery silt loam, silt loam, channery loam	CL, CL-ML, SC, SC-SM	A-4	0	0-10	65-95	55-90	45-90	35-80	16-30	3-11
	7-60	Channery silt loam, silty clay loam, channery loam	CL, SC	A-4, A-6	0	0-10	65-95	55-90	45-90	35-85	23-39	7-16
	60-65	Channery silt loam, channery silty clay loam, extremely channery loam	SC, CL, GC	A-4, A-2-4, A-6	0	0-10	40-80	25-75	20-75	15-70	23-39	7-16

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	
50E:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
51B:												
Sugarhol--------	0-2	Silt loam	CL-ML, CL	A-4	0	0-10	85-100	80-100	75-100	55-90	21-31	6-11
	2-11	Silt loam, loam, clay loam	CL-ML, CL	A-4	0	0-10	85-100	80-100	70-100	50-90	21-34	6-13
	11-61	Silty clay, clay, gravelly clay loam	CL, CH, SC	A-6, A-7	0	0-15	70-100	60-100	55-100	45-95	39-70	16-33

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	
51C:												
Sugarhol--------	0-2	Silt loam	CL-ML, CL	A-4	0	0-10	85-100	80-100	75-100	55-90	21-31	6-11
	2-11	Silt loam, loam, clay loam	CL-ML, CL	A-4	0	0-10	85-100	80-100	70-100	50-90	21-34	6-13
	11-61	Silty clay, clay, gravelly clay loam	CL, CH, SC	A-6, A-7	0	0-15	70-100	60-100	55-100	45-95	39-70	16-33
52.												
Udorthents, dams												
53.												
Udorthents, smoothed												
54.												
Udorthents-Rock outcrop												
55E:												
Watahala--------	0-3	Very gravelly sandy loam	SC-SM, SC	A-2-4, A-1	0	0-7	55-60	40-45	25-35	10-20	16-25	3-8
	3-27	Gravelly silt loam, very gravelly loam, gravelly loam, very gravelly silt loam	SC-SM, SC, CL-ML, CL	A-4, A-2-4	0	0-15	60-80	45-75	40-75	30-65	16-30	3-11
	27-37	Gravelly loam, gravelly silt loam, gravelly silty clay loam, gravelly clay loam	SC, SC-SM, CL, CL-ML	A-4, A-6	0	0-15	70-80	60-75	50-75	35-70	23-39	7-16
	37-61	Gravelly clay, silty clay, clay	MH, CH, CL, SC, SM	A-7	0	0-10	65-100	55-100	50-100	40-95	45-70	20-33

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	
55E:												
Frederick-------	0-3	Gravelly silt loam	SC, SC-SM, CL, CL-ML	A-4	0	0-7	65-80	55-75	50-75	40-65	19-31	5-11
	3-8	Silt loam, silty clay loam, loam, gravelly silty clay loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4, A-6	0	0-13	60-100	45-100	40-100	30-95	21-43	6-18
	8-20	Silty clay, silty clay loam, clay, gravelly silty clay loam	CL, MH, CH, SC, SM	A-7, A-6	0	0-7	65-100	55-100	50-100	40-95	39-61	16-28
	20-72	Silty clay, clay, gravelly clay	MH, CH, CL, SC, SM	A-7	0	0-7	65-100	55-100	50-100	40-95	43-79	17-38
56E:												
Weikert---------	0-4	Channery silt loam	CL, CL-ML, SC-SM, SC	A-4	0	0-5	65-80	50-75	45-75	35-70	16-31	2-11
	4-16	Very channery silt loam, very channery loam	SC, SC-SM, GC, GC-GM	A-2-4, A-4	0	0-15	45-60	30-50	25-50	15-45	16-31	2-11
	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	Plasticity index
	In				Pct	Pct					Pct	
56E:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
57D:												
Weikert---------	0-4	Channery silt loam	CL, CL-ML, SC-SM, SC	A-4	0	0-5	65-80	50-75	45-75	35-70	16-31	2-11
	4-16	Very channery silt loam, very channery loam	SC, SC-SM, GC, GC-GM	A-2-4, A-4	0	0-15	45-60	30-50	25-50	15-45	16-31	2-11
	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	Plasticity index
	In				Pct	Pct					Pct	
57D:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
Rough-----------	0-1	Very channery silt loam	GC-GM, GM, GC	A-1, A-4, A-2-4	0	0-10	45-60	30-50	25-50	20-45	16-30	3-11
	1-5	Extremely channery silt loam, very channery loam	GC-GM, GC, GM, GW-GM, SM, SC, SC-SM	A-2-4, A-4, A-1	0	0-10	35-60	15-50	10-50	10-45	16-30	3-11
	5-7	Extremely channery silt loam, very channery loam	GW-GC, GM, GC, GC-GM	A-2-4, A-1	0	5-20	35-55	10-40	10-40	5-35	16-30	3-11
	7-17	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	
57E:												
Weikert---------	0-4	Channery silt loam	CL, CL-ML, SC-SM, SC	A-4	0	0-5	65-80	50-75	45-75	35-70	16-31	2-11
	4-16	Very channery silt loam, very channery loam	SC, SC-SM, GC, GC-GM	A-2-4, A-4	0	0-15	45-60	30-50	25-50	15-45	16-31	2-11
	16-26	Bedrock			---	---	---	---	---	---	---	---
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	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	
57E:												
Rough-----------	0-1	Very channery silt loam	GC-GM, GM, GC	A-1, A-4, A-2-4	0	0-10	45-60	30-50	25-50	20-45	16-30	3-11
	1-5	Extremely channery silt loam, very channery loam	GC-GM, GC, GM, GW-GM, SM, SC, SC-SM	A-2-4, A-4, A-1	0	0-10	35-60	15-50	10-50	10-45	16-30	3-11
	5-7	Extremely channery silt loam, very channery loam	GW-GC, GM, GC, GC-GM	A-2-4, A-1	0	5-20	35-55	10-40	10-40	5-35	16-30	3-11
	7-17	Bedrock			---	---	---	---	---	---	---	---
58F:												
Weikert---------	0-4	Channery silt loam	CL, CL-ML, SC-SM, SC	A-4	0	0-5	65-80	50-75	45-75	35-70	16-31	2-11
	4-16	Very channery silt loam, very channery loam	SC, SC-SM, GC, GC-GM	A-2-4, A-4	0	0-15	45-60	30-50	25-50	15-45	16-31	2-11
	16-26	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	
58F:												
Berks-----------	0-4	Channery silt loam	SC-SM, SC, SM, CL, CL-ML, ML	A-4	0	0-10	65-85	55-75	50-75	40-70	16-30	2-10
	4-11	Channery silt loam, very channery silt loam, channery silty clay loam, extremely channery loam	SC, SC-SM, CL, CL-ML, GC-GM, GC	A-4, A-1, A-2-4, A-6	0	0-15	40-85	20-75	15-75	10-75	16-35	2-14
	11-22	Very channery silt loam, extremely channery silt loam, very channery silty clay loam, extremely channery loam	SC, SC-SM, GC-GM, GC	A-2-4, A-1, A-4, A-6	0	0-15	40-65	20-50	15-50	10-50	16-35	2-14
	22-27	Very channery loam, very channery silt loam, extremely channery loam, extremely channery silt loam	SC, SM, SC-SM, GC-GM, GC, GM, GP-GC, GP-GM	A-2-4, A-1, A-4	0	0-20	30-65	10-50	5-50	5-45	16-30	2-10
	27-37	Bedrock			---	---	---	---	---	---	---	---
Rough-----------	0-1	Very channery silt loam	GC-GM, GM, GC	A-1, A-4, A-2-4	0	0-10	45-60	30-50	25-50	20-45	16-30	3-11
	1-5	Extremely channery silt loam, very channery loam	GC-GM, GC, GM, GW-GM, SM, SC, SC-SM	A-2-4, A-4, A-1	0	0-10	35-60	15-50	10-50	10-45	16-30	3-11
	5-7	Extremely channery silt loam, very channery loam	GW-GC, GM, GC, GC-GM	A-2-4, A-1	0	5-20	35-55	10-40	10-40	5-35	16-30	3-11
	7-17	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	
59F:												
Weikert	0-4	Channery silt loam	CL, CL-ML, SC-SM, SC	A-4	0	0-5	65-80	50-75	45-75	35-70	16-31	2-11
	4-16	Very channery silt loam, very channery loam	SC, SC-SM, GC, GC-GM	A-2-4, A-4	0	0-15	45-60	30-50	25-50	15-45	16-31	2-11
	16-26	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
Rough	0-1	Very channery silt loam	GC-GM, GM, GC	A-1, A-4, A-2-4	0	0-10	45-60	30-50	25-50	20-45	16-30	3-11
	1-5	Extremely channery silt loam, very channery loam	GC-GM, GC, GM, GW-GM, SM, SC, SC-SM	A-2-4, A-4, A-1	0	0-10	35-60	15-50	10-50	10-45	16-30	3-11
	5-7	Extremely channery silt loam, very channery loam	GW-GC, GM, GC, GC-GM	A-2-4, A-1	0	5-20	35-55	10-40	10-40	5-35	16-30	3-11
	7-17	Bedrock			---	---	---	---	---	---	---	---
60F:												
Weikert	0-4	Channery silt loam	CL, CL-ML, SC-SM, SC	A-4	0	0-5	65-80	50-75	45-75	35-70	16-31	2-11
	4-16	Very channery silt loam, very channery loam	SC, SC-SM, GC, GC-GM	A-2-4, A-4	0	0-15	45-60	30-50	25-50	15-45	16-31	2-11
	16-26	Bedrock			---	---	---	---	---	---	---	---
Rough	0-1	Very channery silt loam	GC-GM, GM, GC	A-1, A-4, A-2-4	0	0-10	45-60	30-50	25-50	20-45	16-30	3-11
	1-5	Extremely channery silt loam, very channery loam	GC-GM, GC, GM, GW-GM, SM, SC, SC-SM	A-2-4, A-4, A-1	0	0-10	35-60	15-50	10-50	10-45	16-30	3-11
	5-7	Extremely channery silt loam, very channery loam	GW-GC, GM, GC, GC-GM	A-2-4, A-1	0	5-20	35-55	10-40	10-40	5-35	16-30	3-11
	7-17	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	
61C:												
Wharton---------	0-3	Silt loam	CL, CL-ML	A-4	0	0-5	80-100	75-100	65-100	50-90	16-30	2-11
	3-8	Silt loam, silty clay loam, channery silt loam	CL, CL-ML	A-6, A-4	0	0-5	75-100	70-100	60-100	45-95	21-34	6-13
	8-44	Silty clay loam, channery silty clay, clay	CL	A-6, A-4	0	0-5	80-100	70-100	65-100	55-95	25-52	7-22
	44-62	Silty clay loam, very channery silt loam, channery clay loam	CL, SC	A-6, A-2-4	0	0-10	55-100	40-100	35-100	30-95	25-52	7-22
Blairton--------	0-9	Silt loam	CL-ML, CL, ML	A-4	0	0	80-100	75-100	70-100	55-90	16-31	3-11
	9-31	Silty clay loam, channery silt loam	CL-ML, CL	A-6, A-4	0	0-5	80-100	75-100	70-100	55-95	23-39	7-16
	31-38	Very channery silt loam, channery silty clay, channery silty clay loam	SC, CL	A-6, A-7-6, A-2-4	0	0-10	55-85	40-80	35-80	30-75	25-52	8-23
	38-48	Bedrock			---	---	---	---	---	---	---	---
61D:												
Wharton---------	0-3	Silt loam	CL, CL-ML	A-4	0	0-5	80-100	75-100	65-100	50-90	16-30	2-11
	3-8	Silt loam, silty clay loam, channery silt loam	CL, CL-ML	A-6, A-4	0	0-5	75-100	70-100	60-100	45-95	21-34	6-13
	8-44	Silty clay loam, channery silty clay, clay	CL	A-6, A-4	0	0-5	80-100	70-100	65-100	55-95	25-52	7-22
	44-62	Silty clay loam, very channery silt loam, channery clay loam	CL, SC	A-6, A-2-4	0	0-10	55-100	40-100	35-100	30-95	25-52	7-22

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	
61D:												
Blairton--------	0-9	Silt loam	CL-ML, CL, ML	A-4	0	0	80-100	75-100	70-100	55-90	16-31	3-11
	9-31	Silty clay loam, channery silt loam	CL-ML, CL	A-6, A-4	0	0-5	80-100	75-100	70-100	55-95	23-39	7-16
	31-38	Very channery silt loam, channery silty clay, channery silty clay loam	SC, CL	A-6, A-7-6, A-2-4	0	0-10	55-85	40-80	35-80	30-75	25-52	8-23
	38-48	Bedrock			---	---	---	---	---	---	---	---
62A:												
Wolfgap---------	0-22	Loam	CL, CL-ML	A-4	0	0-5	85-100	80-100	70-95	50-75	18-25	4-8
	22-52	Loam, silt loam, clay loam, sandy clay loam	CL, SC	A-4, A-6, A-2-4	0	0-5	85-100	80-100	65-100	30-90	23-39	7-16
	52-65	Gravelly sandy loam, very cobbly loam, very gravelly fine sandy loam	SC-SM, SC, CL, CL-ML	A-2-4, A-1, A-4	0	0-25	55-85	35-75	25-75	10-60	16-31	3-11
63A:												
Wolfgap---------	0-22	Loam	CL, CL-ML	A-4	0	0-5	85-100	80-100	70-95	50-75	18-25	4-8
	22-52	Loam, silt loam, clay loam, sandy clay loam	CL, SC	A-4, A-6, A-2-4	0	0-5	85-100	80-100	65-100	30-90	23-39	7-16
	52-65	Gravelly sandy loam, very cobbly loam, very gravelly fine sandy loam	SC-SM, SC, CL, CL-ML	A-2-4, A-1, A-4	0	0-25	55-85	35-75	25-75	10-60	16-31	3-11

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	
64B:												
Zoar------------	0-8	Silt loam	CL, CL-ML	A-4	0	0-3	90-100	85-100	75-100	60-90	21-31	6-11
	8-15	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0-3	90-100	85-100	75-100	60-95	21-39	6-16
	15-42	Silty clay loam, silty clay, clay	CL, MH, CH	A-6, A-7	0	0-3	90-100	90-100	75-100	65-95	39-61	16-28
	42-60	Silty clay loam, silty clay, clay, gravelly silty clay	CL	A-6, A-7	0	0-13	70-100	60-100	55-100	45-95	39-52	16-23
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 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					
1A:														
Alonzville-------	0-5	30-50	30-50	15-27	1.45-1.65	4.00-14.00	0.15-0.19	0.0-2.9	1.0-3.0	.17	.24	5	6	48
	5-15	10-80	10-80	10-27	1.45-1.65	4.00-14.00	0.13-0.22	0.0-2.9	0.5-1.5	.24	.32			
	15-55	10-50	18-70	18-34	1.45-1.70	4.00-14.00	0.10-0.22	0.0-2.9	0.5-1.0	.24	.32			
	55-65	21-78	10-49	10-34	1.45-1.70	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.5	.17	.37			
2B:														
Alonzville-------	0-6	30-50	30-50	15-27	1.45-1.65	4.00-14.00	0.12-0.15	0.0-2.9	1.0-3.0	.15	.24	5	6	38
	6-16	10-80	10-80	10-27	1.45-1.65	4.00-14.00	0.10-0.22	0.0-2.9	0.5-1.5	.24	.37			
	16-57	10-50	18-70	18-34	1.45-1.70	4.00-14.00	0.09-0.22	0.0-2.9	0.5-1.0	.24	.28			
	57-65	21-78	10-49	10-34	1.45-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.37			
3C:														
Alticrest--------	0-4	50-80	10-40	8-18	1.40-1.55	14.00-42.00	0.08-0.10	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	4-30	50-80	10-40	8-18	1.40-1.55	14.00-42.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
Dekalb-----------	0-2	50-80	10-40	8-18	1.40-1.55	42.00-141.00	0.08-0.11	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	2-30	35-80	10-45	8-18	1.40-1.55	42.00-141.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
4A:														
Atkins-----------	0-4	10-30	50-75	18-27	1.20-1.40	4.00-14.00	0.17-0.22	0.0-2.9	1.0-5.0	.32	.32	4	6	48
	4-29	15-50	30-70	18-30	1.20-1.50	0.42-14.00	0.13-0.22	0.0-2.9	0.5-1.0	.43	.49			
	29-47	15-50	30-70	10-35	1.20-1.50	1.40-42.00	0.13-0.22	0.0-2.9	0.2-1.0	.37	.43			
	47-65	15-70	20-70	10-35	1.20-1.50	1.40-42.00	0.04-0.22	0.0-2.9	0.2-1.0	.15	.43			
5D:														
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
5E:														
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			

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 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					
6B:														
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
Weikert----------	0-4	15-35	50-70	10-25	1.20-1.40	14.00-42.00	0.11-0.17	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	4-16	15-35	40-70	10-25	1.20-1.40	14.00-42.00	0.06-0.11	0.0-2.9	0.0-0.5	.15	.49			
	16-26	---	---	---	---	1.40-42.00	---	---	---	---	---			
6C:														
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
Weikert----------	0-4	15-35	50-70	10-25	1.20-1.40	14.00-42.00	0.11-0.17	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	4-16	15-35	40-70	10-25	1.20-1.40	14.00-42.00	0.06-0.11	0.0-2.9	0.0-0.5	.15	.49			
	16-26	---	---	---	---	1.40-42.00	---	---	---	---	---			
7C:														
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
Weikert----------	0-4	15-35	50-70	10-25	1.20-1.40	14.00-42.00	0.11-0.17	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	4-16	15-35	40-70	10-25	1.20-1.40	14.00-42.00	0.06-0.11	0.0-2.9	0.0-0.5	.15	.49			
	16-26	---	---	---	---	1.40-42.00	---	---	---	---	---			
7D:														
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
Weikert----------	0-4	15-35	50-70	10-25	1.20-1.40	14.00-42.00	0.11-0.17	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	4-16	15-35	40-70	10-25	1.20-1.40	14.00-42.00	0.06-0.11	0.0-2.9	0.0-0.5	.15	.49			
	16-26	---	---	---	---	1.40-42.00	---	---	---	---	---			

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 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					
8B:														
Blairton----------	0-9	15-35	45-65	10-27	1.40-1.60	4.00-14.00	0.17-0.22	0.0-2.9	0.5-2.5	.43	.43	2	5	56
	9-31	10-30	45-65	18-35	1.50-1.70	1.40-4.00	0.11-0.22	0.0-2.9	0.0-0.5	.43	.49			
	31-38	10-30	40-65	20-50	1.40-1.60	1.40-4.00	0.06-0.18	0.0-2.9	0.0-0.5	.20	.55			
	38-48	---	---	---	---	0.01-4.00	---	---	---	---	---			
Wharton-----------	0-3	15-35	50-70	10-25	1.10-1.30	4.00-14.00	0.15-0.22	0.0-2.9	0.5-2.5	.43	.43	4	6	48
	3-8	15-35	40-65	15-30	1.10-1.30	4.00-14.00	0.11-0.22	0.0-2.9	0.0-0.5	.49	.49			
	8-44	10-30	35-65	20-50	1.20-1.50	0.42-4.00	0.08-0.15	3.0-5.9	0.0-0.5	.49	.49			
	44-62	10-30	35-60	20-50	1.20-1.60	0.42-4.00	0.05-0.22	3.0-5.9	0.0-0.5	.43	.49			
9C:														
Caneyville--------	0-10	15-40	51-75	10-25	1.20-1.40	4.00-14.00	0.19-0.22	0.0-2.9	0.5-2.5	.43	.43	2	6	48
	10-16	2-30	15-60	36-60	1.35-1.60	0.42-1.40	0.10-0.15	3.0-5.9	0.0-0.5	.37	.37			
	16-29	10-40	15-45	40-60	1.35-1.60	0.42-1.40	0.10-0.14	3.0-5.9	0.0-0.5	.24	.24			
	29-39	---	---	---	---	0.00-4.00	---	---	---	---	---			
9D:														
Caneyville--------	0-10	15-40	51-75	10-25	1.20-1.40	4.00-14.00	0.19-0.22	0.0-2.9	0.5-2.5	.43	.43	2	6	48
	10-16	2-30	15-60	36-60	1.35-1.60	0.42-1.40	0.10-0.15	3.0-5.9	0.0-0.5	.37	.37			
	16-29	10-40	15-45	40-60	1.35-1.60	0.42-1.40	0.10-0.14	3.0-5.9	0.0-0.5	.24	.24			
	29-39	---	---	---	---	0.00-4.00	---	---	---	---	---			
9E:														
Caneyville--------	0-10	15-40	51-75	10-25	1.20-1.40	4.00-14.00	0.19-0.22	0.0-2.9	0.5-2.5	.43	.43	2	6	48
	10-16	2-30	15-60	36-60	1.35-1.60	0.42-1.40	0.10-0.15	3.0-5.9	0.0-0.5	.37	.37			
	16-29	10-40	15-45	40-60	1.35-1.60	0.42-1.40	0.10-0.14	3.0-5.9	0.0-0.5	.24	.24			
	29-39	---	---	---	---	0.00-4.00	---	---	---	---	---			
10B:														
Cottonbend--------	0-8	10-45	50-70	10-25	1.35-1.50	4.00-14.00	0.17-0.22	0.0-2.9	0.5-3.0	.28	.37	5	6	48
	8-17	10-70	15-70	10-27	1.40-1.55	4.00-14.00	0.13-0.22	0.0-2.9	0.2-1.5	.24	.28			
	17-52	10-70	15-70	18-35	1.40-1.55	4.00-14.00	0.07-0.19	0.0-2.9	0.0-0.5	.32	.37			
	52-72	10-70	15-50	15-50	1.40-1.60	4.00-14.00	0.07-0.19	0.0-2.9	0.0-0.5	.17	.37			
11A:														
Coursey-----------	0-5	15-40	50-70	18-27	1.35-1.60	4.00-14.00	0.18-0.22	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	5-12	25-50	30-45	15-27	1.50-1.70	4.00-14.00	0.11-0.19	0.0-2.9	0.5-1.8	.32	.32			
	12-60	25-50	25-45	18-35	1.50-1.70	4.00-14.00	0.08-0.19	0.0-2.9	0.5-1.0	.32	.32			
12D:														
Dekalb------------	0-2	50-80	10-40	8-18	1.40-1.55	42.00-141.00	0.08-0.11	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	2-30	35-80	10-45	8-18	1.40-1.55	42.00-141.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
Alticrest---------	0-4	50-80	10-40	8-18	1.40-1.55	14.00-42.00	0.08-0.10	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	4-30	50-80	10-40	8-18	1.40-1.55	14.00-42.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			

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 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					
12E:														
Dekalb-----------	0-2	50-80	10-40	8-18	1.40-1.55	42.00-141.00	0.08-0.11	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	2-30	35-80	10-45	8-18	1.40-1.55	42.00-141.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
Alticrest--------	0-4	50-80	10-40	8-18	1.40-1.55	14.00-42.00	0.08-0.10	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	4-30	50-80	10-40	8-18	1.40-1.55	14.00-42.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
13D:														
Dekalb-----------	0-2	50-80	10-40	8-18	1.40-1.55	42.00-141.00	0.08-0.11	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	2-30	35-80	10-45	8-18	1.40-1.55	42.00-141.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
Lily-------------	0-3	50-80	10-40	8-20	1.20-1.40	4.00-42.00	0.10-0.12	0.0-2.9	0.5-2.0	.17	.24	2	3	86
	3-17	35-80	10-45	8-20	1.25-1.35	14.00-42.00	0.07-0.17	0.0-2.9	0.0-0.5	.32	.43			
	17-32	25-75	10-45	18-35	1.25-1.35	14.00-42.00	0.07-0.17	0.0-2.9	0.0-0.5	.28	.37			
	32-42	---	---	---	---	0.00-4.00	---	---	---	---	---			
McClung----------	0-3	50-80	5-45	5-20	1.25-1.50	14.00-42.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24	5	3	86
	3-11	25-80	5-50	10-25	1.20-1.50	4.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.24	.24			
	11-19	25-80	5-50	10-27	1.30-1.60	4.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.20	.20			
	19-65	20-75	5-50	18-40	1.30-1.60	4.00-14.00	0.06-0.13	0.0-2.9	0.0-0.5	.24	.24			
14E:														
Dekalb-----------	0-2	50-80	10-40	8-18	1.40-1.55	42.00-141.00	0.08-0.11	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	2-30	35-80	10-45	8-18	1.40-1.55	42.00-141.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
Lily-------------	0-3	50-80	10-40	8-20	1.20-1.40	4.00-42.00	0.10-0.12	0.0-2.9	0.5-2.0	.17	.24	2	3	86
	3-17	35-80	10-45	8-20	1.25-1.35	14.00-42.00	0.07-0.17	0.0-2.9	0.0-0.5	.32	.43			
	17-32	25-75	10-45	18-35	1.25-1.35	14.00-42.00	0.07-0.17	0.0-2.9	0.0-0.5	.28	.37			
	32-42	---	---	---	---	0.00-4.00	---	---	---	---	---			
15D:														
Dekalb-----------	0-2	50-80	10-40	8-18	1.40-1.55	42.00-141.00	0.08-0.11	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	2-30	35-80	10-45	8-18	1.40-1.55	42.00-141.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
Rock outcrop.														
15E:														
Dekalb-----------	0-2	50-80	10-40	8-18	1.40-1.55	42.00-141.00	0.08-0.11	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	2-30	35-80	10-45	8-18	1.40-1.55	42.00-141.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
Rock outcrop.														

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	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
16E:														
Dekalb-----------	0-2	50-80	10-40	8-18	1.40-1.55	42.00-141.00	0.08-0.11	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	2-30	35-80	10-45	8-18	1.40-1.55	42.00-141.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
Watahala---------	0-3	50-70	10-35	10-20	1.20-1.45	14.00-42.00	0.05-0.06	0.0-2.9	0.5-2.5	.10	.20	4	3	48
	3-27	18-45	35-65	10-25	1.25-1.45	14.00-42.00	0.09-0.15	0.0-2.9	0.0-0.5	.24	.49			
	27-37	18-50	25-60	18-35	1.40-1.55	4.00-14.00	0.08-0.17	0.0-2.9	0.0-0.5	.17	.37			
	37-61	1-30	15-50	43-70	1.50-1.65	1.40-14.00	0.07-0.14	3.0-5.9	0.0-0.5	.17	.24			
McClung----------	0-3	50-80	5-45	5-20	1.25-1.50	14.00-42.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24	5	3	86
	3-11	25-80	5-50	10-25	1.20-1.50	4.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.24	.24			
	11-19	25-80	5-50	10-27	1.30-1.60	4.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.20	.20			
	19-65	20-75	5-50	18-40	1.30-1.60	4.00-14.00	0.06-0.13	0.0-2.9	0.0-0.5	.24	.24			
17A:														
Derroc-----------	0-4	40-50	35-50	7-15	1.40-1.65	14.00-141.00	0.10-0.13	0.0-2.9	1.0-4.0	.10	.32	5	5	38
	4-17	35-75	10-50	5-15	1.55-1.70	14.00-141.00	0.03-0.14	0.0-2.9	0.5-2.0	.05	.24			
	17-38	35-75	10-50	5-15	1.55-1.70	14.00-141.00	0.03-0.14	0.0-2.9	0.2-1.0	.05	.28			
	38-48	55-85	5-40	5-10	1.55-1.70	42.00-141.00	0.03-0.10	0.0-2.9	0.2-1.0	.05	.28			
	48-60	55-85	5-40	5-10	1.55-1.70	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.05	.17			
18B:														
Escatawba--------	0-3	25-50	30-50	10-25	1.15-1.30	4.00-14.00	0.15-0.19	0.0-2.9	0.5-3.0	.28	.32	5	6	48
	3-17	15-75	15-75	10-25	1.30-1.55	4.00-14.00	0.12-0.22	0.0-2.9	0.0-0.5	.43	.43			
	17-30	15-50	25-60	18-34	1.30-1.55	4.00-14.00	0.08-0.22	0.0-2.9	0.0-0.5	.37	.37			
	30-50	15-40	25-55	35-50	1.30-1.55	1.40-4.00	0.07-0.13	0.0-2.9	0.0-0.5	.24	.32			
	50-60	15-35	10-45	35-65	1.30-1.55	1.40-4.00	0.06-0.13	0.0-2.9	0.0-0.5	.15	.28			
18C:														
Escatawba--------	0-3	25-50	30-50	10-25	1.15-1.30	4.00-14.00	0.15-0.19	0.0-2.9	0.5-3.0	.28	.32	5	6	48
	3-17	15-75	15-75	10-25	1.30-1.55	4.00-14.00	0.12-0.22	0.0-2.9	0.0-0.5	.43	.43			
	17-30	15-50	25-60	18-34	1.30-1.55	4.00-14.00	0.08-0.22	0.0-2.9	0.0-0.5	.37	.37			
	30-50	15-40	25-55	35-50	1.30-1.55	1.40-4.00	0.07-0.13	0.0-2.9	0.0-0.5	.24	.32			
	50-60	15-35	10-45	35-65	1.30-1.55	1.40-4.00	0.06-0.13	0.0-2.9	0.0-0.5	.15	.28			
18D:														
Escatawba--------	0-3	25-50	30-50	10-25	1.15-1.30	4.00-14.00	0.15-0.19	0.0-2.9	0.5-3.0	.28	.32	5	6	48
	3-17	15-75	15-75	10-25	1.30-1.55	4.00-14.00	0.12-0.22	0.0-2.9	0.0-0.5	.43	.43			
	17-30	15-50	25-60	18-34	1.30-1.55	4.00-14.00	0.08-0.22	0.0-2.9	0.0-0.5	.37	.37			
	30-50	15-40	25-55	35-50	1.30-1.55	1.40-4.00	0.07-0.13	0.0-2.9	0.0-0.5	.24	.32			
	50-60	15-35	10-45	35-65	1.30-1.55	1.40-4.00	0.06-0.13	0.0-2.9	0.0-0.5	.15	.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					
19B:														
Escatawba--------	0-4	10-35	50-80	10-25	1.30-1.55	4.00-14.00	0.18-0.22	0.0-2.9	0.2-1.0	.32	.37	5	6	48
	4-9	10-50	30-75	8-25	1.30-1.55	4.00-14.00	0.15-0.22	0.0-2.9	0.0-0.5	.43	.49			
	9-36	10-45	30-70	18-35	1.30-1.55	4.00-14.00	0.11-0.22	0.0-2.9	0.0-0.5	.37	.49			
	36-53	10-40	25-55	35-50	1.30-1.55	1.40-4.00	0.08-0.13	0.0-2.9	0.0-0.5	.20	.32			
	53-75	10-40	10-50	35-65	1.30-1.55	1.40-4.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.24			
19C:														
Escatawba--------	0-4	10-35	50-80	10-25	1.30-1.55	4.00-14.00	0.18-0.22	0.0-2.9	0.2-1.0	.32	.37	5	6	48
	4-9	10-50	30-75	8-25	1.30-1.55	4.00-14.00	0.15-0.22	0.0-2.9	0.0-0.5	.43	.49			
	9-36	10-45	30-70	18-35	1.30-1.55	4.00-14.00	0.11-0.22	0.0-2.9	0.0-0.5	.37	.49			
	36-53	10-40	25-55	35-50	1.30-1.55	1.40-4.00	0.08-0.13	0.0-2.9	0.0-0.5	.20	.32			
	53-75	10-40	10-50	35-65	1.30-1.55	1.40-4.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.24			
20C:														
Faywood----------	0-6	5-20	45-65	27-40	1.30-1.40	4.00-14.00	0.11-0.15	0.0-2.9	0.5-2.5	.37	.37	2	6	48
	6-24	5-30	20-60	35-60	1.35-1.45	0.42-4.00	0.09-0.15	3.0-5.9	0.0-0.5	.24	.28			
	24-34	---	---	---	---	0.00-4.00	---	---	---	---	---			
Poplimento-------	0-5	5-20	45-65	27-40	1.30-1.45	4.00-14.00	0.13-0.15	3.0-5.9	0.5-2.5	.32	.32	5	6	48
	5-20	2-30	20-60	35-60	1.30-1.60	1.40-4.00	0.10-0.15	6.0-8.9	0.0-0.5	.28	.28			
	20-35	2-30	20-60	35-60	1.30-1.60	1.40-4.00	0.04-0.15	6.0-8.9	0.0-0.5	.28	.28			
	35-60	2-20	45-65	27-50	1.25-1.50	1.40-4.00	0.04-0.14	3.0-5.9	0.0-0.5	.32	.43			
20D:														
Faywood----------	0-6	5-20	45-65	27-40	1.30-1.40	4.00-14.00	0.11-0.15	0.0-2.9	0.5-2.5	.37	.37	2	6	48
	6-24	5-30	20-60	35-60	1.35-1.45	0.42-4.00	0.09-0.15	3.0-5.9	0.0-0.5	.24	.28			
	24-34	---	---	---	---	0.00-4.00	---	---	---	---	---			
Poplimento-------	0-5	5-20	45-65	27-40	1.30-1.45	4.00-14.00	0.13-0.15	3.0-5.9	0.5-2.5	.32	.32	5	6	48
	5-20	2-30	20-60	35-60	1.30-1.60	1.40-4.00	0.10-0.15	6.0-8.9	0.0-0.5	.28	.28			
	20-35	2-30	20-60	35-60	1.30-1.60	1.40-4.00	0.04-0.15	6.0-8.9	0.0-0.5	.28	.28			
	35-60	2-20	45-65	27-50	1.25-1.50	1.40-4.00	0.04-0.14	3.0-5.9	0.0-0.5	.32	.43			
20E:														
Faywood----------	0-6	5-20	45-65	27-40	1.30-1.40	4.00-14.00	0.11-0.15	0.0-2.9	0.5-2.5	.37	.37	2	6	48
	6-24	5-30	20-60	35-60	1.35-1.45	0.42-4.00	0.09-0.15	3.0-5.9	0.0-0.5	.24	.28			
	24-34	---	---	---	---	0.00-4.00	---	---	---	---	---			
Poplimento-------	0-5	5-20	45-65	27-40	1.30-1.45	4.00-14.00	0.13-0.15	3.0-5.9	0.5-2.5	.32	.32	5	6	48
	5-20	2-30	20-60	35-60	1.30-1.60	1.40-4.00	0.10-0.15	6.0-8.9	0.0-0.5	.28	.28			
	20-35	2-30	20-60	35-60	1.30-1.60	1.40-4.00	0.04-0.15	6.0-8.9	0.0-0.5	.28	.28			
	35-60	2-20	45-65	27-50	1.25-1.50	1.40-4.00	0.04-0.14	3.0-5.9	0.0-0.5	.32	.43			

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	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
21A:														
Feedstone--------	0-21	10-35	50-80	12-20	1.20-1.40	4.00-42.00	0.17-0.22	0.0-2.9	1.0-5.0	.32	.32	5	5	56
	21-26	10-65	20-75	12-20	1.20-1.40	4.00-42.00	0.12-0.22	0.0-2.9	1.0-5.0	.37	.37			
	26-47	20-65	10-60	18-35	1.30-1.50	4.00-14.00	0.07-0.22	0.0-2.9	0.2-3.0	.37	.37			
	47-50	30-70	10-50	10-25	1.30-1.50	4.00-14.00	0.07-0.19	0.0-2.9	0.2-3.0	.24	.24			
	50-65	30-70	10-50	8-25	1.20-1.40	4.00-42.00	0.04-0.15	0.0-2.9	0.2-3.0	.10	.28			
22C:														
Frederick--------	0-3	15-35	50-70	13-27	1.25-1.50	14.00-42.00	0.17-0.22	0.0-2.9	0.5-2.5	.28	.37	5	6	48
	3-8	15-45	20-70	15-40	1.25-1.50	14.00-42.00	0.06-0.22	0.0-2.9	0.0-1.0	.32	.43			
	8-20	2-30	20-50	35-60	1.20-1.50	4.00-14.00	0.07-0.15	3.0-5.9	0.0-0.5	.32	.32			
	20-72	0-30	10-50	40-80	1.20-1.50	4.00-14.00	0.07-0.14	3.0-5.9	0.0-0.5	.20	.20			
22D:														
Frederick--------	0-3	15-35	50-70	13-27	1.25-1.50	14.00-42.00	0.17-0.22	0.0-2.9	0.5-2.5	.28	.37	5	6	48
	3-8	15-45	20-70	15-40	1.25-1.50	14.00-42.00	0.06-0.22	0.0-2.9	0.0-1.0	.32	.43			
	8-20	2-30	20-50	35-60	1.20-1.50	4.00-14.00	0.07-0.15	3.0-5.9	0.0-0.5	.32	.32			
	20-72	0-30	10-50	40-80	1.20-1.50	4.00-14.00	0.07-0.14	3.0-5.9	0.0-0.5	.20	.20			
23C:														
Frederick--------	0-3	15-35	50-70	13-27	1.25-1.50	14.00-42.00	0.12-0.15	0.0-2.9	0.5-2.5	.20	.37	5	6	38
	3-8	15-45	20-70	15-40	1.25-1.50	14.00-42.00	0.06-0.22	0.0-2.9	0.0-1.0	.32	.43			
	8-20	2-30	20-50	35-60	1.20-1.50	4.00-14.00	0.07-0.15	3.0-5.9	0.0-0.5	.32	.32			
	20-72	0-30	10-50	40-80	1.20-1.50	4.00-14.00	0.07-0.14	3.0-5.9	0.0-0.5	.20	.20			
Watahala---------	0-3	50-70	10-35	10-20	1.20-1.45	14.00-42.00	0.05-0.06	0.0-2.9	0.5-2.5	.10	.20	4	3	48
	3-27	18-45	35-65	10-25	1.25-1.45	14.00-42.00	0.09-0.15	0.0-2.9	0.0-0.5	.24	.49			
	27-37	18-50	25-60	18-35	1.40-1.55	4.00-14.00	0.08-0.17	0.0-2.9	0.0-0.5	.17	.37			
	37-61	1-30	15-50	43-70	1.50-1.65	1.40-14.00	0.07-0.14	3.0-5.9	0.0-0.5	.17	.24			
23D:														
Frederick--------	0-3	15-35	50-70	13-27	1.25-1.50	14.00-42.00	0.12-0.15	0.0-2.9	0.5-2.5	.20	.37	5	6	38
	3-8	15-45	20-70	15-40	1.25-1.50	14.00-42.00	0.06-0.22	0.0-2.9	0.0-1.0	.32	.43			
	8-20	2-30	20-50	35-60	1.20-1.50	4.00-14.00	0.07-0.15	3.0-5.9	0.0-0.5	.32	.32			
	20-72	0-30	10-50	40-80	1.20-1.50	4.00-14.00	0.07-0.14	3.0-5.9	0.0-0.5	.20	.20			
Watahala---------	0-3	50-70	10-35	10-20	1.20-1.45	14.00-42.00	0.05-0.06	0.0-2.9	0.5-2.5	.10	.20	4	3	48
	3-27	18-45	35-65	10-25	1.25-1.45	14.00-42.00	0.09-0.15	0.0-2.9	0.0-0.5	.24	.49			
	27-37	18-50	25-60	18-35	1.40-1.55	4.00-14.00	0.08-0.17	0.0-2.9	0.0-0.5	.17	.37			
	37-61	1-30	15-50	43-70	1.50-1.65	1.40-14.00	0.07-0.14	3.0-5.9	0.0-0.5	.17	.24			
24B:														
Gilpin-----------	0-2	15-35	50-70	15-27	1.20-1.40	4.00-14.00	0.17-0.21	0.0-2.9	0.5-2.5	.28	.37	3	6	48
	2-7	15-45	30-70	15-27	1.20-1.40	4.00-14.00	0.11-0.20	0.0-2.9	0.0-0.5	.32	.49			
	7-26	15-45	30-70	18-35	1.20-1.50	4.00-14.00	0.07-0.20	0.0-2.9	0.0-0.5	.28	.43			
	26-32	15-30	35-70	15-35	1.20-1.50	4.00-14.00	0.05-0.11	0.0-2.9	0.0-0.2	.20	.49			
	32-42	---	---	---	---	1.40-42.00	---	---	---	---	---			

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 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					
24C:														
Gilpin-----------	0-2	15-35	50-70	15-27	1.20-1.40	4.00-14.00	0.17-0.21	0.0-2.9	0.5-2.5	.28	.37	3	6	48
	2-7	15-45	30-70	15-27	1.20-1.40	4.00-14.00	0.11-0.20	0.0-2.9	0.0-0.5	.32	.49			
	7-26	15-45	30-70	18-35	1.20-1.50	4.00-14.00	0.07-0.20	0.0-2.9	0.0-0.5	.28	.43			
	26-32	15-30	35-70	15-35	1.20-1.50	4.00-14.00	0.05-0.11	0.0-2.9	0.0-0.2	.20	.49			
	32-42	---	---	---	---	1.40-42.00	---	---	---	---	---			
24D:														
Gilpin-----------	0-2	15-35	50-70	15-27	1.20-1.40	4.00-14.00	0.17-0.21	0.0-2.9	0.5-2.5	.28	.37	3	6	48
	2-7	15-45	30-70	15-27	1.20-1.40	4.00-14.00	0.11-0.20	0.0-2.9	0.0-0.5	.32	.49			
	7-26	15-45	30-70	18-35	1.20-1.50	4.00-14.00	0.07-0.20	0.0-2.9	0.0-0.5	.28	.43			
	26-32	15-30	35-70	15-35	1.20-1.50	4.00-14.00	0.05-0.11	0.0-2.9	0.0-0.2	.20	.49			
	32-42	---	---	---	---	1.40-42.00	---	---	---	---	---			
25A:														
Gladehill--------	0-20	35-50	30-50	7-18	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
	20-33	35-75	10-50	5-18	1.45-1.70	14.00-42.00	0.10-0.19	0.0-2.9	0.2-3.0	.37	.37			
	33-60	35-75	5-50	5-25	1.50-1.70	14.00-42.00	0.08-0.19	0.0-2.9	0.2-3.0	.28	.28			
26A:														
Irongate---------	0-21	55-75	10-40	10-18	1.20-1.40	4.00-14.00	0.13-0.16	0.0-2.9	1.0-5.0	.17	.17	5	3	86
	21-42	35-75	10-50	10-18	1.20-1.40	4.00-14.00	0.10-0.19	0.0-2.9	0.5-3.0	.24	.24			
	42-55	35-75	10-50	5-18	1.20-1.40	14.00-42.00	0.07-0.19	0.0-2.9	0.2-3.0	.24	.24			
	55-62	35-75	10-50	5-18	1.20-1.40	14.00-42.00	0.07-0.19	0.0-2.9	0.2-3.0	.15	.28			
27C:														
Lehew------------	0-2	50-75	15-35	5-15	1.20-1.40	14.00-141.00	0.07-0.10	0.0-2.9	0.5-2.0	.17	.28	2	3	56
	2-15	35-75	15-50	5-18	1.20-1.40	14.00-141.00	0.07-0.12	0.0-2.9	0.0-0.5	.20	.49			
	15-27	35-75	15-50	5-18	1.20-1.40	14.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	27-37	---	---	---	---	0.00-4.00	---	---	---	---	---			
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
27D:														
Lehew------------	0-2	50-75	15-35	5-15	1.20-1.40	14.00-141.00	0.07-0.10	0.0-2.9	0.5-2.0	.17	.28	2	3	56
	2-15	35-75	15-50	5-18	1.20-1.40	14.00-141.00	0.07-0.12	0.0-2.9	0.0-0.5	.20	.49			
	15-27	35-75	15-50	5-18	1.20-1.40	14.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	27-37	---	---	---	---	0.00-4.00	---	---	---	---	---			
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			

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	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
27E:														
Lehew------------	0-2	50-75	15-35	5-15	1.20-1.40	14.00-141.00	0.07-0.10	0.0-2.9	0.5-2.0	.17	.28	2	3	56
	2-15	35-75	15-50	5-18	1.20-1.40	14.00-141.00	0.07-0.12	0.0-2.9	0.0-0.5	.20	.49			
	15-27	35-75	15-50	5-18	1.20-1.40	14.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	27-37	---	---	---	---	0.00-4.00	---	---	---	---	---			
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
28F:														
Lehew------------	0-2	50-75	15-35	5-15	1.20-1.40	14.00-141.00	0.07-0.10	0.0-2.9	0.5-2.0	.17	.28	2	3	56
	2-15	35-75	15-50	5-18	1.20-1.40	14.00-141.00	0.07-0.12	0.0-2.9	0.0-0.5	.20	.49			
	15-27	35-75	15-50	5-18	1.20-1.40	14.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	27-37	---	---	---	---	0.00-4.00	---	---	---	---	---			
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
Rock outcrop.														
29C:														
Lily-------------	0-3	50-80	10-40	8-20	1.20-1.40	4.00-42.00	0.10-0.12	0.0-2.9	0.5-2.0	.17	.24	2	3	86
	3-17	35-80	10-45	8-20	1.25-1.35	14.00-42.00	0.07-0.17	0.0-2.9	0.0-0.5	.32	.43			
	17-32	25-75	10-45	18-35	1.25-1.35	14.00-42.00	0.07-0.17	0.0-2.9	0.0-0.5	.28	.37			
	32-42	---	---	---	---	0.00-4.00	---	---	---	---	---			
30D:														
Lily-------------	0-3	50-80	10-40	8-20	1.20-1.40	4.00-42.00	0.10-0.12	0.0-2.9	0.5-2.0	.17	.24	2	3	86
	3-17	35-80	10-45	8-20	1.25-1.35	14.00-42.00	0.07-0.17	0.0-2.9	0.0-0.5	.32	.43			
	17-32	25-75	10-45	18-35	1.25-1.35	14.00-42.00	0.07-0.17	0.0-2.9	0.0-0.5	.28	.37			
	32-42	---	---	---	---	0.00-4.00	---	---	---	---	---			
31C:														
Lily-------------	0-3	50-80	10-40	8-20	1.20-1.40	4.00-42.00	0.10-0.12	0.0-2.9	0.5-2.0	.17	.24	2	3	86
	3-17	35-80	10-45	8-20	1.25-1.35	14.00-42.00	0.07-0.17	0.0-2.9	0.0-0.5	.32	.43			
	17-32	25-75	10-45	18-35	1.25-1.35	14.00-42.00	0.07-0.17	0.0-2.9	0.0-0.5	.28	.37			
	32-42	---	---	---	---	0.00-4.00	---	---	---	---	---			

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 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					
31C:														
McClung----------	0-3	50-80	5-45	5-20	1.25-1.50	14.00-42.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24	5	3	86
	3-11	25-80	5-50	10-25	1.20-1.50	4.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.24	.24			
	11-19	25-80	5-50	10-27	1.30-1.60	4.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.20	.20			
	19-65	20-75	5-50	18-40	1.30-1.60	4.00-14.00	0.06-0.13	0.0-2.9	0.0-0.5	.24	.24			
Dekalb-----------	0-2	50-80	10-40	8-18	1.40-1.55	42.00-141.00	0.08-0.11	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	2-30	35-80	10-45	8-18	1.40-1.55	42.00-141.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
32C:														
Macove-----------	0-1	10-30	50-70	10-25	1.20-1.40	14.00-42.00	0.13-0.15	0.0-2.9	0.5-3.0	.24	.37	5	6	38
	1-4	15-50	30-65	10-25	1.20-1.40	14.00-42.00	0.11-0.18	0.0-2.9	0.0-0.5	.15	.32			
	4-7	15-50	30-65	10-25	1.20-1.40	14.00-42.00	0.07-0.15	0.0-2.9	0.0-0.5	.20	.43			
	7-65	10-50	40-65	10-35	1.20-1.50	14.00-42.00	0.06-0.18	0.0-2.9	0.0-0.5	.10	.37			
32D:														
Macove-----------	0-1	10-30	50-70	10-25	1.20-1.40	14.00-42.00	0.13-0.15	0.0-2.9	0.5-3.0	.24	.37	5	6	38
	1-4	15-50	30-65	10-25	1.20-1.40	14.00-42.00	0.11-0.18	0.0-2.9	0.0-0.5	.15	.32			
	4-7	15-50	30-65	10-25	1.20-1.40	14.00-42.00	0.07-0.15	0.0-2.9	0.0-0.5	.20	.43			
	7-65	10-50	40-65	10-35	1.20-1.50	14.00-42.00	0.06-0.18	0.0-2.9	0.0-0.5	.10	.37			
33E:														
Macove-----------	0-5	25-50	30-50	10-25	1.20-1.40	14.00-42.00	0.08-0.11	0.0-2.9	0.5-3.0	.05	.24	5	6	0
	5-12	15-50	30-65	10-25	1.20-1.40	14.00-42.00	0.08-0.15	0.0-2.9	0.0-0.5	.15	.37			
	12-20	15-50	30-65	10-25	1.20-1.40	14.00-42.00	0.11-0.20	0.0-2.9	0.0-0.5	.15	.43			
	20-65	10-50	40-65	10-35	1.20-1.50	14.00-42.00	0.06-0.18	0.0-2.9	0.0-0.5	.10	.37			
34D:														
Macove-----------	0-1	10-30	50-70	10-25	1.20-1.40	14.00-42.00	0.13-0.15	0.0-2.9	0.5-3.0	.24	.37	5	6	38
	1-4	15-50	30-65	10-25	1.20-1.40	14.00-42.00	0.11-0.18	0.0-2.9	0.0-0.5	.15	.32			
	4-7	15-50	30-65	10-25	1.20-1.40	14.00-42.00	0.07-0.15	0.0-2.9	0.0-0.5	.20	.43			
	7-65	10-50	40-65	10-35	1.20-1.50	14.00-42.00	0.06-0.18	0.0-2.9	0.0-0.5	.10	.37			
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
34E:														
Macove-----------	0-1	10-30	50-70	10-25	1.20-1.40	14.00-42.00	0.13-0.15	0.0-2.9	0.5-3.0	.24	.37	5	6	38
	1-4	15-50	30-65	10-25	1.20-1.40	14.00-42.00	0.11-0.18	0.0-2.9	0.0-0.5	.15	.32			
	4-7	15-50	30-65	10-25	1.20-1.40	14.00-42.00	0.07-0.15	0.0-2.9	0.0-0.5	.20	.43			
	7-65	10-50	40-65	10-35	1.20-1.50	14.00-42.00	0.06-0.18	0.0-2.9	0.0-0.5	.10	.37			

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					
34E:														
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
35C:														
Mandy------------	0-4	10-40	50-80	7-25	1.20-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.5-3.0	.28	.43	3	5	48
	4-6	10-50	30-80	7-25	1.20-1.60	4.00-14.00	0.13-0.18	0.0-2.9	0.0-1.0	.37	.55			
	6-10	10-50	30-80	10-27	1.20-1.60	4.00-14.00	0.08-0.14	0.0-2.9	0.0-0.5	.32	.55			
	10-29	10-50	30-80	10-27	1.20-1.60	4.00-14.00	0.08-0.14	0.0-2.9	0.0-0.5	.20	.55			
	29-37	10-50	30-80	10-27	1.20-1.60	4.00-14.00	0.02-0.06	0.0-2.9	0.0-0.5	.10	.55			
	37-47	---	---	---	---	0.01-4.00	---	---	---	---	---			
35D:														
Mandy------------	0-4	10-40	50-80	7-25	1.20-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.5-3.0	.28	.43	3	5	48
	4-6	10-50	30-80	7-25	1.20-1.60	4.00-14.00	0.13-0.18	0.0-2.9	0.0-1.0	.37	.55			
	6-10	10-50	30-80	10-27	1.20-1.60	4.00-14.00	0.08-0.14	0.0-2.9	0.0-0.5	.32	.55			
	10-29	10-50	30-80	10-27	1.20-1.60	4.00-14.00	0.08-0.14	0.0-2.9	0.0-0.5	.20	.55			
	29-37	10-50	30-80	10-27	1.20-1.60	4.00-14.00	0.02-0.06	0.0-2.9	0.0-0.5	.10	.55			
	37-47	---	---	---	---	0.01-4.00	---	---	---	---	---			
35E:														
Mandy------------	0-4	10-40	50-80	7-25	1.20-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.5-3.0	.28	.43	3	5	48
	4-6	10-50	30-80	7-25	1.20-1.60	4.00-14.00	0.13-0.18	0.0-2.9	0.0-1.0	.37	.55			
	6-10	10-50	30-80	10-27	1.20-1.60	4.00-14.00	0.08-0.14	0.0-2.9	0.0-0.5	.32	.55			
	10-29	10-50	30-80	10-27	1.20-1.60	4.00-14.00	0.08-0.14	0.0-2.9	0.0-0.5	.20	.55			
	29-37	10-50	30-80	10-27	1.20-1.60	4.00-14.00	0.02-0.06	0.0-2.9	0.0-0.5	.10	.55			
	37-47	---	---	---	---	0.01-4.00	---	---	---	---	---			
36A:														
Maurertown-------	0-8	2-20	45-70	27-40	1.25-1.35	1.40-4.00	0.15-0.15	3.0-5.9	1.0-4.0	.32	.32	4	6	48
	8-26	2-25	20-65	35-60	1.30-1.50	0.01-0.42	0.12-0.15	6.0-8.9	0.0-1.0	.37	.37			
	26-36	2-25	20-65	35-60	1.30-1.50	0.01-0.42	0.12-0.15	6.0-8.9	0.0-1.0	.37	.37			
	36-44	2-25	20-65	35-60	1.30-1.50	0.01-0.42	0.12-0.15	6.0-8.9	0.0-1.0	.37	.37			
	44-58	2-25	20-65	35-60	1.30-1.50	0.01-0.42	0.09-0.15	6.0-8.9	0.0-1.0	.37	.37			
	58-63	2-25	20-65	35-60	1.30-1.50	0.01-0.42	0.07-0.15	6.0-8.9	0.0-1.0	.17	.37			
37B:														
McClung----------	0-3	50-80	5-45	5-20	1.25-1.50	14.00-42.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24	5	3	86
	3-11	25-80	5-50	10-25	1.20-1.50	4.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.24	.24			
	11-19	25-80	5-50	10-27	1.30-1.60	4.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.20	.20			
	19-65	20-75	5-50	18-40	1.30-1.60	4.00-14.00	0.06-0.13	0.0-2.9	0.0-0.5	.24	.24			

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					
37B:														
Lily-------------	0-3	50-80	10-40	8-20	1.20-1.40	4.00-42.00	0.10-0.12	0.0-2.9	0.5-2.0	.17	.24	2	3	86
	3-17	35-80	10-45	8-20	1.25-1.35	14.00-42.00	0.07-0.17	0.0-2.9	0.0-0.5	.32	.43			
	17-32	25-75	10-45	18-35	1.25-1.35	14.00-42.00	0.07-0.17	0.0-2.9	0.0-0.5	.28	.37			
	32-42	---	---	---	---	0.00-4.00	---	---	---	---	---			
38C:														
McClung----------	0-3	50-80	5-45	5-20	1.25-1.50	14.00-42.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24	5	3	86
	3-11	25-80	5-50	10-25	1.20-1.50	4.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.24	.24			
	11-19	25-80	5-50	10-27	1.30-1.60	4.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.20	.20			
	19-65	20-75	5-50	18-40	1.30-1.60	4.00-14.00	0.06-0.13	0.0-2.9	0.0-0.5	.24	.24			
Watahala---------	0-3	50-70	10-35	10-20	1.20-1.45	14.00-42.00	0.05-0.06	0.0-2.9	0.5-2.5	.10	.20	4	3	48
	3-27	18-45	35-65	10-25	1.25-1.45	14.00-42.00	0.09-0.15	0.0-2.9	0.0-0.5	.24	.49			
	27-37	18-50	25-60	18-35	1.40-1.55	4.00-14.00	0.08-0.17	0.0-2.9	0.0-0.5	.17	.37			
	37-61	1-30	15-50	43-70	1.50-1.65	1.40-14.00	0.07-0.14	3.0-5.9	0.0-0.5	.17	.24			
Dekalb-----------	0-2	50-80	10-40	8-18	1.40-1.55	42.00-141.00	0.08-0.11	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	2-30	35-80	10-45	8-18	1.40-1.55	42.00-141.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
38D:														
McClung----------	0-3	50-80	5-45	5-20	1.25-1.50	14.00-42.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24	5	3	86
	3-11	25-80	5-50	10-25	1.20-1.50	4.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.24	.24			
	11-19	25-80	5-50	10-27	1.30-1.60	4.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.20	.20			
	19-65	20-75	5-50	18-40	1.30-1.60	4.00-14.00	0.06-0.13	0.0-2.9	0.0-0.5	.24	.24			
Watahala---------	0-3	50-70	10-35	10-20	1.20-1.45	14.00-42.00	0.05-0.06	0.0-2.9	0.5-2.5	.10	.20	4	3	48
	3-27	18-45	35-65	10-25	1.25-1.45	14.00-42.00	0.09-0.15	0.0-2.9	0.0-0.5	.24	.49			
	27-37	18-50	25-60	18-35	1.40-1.55	4.00-14.00	0.08-0.17	0.0-2.9	0.0-0.5	.17	.37			
	37-61	1-30	15-50	43-70	1.50-1.65	1.40-14.00	0.07-0.14	3.0-5.9	0.0-0.5	.17	.24			
Dekalb-----------	0-2	50-80	10-40	8-18	1.40-1.55	42.00-141.00	0.08-0.11	0.0-2.9	0.5-2.0	.17	.24	2	3	56
	2-30	35-80	10-45	8-18	1.40-1.55	42.00-141.00	0.05-0.11	0.0-2.9	0.0-0.5	.10	.32			
	30-40	---	---	---	---	0.00-4.00	---	---	---	---	---			
39B:														
Murrill----------	0-4	30-50	30-50	10-20	1.20-1.50	4.00-14.00	0.14-0.16	0.0-2.9	0.5-3.0	.24	.28	5	6	48
	4-10	15-75	20-60	10-25	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.28	.43			
	10-40	15-50	30-65	18-35	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.37			
	40-65	5-30	30-60	27-55	1.40-1.70	1.40-14.00	0.09-0.15	3.0-5.9	0.0-0.5	.32	.32			
39C:														
Murrill----------	0-4	30-50	30-50	10-20	1.20-1.50	4.00-14.00	0.14-0.16	0.0-2.9	0.5-3.0	.24	.28	5	6	48
	4-10	15-75	20-60	10-25	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.28	.43			
	10-40	15-50	30-65	18-35	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.37			
	40-65	5-30	30-60	27-55	1.40-1.70	1.40-14.00	0.09-0.15	3.0-5.9	0.0-0.5	.32	.32			

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					
39D:														
Murrill----------	0-4	30-50	30-50	10-20	1.20-1.50	4.00-14.00	0.14-0.16	0.0-2.9	0.5-3.0	.24	.28	5	6	48
	4-10	15-75	20-60	10-25	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.28	.43			
	10-40	15-50	30-65	18-35	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.37			
	40-65	5-30	30-60	27-55	1.40-1.70	1.40-14.00	0.09-0.15	3.0-5.9	0.0-0.5	.32	.32			
40C:														
Murrill----------	0-4	30-50	30-50	10-20	1.20-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.5-3.0	.15	.28	5	6	38
	4-10	15-75	20-60	10-25	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.28	.43			
	10-40	15-50	30-65	18-35	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.37			
	40-65	5-30	30-60	27-55	1.40-1.70	1.40-14.00	0.09-0.15	3.0-5.9	0.0-0.5	.32	.32			
40D:														
Murrill----------	0-4	30-50	30-50	10-20	1.20-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.5-3.0	.15	.28	5	6	38
	4-10	15-75	20-60	10-25	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.28	.43			
	10-40	15-50	30-65	18-35	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.37			
	40-65	5-30	30-60	27-55	1.40-1.70	1.40-14.00	0.09-0.15	3.0-5.9	0.0-0.5	.32	.32			
40E:														
Murrill----------	0-4	30-50	30-50	10-20	1.20-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.5-3.0	.15	.28	5	6	38
	4-10	15-75	20-60	10-25	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.28	.43			
	10-40	15-50	30-65	18-35	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.37			
	40-65	5-30	30-60	27-55	1.40-1.70	1.40-14.00	0.09-0.15	3.0-5.9	0.0-0.5	.32	.32			
41B:														
Nicelytown-------	0-5	15-40	50-75	7-27	1.35-1.60	4.00-14.00	0.19-0.22	0.0-2.9	0.5-3.0	.37	.37	5	6	48
	5-8	15-70	20-75	7-27	1.35-1.60	1.40-4.00	0.14-0.22	0.0-2.9	0.5-2.0	.49	.49			
	8-34	10-50	20-70	18-35	1.45-1.70	1.40-4.00	0.08-0.22	0.0-2.9	0.0-0.5	.32	.37			
	34-65	10-50	20-70	18-35	1.45-1.70	1.40-4.00	0.06-0.19	0.0-2.9	0.0-0.5	.43	.43			
42A:														
Ogles------------	0-5	25-50	30-45	15-27	1.20-1.40	14.00-42.00	0.09-0.12	0.0-2.9	1.0-4.0	.05	.24	5	6	0
	5-28	30-80	10-45	12-27	1.40-1.60	14.00-42.00	0.05-0.13	0.0-2.9	0.5-2.0	.05	.20			
	28-60	55-85	2-30	10-20	1.50-1.70	14.00-42.00	0.02-0.09	0.0-2.9	0.0-1.0	.05	.20			
43B:														
Oriskany---------	0-6	50-75	15-35	5-15	1.20-1.40	14.00-42.00	0.10-0.12	0.0-2.9	0.5-3.0	.05	.15	5	3	56
	6-11	30-75	15-35	5-25	1.20-1.40	14.00-42.00	0.05-0.17	0.0-2.9	0.0-0.5	.10	.24			
	11-65	30-75	15-50	15-35	1.25-1.60	14.00-42.00	0.05-0.12	0.0-2.9	0.0-0.5	.10	.32			
44C:														
Oriskany---------	0-6	50-75	15-35	5-15	1.20-1.40	14.00-42.00	0.10-0.12	0.0-2.9	0.5-3.0	.05	.15	5	3	56
	6-11	30-75	15-35	5-25	1.20-1.40	14.00-42.00	0.05-0.17	0.0-2.9	0.0-0.5	.10	.24			
	11-65	30-75	15-50	15-35	1.25-1.60	14.00-42.00	0.05-0.12	0.0-2.9	0.0-0.5	.10	.32			

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					
44D:														
Oriskany----------	0-6	50-75	15-35	5-15	1.20-1.40	14.00-42.00	0.10-0.12	0.0-2.9	0.5-3.0	.05	.15	5	3	56
	6-11	30-75	15-35	5-25	1.20-1.40	14.00-42.00	0.05-0.17	0.0-2.9	0.0-0.5	.10	.24			
	11-65	30-75	15-50	15-35	1.25-1.60	14.00-42.00	0.05-0.12	0.0-2.9	0.0-0.5	.10	.32			
44E:														
Oriskany----------	0-6	50-75	15-35	5-15	1.20-1.40	14.00-42.00	0.10-0.12	0.0-2.9	0.5-3.0	.05	.15	5	3	56
	6-11	30-75	15-35	5-25	1.20-1.40	14.00-42.00	0.05-0.17	0.0-2.9	0.0-0.5	.10	.24			
	11-65	30-75	15-50	15-35	1.25-1.60	14.00-42.00	0.05-0.12	0.0-2.9	0.0-0.5	.10	.32			
45E:														
Oriskany----------	0-6	50-75	15-35	5-15	1.20-1.40	14.00-42.00	0.09-0.09	0.0-2.9	0.5-3.0	.02	.15	5	3	48
	6-11	30-75	15-35	5-25	1.20-1.40	14.00-42.00	0.05-0.17	0.0-2.9	0.0-0.5	.10	.24			
	11-65	30-75	15-50	15-35	1.25-1.60	14.00-42.00	0.05-0.12	0.0-2.9	0.0-0.5	.10	.32			
46C:														
Oriskany----------	0-6	50-75	15-35	5-15	1.20-1.40	14.00-42.00	0.10-0.12	0.0-2.9	0.5-3.0	.05	.15	5	3	56
	6-11	30-75	15-35	5-25	1.20-1.40	14.00-42.00	0.05-0.17	0.0-2.9	0.0-0.5	.10	.24			
	11-65	30-75	15-50	15-35	1.25-1.60	14.00-42.00	0.05-0.12	0.0-2.9	0.0-0.5	.10	.32			
Murrill----------	0-4	30-50	30-50	10-20	1.20-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.5-3.0	.15	.28	5	6	38
	4-10	15-75	20-60	10-25	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.28	.43			
	10-40	15-50	30-65	18-35	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.37			
	40-65	5-30	30-60	27-55	1.40-1.70	1.40-14.00	0.09-0.15	3.0-5.9	0.0-0.5	.32	.32			
46D:														
Oriskany----------	0-6	50-75	15-35	5-15	1.20-1.40	14.00-42.00	0.10-0.12	0.0-2.9	0.5-3.0	.05	.15	5	3	56
	6-11	30-75	15-35	5-25	1.20-1.40	14.00-42.00	0.05-0.17	0.0-2.9	0.0-0.5	.10	.24			
	11-65	30-75	15-50	15-35	1.25-1.60	14.00-42.00	0.05-0.12	0.0-2.9	0.0-0.5	.10	.32			
Murrill----------	0-4	30-50	30-50	10-20	1.20-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.5-3.0	.15	.28	5	6	38
	4-10	15-75	20-60	10-25	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.28	.43			
	10-40	15-50	30-65	18-35	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.37			
	40-65	5-30	30-60	27-55	1.40-1.70	1.40-14.00	0.09-0.15	3.0-5.9	0.0-0.5	.32	.32			
47E:														
Oriskany----------	0-6	50-75	15-35	5-15	1.20-1.40	14.00-42.00	0.10-0.12	0.0-2.9	0.5-3.0	.05	.15	5	3	56
	6-11	30-75	15-35	5-25	1.20-1.40	14.00-42.00	0.05-0.17	0.0-2.9	0.0-0.5	.10	.24			
	11-65	30-75	15-50	15-35	1.25-1.60	14.00-42.00	0.05-0.12	0.0-2.9	0.0-0.5	.10	.32			
Murrill----------	0-4	30-50	30-50	10-20	1.20-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.5-3.0	.15	.28	5	6	38
	4-10	15-75	20-60	10-25	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.28	.43			
	10-40	15-50	30-65	18-35	1.40-1.70	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.37			
	40-65	5-30	30-60	27-55	1.40-1.70	1.40-14.00	0.09-0.15	3.0-5.9	0.0-0.5	.32	.32			

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					
48C:														
Paddyknob---------	0-3	35-50	30-50	10-20	1.20-1.50	42.00-141.00	0.08-0.11	0.0-2.9	0.5-3.0	.17	.37	2	5	38
	3-6	35-75	10-45	8-22	1.20-1.50	42.00-141.00	0.05-0.13	0.0-2.9	0.0-1.0	.20	.49			
	6-26	35-75	10-40	8-22	1.20-1.50	42.00-141.00	0.05-0.14	0.0-2.9	0.0-0.5	.10	.32			
	26-36	---	---	---	---	0.00-4.00	---	---	---	---	---			
Madsheep---------	0-4	30-50	35-50	12-25	1.20-1.40	14.00-42.00	0.11-0.14	0.0-2.9	0.5-3.0	.24	.37	2	5	48
	4-17	15-50	35-70	12-25	1.40-1.60	14.00-42.00	0.08-0.15	0.0-2.9	0.0-0.5	.24	.49			
	17-30	15-50	35-70	12-25	1.40-1.60	14.00-42.00	0.08-0.15	0.0-2.9	0.0-0.5	.20	.49			
	30-40	---	---	---	---	0.01-4.00	---	---	---	---	---			
48D:														
Paddyknob---------	0-3	35-50	30-50	10-20	1.20-1.50	42.00-141.00	0.08-0.11	0.0-2.9	0.5-3.0	.17	.37	2	5	38
	3-6	35-75	10-45	8-22	1.20-1.50	42.00-141.00	0.05-0.13	0.0-2.9	0.0-1.0	.20	.49			
	6-26	35-75	10-40	8-22	1.20-1.50	42.00-141.00	0.05-0.14	0.0-2.9	0.0-0.5	.10	.32			
	26-36	---	---	---	---	0.00-4.00	---	---	---	---	---			
Madsheep---------	0-4	30-50	35-50	12-25	1.20-1.40	14.00-42.00	0.11-0.14	0.0-2.9	0.5-3.0	.24	.37	2	5	48
	4-17	15-50	35-70	12-25	1.40-1.60	14.00-42.00	0.08-0.15	0.0-2.9	0.0-0.5	.24	.49			
	17-30	15-50	35-70	12-25	1.40-1.60	14.00-42.00	0.08-0.15	0.0-2.9	0.0-0.5	.20	.49			
	30-40	---	---	---	---	0.01-4.00	---	---	---	---	---			
48E:														
Paddyknob---------	0-3	35-50	30-50	10-20	1.20-1.50	42.00-141.00	0.08-0.11	0.0-2.9	0.5-3.0	.17	.37	2	5	38
	3-6	35-75	10-45	8-22	1.20-1.50	42.00-141.00	0.05-0.13	0.0-2.9	0.0-1.0	.20	.49			
	6-26	35-75	10-40	8-22	1.20-1.50	42.00-141.00	0.05-0.14	0.0-2.9	0.0-0.5	.10	.32			
	26-36	---	---	---	---	0.00-4.00	---	---	---	---	---			
Madsheep---------	0-4	30-50	35-50	12-25	1.20-1.40	14.00-42.00	0.11-0.14	0.0-2.9	0.5-3.0	.24	.37	2	5	48
	4-17	15-50	35-70	12-25	1.40-1.60	14.00-42.00	0.08-0.15	0.0-2.9	0.0-0.5	.24	.49			
	17-30	15-50	35-70	12-25	1.40-1.60	14.00-42.00	0.08-0.15	0.0-2.9	0.0-0.5	.20	.49			
	30-40	---	---	---	---	0.01-4.00	---	---	---	---	---			
49A:														
Purdy------------	0-5	2-20	45-70	27-40	1.30-1.50	1.40-4.00	0.13-0.15	3.0-5.9	0.5-3.0	.37	.37	3	6	48
	5-12	2-20	35-70	27-50	1.30-1.50	0.01-1.40	0.12-0.15	3.0-5.9	0.2-1.5	.37	.37			
	12-32	2-30	20-65	35-60	1.30-1.60	0.01-1.40	0.10-0.15	3.0-5.9	0.0-0.5	.24	.24			
	32-48	2-30	15-60	35-70	1.30-1.60	0.01-1.40	0.10-0.15	3.0-5.9	0.0-0.5	.20	.20			
	48-62	2-35	10-55	35-70	1.30-1.60	0.01-1.40	0.08-0.15	3.0-5.9	0.0-0.5	.15	.20			
50C:														
Shelocta---------	0-2	20-40	40-65	10-25	1.15-1.30	4.00-14.00	0.18-0.21	0.0-2.9	0.5-3.0	.28	.37	5	6	48
	2-7	15-35	45-65	10-25	1.30-1.55	4.00-14.00	0.11-0.20	0.0-2.9	0.0-0.5	.32	.43			
	7-60	15-35	45-65	18-35	1.30-1.55	4.00-14.00	0.08-0.20	0.0-2.9	0.0-0.5	.28	.43			
	60-65	14-34	40-65	18-35	1.30-1.55	4.00-14.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.43			

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	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
50C:														
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
50D:														
Shelocta---------	0-2	20-40	40-65	10-25	1.15-1.30	4.00-14.00	0.18-0.21	0.0-2.9	0.5-3.0	.28	.37	5	6	48
	2-7	15-35	45-65	10-25	1.30-1.55	4.00-14.00	0.11-0.20	0.0-2.9	0.0-0.5	.32	.43			
	7-60	15-35	45-65	18-35	1.30-1.55	4.00-14.00	0.08-0.20	0.0-2.9	0.0-0.5	.28	.43			
	60-65	14-34	40-65	18-35	1.30-1.55	4.00-14.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.43			
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
50E:														
Shelocta---------	0-2	20-40	40-65	10-25	1.15-1.30	4.00-14.00	0.18-0.21	0.0-2.9	0.5-3.0	.28	.37	5	6	48
	2-7	15-35	45-65	10-25	1.30-1.55	4.00-14.00	0.11-0.20	0.0-2.9	0.0-0.5	.32	.43			
	7-60	15-35	45-65	18-35	1.30-1.55	4.00-14.00	0.08-0.20	0.0-2.9	0.0-0.5	.28	.43			
	60-65	14-34	40-65	18-35	1.30-1.55	4.00-14.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.43			
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
51B:														
Sugarhol---------	0-2	15-30	50-70	15-27	1.30-1.45	4.00-42.00	0.18-0.22	0.0-2.9	0.5-3.0	.37	.37	5	6	48
	2-11	15-50	20-70	15-30	1.30-1.45	4.00-14.00	0.10-0.22	0.0-2.9	0.0-1.0	.43	.43			
	11-61	5-40	10-60	35-70	1.45-1.60	4.00-14.00	0.07-0.15	3.0-5.9	0.0-0.5	.28	.28			
51C:														
Sugarhol---------	0-2	15-30	50-70	15-27	1.30-1.45	4.00-42.00	0.18-0.22	0.0-2.9	0.5-3.0	.37	.37	5	6	48
	2-11	15-50	20-70	15-30	1.30-1.45	4.00-14.00	0.10-0.22	0.0-2.9	0.0-1.0	.43	.43			
	11-61	5-40	10-60	35-70	1.45-1.60	4.00-14.00	0.07-0.15	3.0-5.9	0.0-0.5	.28	.28			
52.														
Udorthents, dams														
53.														
Udorthents, smoothed														

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					
54. Udorthents-Rock outcrop														
55E:														
Watahala----------	0-3	50-70	10-35	10-20	1.20-1.45	14.00-42.00	0.05-0.06	0.0-2.9	0.5-2.5	.10	.20	4	3	48
	3-27	18-45	35-65	10-25	1.25-1.45	14.00-42.00	0.09-0.15	0.0-2.9	0.0-0.5	.24	.49			
	27-37	18-50	25-60	18-35	1.40-1.55	4.00-14.00	0.08-0.17	0.0-2.9	0.0-0.5	.17	.37			
	37-61	1-30	15-50	43-70	1.50-1.65	1.40-14.00	0.07-0.14	3.0-5.9	0.0-0.5	.17	.24			
Frederick---------	0-3	15-35	50-70	13-27	1.25-1.50	14.00-42.00	0.12-0.15	0.0-2.9	0.5-2.5	.20	.37	5	6	38
	3-8	15-45	20-70	15-40	1.25-1.50	14.00-42.00	0.06-0.22	0.0-2.9	0.0-1.0	.32	.43			
	8-20	2-30	20-50	35-60	1.20-1.50	4.00-14.00	0.07-0.15	3.0-5.9	0.0-0.5	.32	.32			
	20-72	0-30	10-50	40-80	1.20-1.50	4.00-14.00	0.07-0.14	3.0-5.9	0.0-0.5	.20	.20			
56E:														
Weikert-----------	0-4	15-35	50-70	10-25	1.20-1.40	14.00-42.00	0.11-0.17	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	4-16	15-35	40-70	10-25	1.20-1.40	14.00-42.00	0.06-0.11	0.0-2.9	0.0-0.5	.15	.49			
	16-26	---	---	---	---	1.40-42.00	---	---	---	---	---			
Berks-------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
57D:														
Weikert-----------	0-4	15-35	50-70	10-25	1.20-1.40	14.00-42.00	0.11-0.17	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	4-16	15-35	40-70	10-25	1.20-1.40	14.00-42.00	0.06-0.11	0.0-2.9	0.0-0.5	.15	.49			
	16-26	---	---	---	---	1.40-42.00	---	---	---	---	---			
Berks-------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
Rough-------------	0-1	15-35	50-70	10-25	1.20-1.40	14.00-141.00	0.07-0.11	0.0-2.9	0.5-2.0	.10	.43	1	5	38
	1-5	15-35	35-70	10-25	1.20-1.40	14.00-141.00	0.03-0.11	0.0-2.9	0.0-0.5	.05	.43			
	5-7	15-35	35-70	10-25	1.20-1.40	14.00-141.00	0.03-0.09	0.0-2.9	0.0-0.5	.05	.49			
	7-17	---	---	---	---	0.01-4.00	---	---	---	---	---			
57E:														
Weikert-----------	0-4	15-35	50-70	10-25	1.20-1.40	14.00-42.00	0.11-0.17	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	4-16	15-35	40-70	10-25	1.20-1.40	14.00-42.00	0.06-0.11	0.0-2.9	0.0-0.5	.15	.49			
	16-26	---	---	---	---	1.40-42.00	---	---	---	---	---			

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	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
57E:														
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
Rough------------	0-1	15-35	50-70	10-25	1.20-1.40	14.00-141.00	0.07-0.11	0.0-2.9	0.5-2.0	.10	.43	1	5	38
	1-5	15-35	35-70	10-25	1.20-1.40	14.00-141.00	0.03-0.11	0.0-2.9	0.0-0.5	.05	.43			
	5-7	15-35	35-70	10-25	1.20-1.40	14.00-141.00	0.03-0.09	0.0-2.9	0.0-0.5	.05	.49			
	7-17	---	---	---	---	0.01-4.00	---	---	---	---	---			
58F:														
Weikert----------	0-4	15-35	50-70	10-25	1.20-1.40	14.00-42.00	0.11-0.17	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	4-16	15-35	40-70	10-25	1.20-1.40	14.00-42.00	0.06-0.11	0.0-2.9	0.0-0.5	.15	.49			
	16-26	---	---	---	---	1.40-42.00	---	---	---	---	---			
Berks------------	0-4	15-35	50-70	10-25	1.20-1.50	4.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.43	2	5	48
	4-11	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.43			
	11-22	10-35	35-70	10-32	1.20-1.60	4.00-42.00	0.04-0.11	0.0-2.9	0.0-0.5	.17	.43			
	22-27	10-45	35-70	10-25	1.20-1.60	14.00-42.00	0.02-0.11	0.0-2.9	0.0-0.5	.15	.37			
	27-37	---	---	---	---	1.40-42.00	---	---	---	---	---			
Rough------------	0-1	15-35	50-70	10-25	1.20-1.40	14.00-141.00	0.07-0.11	0.0-2.9	0.5-2.0	.10	.43	1	5	38
	1-5	15-35	35-70	10-25	1.20-1.40	14.00-141.00	0.03-0.11	0.0-2.9	0.0-0.5	.05	.43			
	5-7	15-35	35-70	10-25	1.20-1.40	14.00-141.00	0.03-0.09	0.0-2.9	0.0-0.5	.05	.49			
	7-17	---	---	---	---	0.01-4.00	---	---	---	---	---			
59F:														
Weikert----------	0-4	15-35	50-70	10-25	1.20-1.40	14.00-42.00	0.11-0.17	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	4-16	15-35	40-70	10-25	1.20-1.40	14.00-42.00	0.06-0.11	0.0-2.9	0.0-0.5	.15	.49			
	16-26	---	---	---	---	1.40-42.00	---	---	---	---	---			
Rock outcrop.														
Rough------------	0-1	15-35	50-70	10-25	1.20-1.40	14.00-141.00	0.07-0.11	0.0-2.9	0.5-2.0	.10	.43	1	5	38
	1-5	15-35	35-70	10-25	1.20-1.40	14.00-141.00	0.03-0.11	0.0-2.9	0.0-0.5	.05	.43			
	5-7	15-35	35-70	10-25	1.20-1.40	14.00-141.00	0.03-0.09	0.0-2.9	0.0-0.5	.05	.49			
	7-17	---	---	---	---	0.01-4.00	---	---	---	---	---			
60F:														
Weikert----------	0-4	15-35	50-70	10-25	1.20-1.40	14.00-42.00	0.11-0.17	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	4-16	15-35	40-70	10-25	1.20-1.40	14.00-42.00	0.06-0.11	0.0-2.9	0.0-0.5	.15	.49			
	16-26	---	---	---	---	1.40-42.00	---	---	---	---	---			

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					
60F:														
Rough------------	0-1	15-35	50-70	10-25	1.20-1.40	14.00-141.00	0.07-0.11	0.0-2.9	0.5-2.0	.10	.43	1	5	38
	1-5	15-35	35-70	10-25	1.20-1.40	14.00-141.00	0.03-0.11	0.0-2.9	0.0-0.5	.05	.43			
	5-7	15-35	35-70	10-25	1.20-1.40	14.00-141.00	0.03-0.09	0.0-2.9	0.0-0.5	.05	.49			
	7-17	---	---	---	---	0.01-4.00	---	---	---	---	---			
61C:														
Wharton----------	0-3	15-35	50-70	10-25	1.10-1.30	4.00-14.00	0.15-0.22	0.0-2.9	0.5-2.5	.43	.43	4	6	48
	3-8	15-35	40-65	15-30	1.10-1.30	4.00-14.00	0.11-0.22	0.0-2.9	0.0-0.5	.49	.49			
	8-44	10-30	35-65	20-50	1.20-1.50	0.42-4.00	0.08-0.15	3.0-5.9	0.0-0.5	.49	.49			
	44-62	10-30	35-60	20-50	1.20-1.60	0.42-4.00	0.05-0.22	3.0-5.9	0.0-0.5	.43	.49			
Blairton---------	0-9	15-35	45-65	10-27	1.40-1.60	4.00-14.00	0.17-0.22	0.0-2.9	0.5-2.5	.43	.43	2	5	56
	9-31	10-30	45-65	18-35	1.50-1.70	1.40-4.00	0.11-0.22	0.0-2.9	0.0-0.5	.43	.49			
	31-38	10-30	40-65	20-50	1.40-1.60	1.40-4.00	0.06-0.18	0.0-2.9	0.0-0.5	.20	.55			
	38-48	---	---	---	---	0.01-4.00	---	---	---	---	---			
61D:														
Wharton----------	0-3	15-35	50-70	10-25	1.10-1.30	4.00-14.00	0.15-0.22	0.0-2.9	0.5-2.5	.43	.43	4	6	48
	3-8	15-35	40-65	15-30	1.10-1.30	4.00-14.00	0.11-0.22	0.0-2.9	0.0-0.5	.49	.49			
	8-44	10-30	35-65	20-50	1.20-1.50	0.42-4.00	0.08-0.15	3.0-5.9	0.0-0.5	.49	.49			
	44-62	10-30	35-60	20-50	1.20-1.60	0.42-4.00	0.05-0.22	3.0-5.9	0.0-0.5	.43	.49			
Blairton---------	0-9	15-35	45-65	10-27	1.40-1.60	4.00-14.00	0.17-0.22	0.0-2.9	0.5-2.5	.43	.43	2	5	56
	9-31	10-30	45-65	18-35	1.50-1.70	1.40-4.00	0.11-0.22	0.0-2.9	0.0-0.5	.43	.49			
	31-38	10-30	40-65	20-50	1.40-1.60	1.40-4.00	0.06-0.18	0.0-2.9	0.0-0.5	.20	.55			
	38-48	---	---	---	---	0.01-4.00	---	---	---	---	---			
62A:														
Wolfgap----------	0-22	35-50	30-50	12-20	1.45-1.65	4.00-14.00	0.15-0.19	0.0-2.9	1.0-5.0	.24	.24	5	5	56
	22-52	15-75	10-65	18-35	1.45-1.65	4.00-14.00	0.10-0.22	0.0-2.9	0.2-3.0	.37	.37			
	52-65	35-75	10-50	10-27	1.45-1.65	4.00-14.00	0.05-0.14	0.0-2.9	0.2-2.0	.17	.24			
63A:														
Wolfgap----------	0-22	35-50	30-50	12-20	1.45-1.65	4.00-14.00	0.15-0.19	0.0-2.9	1.0-5.0	.24	.24	5	5	56
	22-52	15-75	10-65	18-35	1.45-1.65	4.00-14.00	0.10-0.22	0.0-2.9	0.2-3.0	.37	.37			
	52-65	35-75	10-50	10-27	1.45-1.65	4.00-14.00	0.05-0.14	0.0-2.9	0.2-2.0	.17	.24			
64B:														
Zoar-------------	0-8	15-30	50-65	15-27	1.20-1.40	4.00-14.00	0.19-0.22	0.0-2.9	0.5-3.0	.37	.37	3	6	48
	8-15	5-30	50-75	15-35	1.20-1.40	4.00-14.00	0.13-0.22	0.0-2.9	0.2-1.5	.43	.43			
	15-42	5-20	25-60	35-60	1.30-1.60	0.42-4.00	0.10-0.15	3.0-5.9	0.0-0.5	.37	.37			
	42-60	5-20	25-60	35-50	1.40-1.70	0.42-1.40	0.07-0.15	3.0-5.9	0.0-0.5	.37	.37			
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
1A:				
Alonzville----------	0-5	6.0-14	4.5-10	4.5-5.5
	5-15	3.6-10	2.7-7.6	4.5-5.5
	15-55	5.6-11	4.2-8.1	4.5-5.5
	55-65	2.5-9.6	1.9-7.2	4.5-5.5
2B:				
Alonzville----------	0-6	6.0-14	4.5-10	4.5-5.5
	6-16	3.6-10	2.7-7.6	4.5-5.5
	16-57	5.6-11	4.2-8.1	4.5-5.5
	57-65	2.5-9.6	1.9-7.2	4.5-5.5
3C:				
Alticrest-----------	0-4	3.1-9.0	2.3-6.8	4.0-5.5
	4-30	2.0-5.6	1.5-4.2	4.0-5.5
	30-40	---	---	---
Dekalb--------------	0-2	3.1-9.5	2.3-7.1	3.5-5.5
	2-30	2.0-6.1	1.5-4.6	3.5-5.5
	30-40	---	---	---
4A:				
Atkins--------------	0-4	6.8-18	5.1-14	4.5-5.5
	4-29	5.6-9.8	4.2-7.3	4.5-5.5
	29-47	3.1-11	2.3-8.2	4.5-5.5
	47-65	3.1-11	2.3-8.2	4.5-6.0
5D:				
Berks---------------	0-4	3.6-11	2.7-8.1	5.0-6.5
	4-11	2.5-9.1	1.9-6.8	5.0-6.5
	11-22	2.5-9.1	1.9-6.8	5.0-6.5
	22-27	2.5-7.4	1.9-5.5	5.0-6.5
	27-37	---	---	---
5E:				
Berks---------------	0-4	3.6-11	2.7-8.1	5.0-6.5
	4-11	2.5-9.1	1.9-6.8	5.0-6.5
	11-22	2.5-9.1	1.9-6.8	5.0-6.5
	22-27	2.5-7.4	1.9-5.5	5.0-6.5
	27-37	---	---	---
6B:				
Berks---------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
Weikert-------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-16	2.5-7.4	1.9-5.5	3.5-5.5
	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
6C:				
Berks----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
Weikert--------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-16	2.5-7.4	1.9-5.5	3.5-5.5
	16-26	---	---	---
7C:				
Berks----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
Weikert--------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-16	2.5-7.4	1.9-5.5	3.5-5.5
	16-26	---	---	---
7D:				
Berks----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
Weikert--------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-16	2.5-7.4	1.9-5.5	3.5-5.5
	16-26	---	---	---
8B:				
Blairton-------------	0-9	3.6-12	2.7-9.8	3.5-5.0
	9-31	4.5-9.9	3.4-7.4	3.5-5.0
	31-38	5.0-14	3.9-10	3.5-5.0
	38-48	---	---	---
Wharton--------------	0-3	3.6-12	2.7-8.9	4.0-5.5
	3-8	6.8-8.6	2.8-6.5	4.0-5.5
	8-44	4.5-11	3.4-8.3	4.0-5.5
	44-62	4.5-11	3.4-8.3	4.0-5.5
9C:				
Caneyville-----------	0-10	3.6-12	2.7-8.9	4.5-7.3
	10-16	9.0-16	6.8-12	4.5-7.3
	16-29	10-16	7.5-12	5.6-7.3
	29-39	---	---	---
9D:				
Caneyville-----------	0-10	3.6-12	2.7-8.9	4.5-7.3
	10-16	9.0-16	6.8-12	4.5-7.3
	16-29	10-16	7.5-12	5.6-7.3
	29-39	---	---	---

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
9E:				
Caneyville-----------	0-10	3.6-12	2.7-8.9	4.5-7.3
	10-16	9.0-16	6.8-12	4.5-7.3
	16-29	10-16	7.5-12	5.6-7.3
	29-39	---	---	---
10B:				
Cottonbend-----------	0-8	3.6-13	2.7-9.8	4.5-5.5
	8-17	3.1-10	2.3-7.6	4.5-5.5
	17-52	4.5-9.9	3.5-7.4	4.5-5.5
	52-72	3.8-14	3.0-10	4.5-5.5
11A:				
Coursey--------------	0-5	6.8-14	5.1-10	3.5-5.5
	5-12	4.9-11	3.7-8.0	3.5-5.5
	12-60	5.6-11	4.2-8.2	3.5-5.5
12D:				
Dekalb---------------	0-2	3.1-9.5	2.3-7.1	3.5-5.5
	2-30	2.0-6.1	1.5-4.6	3.5-5.5
	30-40	---	---	---
Alticrest------------	0-4	3.1-9.0	2.3-6.8	4.0-5.5
	4-30	2.0-5.6	1.5-4.2	4.0-5.5
	30-40	---	---	---
12E:				
Dekalb---------------	0-2	3.1-9.5	2.3-7.1	3.5-5.5
	2-30	2.0-6.1	1.5-4.6	3.5-5.5
	30-40	---	---	---
Alticrest------------	0-4	3.1-9.0	2.3-6.8	4.0-5.5
	4-30	2.0-5.6	1.5-4.2	4.0-5.5
	30-40	---	---	---
13D:				
Dekalb---------------	0-2	3.1-9.5	2.3-7.1	3.5-5.5
	2-30	2.0-6.1	1.5-4.6	3.5-5.5
	30-40	---	---	---
Lily-----------------	0-3	2.9-9.5	2.2-7.1	3.5-5.5
	3-17	2.0-6.1	1.5-4.6	3.5-5.5
	17-32	4.7-9.9	3.5-7.4	3.5-5.5
	32-42	---	---	---
McClung--------------	0-3	1.0-6.0	1.0-5.0	4.0-5.5
	3-11	3.0-7.0	2.0-6.0	4.0-5.5
	11-19	3.0-8.0	2.0-6.0	4.0-5.5
	19-65	5.0-11	3.0-8.0	4.0-5.5
14E:				
Dekalb---------------	0-2	3.1-9.5	2.3-7.1	3.5-5.5
	2-30	2.0-6.1	1.5-4.6	3.5-5.5
	30-40	---	---	---
Lily-----------------	0-3	2.9-9.5	2.2-7.1	3.5-5.5
	3-17	2.0-6.1	1.5-4.6	3.5-5.5
	17-32	4.7-9.9	3.5-7.4	3.5-5.5
	32-42	---	---	---

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
15D:				
Dekalb---------------	0-2	3.1-9.5	2.3-7.1	3.5-5.5
	2-30	2.0-6.1	1.5-4.6	3.5-5.5
	30-40	---	---	---
Rock outcrop.				
15E:				
Dekalb---------------	0-2	3.1-9.5	2.3-7.1	3.5-5.5
	2-30	2.0-6.1	1.5-4.6	3.5-5.5
	30-40	---	---	---
Rock outcrop.				
16E:				
Dekalb---------------	0-2	3.1-9.5	2.3-7.1	3.5-5.5
	2-30	2.0-6.1	1.5-4.6	3.5-5.5
	30-40	---	---	---
Watahala-------------	0-3	3.6-11	2.7-8.0	4.0-5.5
	3-27	2.5-7.4	1.9-5.5	4.0-5.5
	27-37	5.0-9.9	3.8-7.4	4.0-5.5
	37-61	10-19	7.9-14	4.5-5.5
McClung--------------	0-3	1.0-6.0	1.0-5.0	4.0-5.5
	3-11	3.0-7.0	2.0-6.0	4.0-5.5
	11-19	3.0-8.0	2.0-6.0	4.0-5.5
	19-65	5.0-11	3.0-8.0	4.0-5.5
17A:				
Derroc---------------	0-4	4.0-13	3.0-9.6	5.6-7.3
	4-17	2.4-8.2	1.8-6.2	5.6-7.3
	17-38	1.8-6.0	1.4-4.5	5.6-7.3
	38-48	1.8-4.8	1.4-3.6	5.6-7.3
	48-60	1.2-3.6	0.9-2.7	5.6-7.3
18B:				
Escatawba------------	0-3	3.6-13	2.7-9.8	3.5-5.5
	3-17	2.5-7.4	1.9-5.5	3.5-5.5
	17-30	4.5-9.6	3.4-7.2	4.5-5.5
	30-50	8.8-14	6.6-10	4.5-5.5
	50-60	8.8-17	6.6-13	4.5-5.5
18C:				
Escatawba------------	0-3	3.6-13	2.7-9.8	3.5-5.5
	3-17	2.5-7.4	1.9-5.5	3.5-5.5
	17-30	4.5-9.6	3.4-7.2	4.5-5.5
	30-50	8.8-14	6.6-10	4.5-5.5
	50-60	8.8-17	6.6-13	4.5-5.5
18D:				
Escatawba------------	0-3	3.6-13	2.7-9.8	3.5-5.5
	3-17	2.5-7.4	1.9-5.5	3.5-5.5
	17-30	4.5-9.6	3.4-7.2	4.5-5.5
	30-50	8.8-14	6.6-10	4.5-5.5
	50-60	8.8-17	6.6-13	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
19B:				
Escatawba	0-4	3.1-8.5	2.3-6.4	3.5-5.5
	4-9	2.0-7.4	1.5-5.5	3.5-5.5
	9-36	4.5-9.9	3.4-7.4	4.5-5.5
	36-53	8.8-14	6.6-10	4.5-5.5
	53-75	8.8-17	6.6-13	4.5-5.5
19C:				
Escatawba	0-4	3.1-8.5	2.3-6.4	3.5-5.5
	4-9	2.0-7.4	1.5-5.5	3.5-5.5
	9-36	4.5-9.9	3.4-7.4	4.5-5.5
	36-53	8.8-14	6.6-10	4.5-5.5
	53-75	8.8-17	6.6-13	4.5-5.5
20C:				
Faywood	0-6	7.9-16	5.9-12	6.1-7.8
	6-24	8.8-16	6.6-12	6.1-7.8
	24-34	---	---	---
Poplimento	0-5	7.9-16	5.9-12	4.5-6.5
	5-20	8.8-16	6.6-12	4.5-6.5
	20-35	8.8-16	6.6-12	4.5-6.5
	35-60	6.8-14	5.1-10	4.5-6.5
20D:				
Faywood	0-6	7.9-16	5.9-12	6.1-7.8
	6-24	8.8-16	6.6-12	6.1-7.8
	24-34	---	---	---
Poplimento	0-5	7.9-16	5.9-12	4.5-6.5
	5-20	8.8-16	6.6-12	4.5-6.5
	20-35	8.8-16	6.6-12	4.5-6.5
	35-60	6.8-14	5.1-10	4.5-6.5
20E:				
Faywood	0-6	7.9-16	5.9-12	6.1-7.8
	6-24	8.8-16	6.6-12	6.1-7.8
	24-34	---	---	---
Poplimento	0-5	7.9-16	5.9-12	4.5-6.5
	5-20	8.8-16	6.6-12	4.5-6.5
	20-35	8.8-16	6.6-12	4.5-6.5
	35-60	6.8-14	5.1-10	4.5-6.5
21A:				
Feedstone	0-21	5.2-16	3.9-12	5.6-7.3
	21-26	5.2-16	3.9-12	5.6-7.3
	26-47	6.8-16	5.1-12	5.6-7.3
	47-50	3.6-13	2.7-9.8	5.6-7.3
	50-65	2.6-13	1.9-9.8	5.6-7.3
22C:				
Frederick	0-3	4.4-12	3.3-9.3	4.5-6.0
	3-8	3.8-12	2.8-9.2	4.5-6.0
	8-20	8.8-16	6.6-12	4.5-6.0
	20-72	10-21	7.5-16	4.5-6.0

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
22D:				
Frederick------------	0-3	4.4-12	3.3-9.3	4.5-6.0
	3-8	3.8-12	2.8-9.2	4.5-6.0
	8-20	8.8-16	6.6-12	4.5-6.0
	20-72	10-21	7.5-16	4.5-6.0
23C:				
Frederick------------	0-3	4.4-12	3.3-9.3	4.5-6.0
	3-8	3.8-12	2.8-9.2	4.5-6.0
	8-20	8.8-16	6.6-12	4.5-6.0
	20-72	10-21	7.5-16	4.5-6.0
Watahala-------------	0-3	3.6-11	2.7-8.0	4.0-5.5
	3-27	2.5-7.4	1.9-5.5	4.0-5.5
	27-37	5.0-9.9	3.8-7.4	4.0-5.5
	37-61	10-19	7.9-14	4.5-5.5
23D:				
Frederick------------	0-3	4.4-12	3.3-9.3	4.5-6.0
	3-8	3.8-12	2.8-9.2	4.5-6.0
	8-20	8.8-16	6.6-12	4.5-6.0
	20-72	10-21	7.5-16	4.5-6.0
Watahala-------------	0-3	3.6-11	2.7-8.0	4.0-5.5
	3-27	2.5-7.4	1.9-5.5	4.0-5.5
	27-37	5.0-9.9	3.8-7.4	4.0-5.5
	37-61	10-19	7.9-14	4.5-5.5
24B:				
Gilpin---------------	0-2	4.9-12	3.7-9.3	3.5-5.5
	2-7	3.8-7.9	2.8-5.9	3.5-5.5
	7-26	4.5-9.9	3.4-7.4	3.5-5.5
	26-32	3.8-9.3	2.8-7.0	3.5-5.5
	32-42	---	---	---
24C:				
Gilpin---------------	0-2	4.9-12	3.7-9.3	3.5-5.5
	2-7	3.8-7.9	2.8-5.9	3.5-5.5
	7-26	4.5-9.9	3.4-7.4	3.5-5.5
	26-32	3.8-9.3	2.8-7.0	3.5-5.5
	32-42	---	---	---
24D:				
Gilpin---------------	0-2	4.9-12	3.7-9.3	3.5-5.5
	2-7	3.8-7.9	2.8-5.9	3.5-5.5
	7-26	4.5-9.9	3.4-7.4	3.5-5.5
	26-32	3.8-9.3	2.8-7.0	3.5-5.5
	32-42	---	---	---
25A:				
Gladehill------------	0-20	4.0-16	3.0-12	6.1-7.3
	20-33	1.8-11	1.4-8.4	6.1-7.3
	33-60	1.8-13	1.4-9.8	6.1-7.3
26A:				
Irongate-------------	0-21	4.8-16	3.6-12	5.6-7.3
	21-42	3.6-11	2.7-8.4	5.6-7.3
	42-55	1.8-11	1.4-8.4	5.6-7.3
	55-62	1.5-11	1.4-8.4	5.6-7.3

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
27C:				
Lehew	0-2	2.1-8.2	1.6-6.2	3.5-5.5
	2-15	1.2-5.6	0.9-4.2	3.5-5.5
	15-27	1.2-5.6	0.9-4.2	3.5-5.5
	27-37	---	---	---
Berks	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
27D:				
Lehew	0-2	2.1-8.2	1.6-6.2	3.5-5.5
	2-15	1.2-5.6	0.9-4.2	3.5-5.5
	15-27	1.2-5.6	0.9-4.2	3.5-5.5
	27-37	---	---	---
Berks	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
27E:				
Lehew	0-2	2.1-8.2	1.6-6.2	3.5-5.5
	2-15	1.2-5.6	0.9-4.2	3.5-5.5
	15-27	1.2-5.6	0.9-4.2	3.5-5.5
	27-37	---	---	---
Berks	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
28F:				
Lehew	0-2	2.1-8.2	1.6-6.2	3.5-5.5
	2-15	1.2-5.6	0.9-4.2	3.5-5.5
	15-27	1.2-5.6	0.9-4.2	3.5-5.5
	27-37	---	---	---
Berks	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
Rock outcrop.				
29C:				
Lily	0-3	2.9-9.5	2.2-7.1	3.5-5.5
	3-17	2.0-6.1	1.5-4.6	3.5-5.5
	17-32	4.7-9.9	3.5-7.4	3.5-5.5
	32-42	---	---	---

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
30D:				
Lily-----------------	0-3	2.9-9.5	2.2-7.1	3.5-5.5
	3-17	2.0-6.1	1.5-4.6	3.5-5.5
	17-32	4.7-9.9	3.5-7.4	3.5-5.5
	32-42	---	---	---
31C:				
Lily-----------------	0-3	2.9-9.5	2.2-7.1	3.5-5.5
	3-17	2.0-6.1	1.5-4.6	3.5-5.5
	17-32	4.7-9.9	3.5-7.4	3.5-5.5
	32-42	---	---	---
McClung--------------	0-3	1.0-6.0	1.0-5.0	4.0-5.5
	3-11	3.0-7.0	2.0-6.0	4.0-5.5
	11-19	3.0-8.0	2.0-6.0	4.0-5.5
	19-65	5.0-11	3.0-8.0	4.0-5.5
Dekalb---------------	0-2	3.1-9.5	2.3-7.1	3.5-5.5
	2-30	2.0-6.1	1.5-4.6	3.5-5.5
	30-40	---	---	---
32C:				
Macove---------------	0-1	3.6-13	2.7-9.8	4.5-5.5
	1-4	2.5-7.4	1.9-5.5	4.5-5.5
	4-7	2.5-7.4	1.9-5.5	4.5-5.5
	7-65	2.5-9.9	1.9-7.4	4.5-5.5
32D:				
Macove---------------	0-1	3.6-13	2.7-9.8	4.5-5.5
	1-4	2.5-7.4	1.9-5.5	4.5-5.5
	4-7	2.5-7.4	1.9-5.5	4.5-5.5
	7-65	2.5-9.9	1.9-7.4	4.5-5.5
33E:				
Macove---------------	0-5	3.6-13	2.7-9.8	4.5-5.5
	5-12	2.5-7.4	1.9-5.5	4.5-5.5
	12-20	2.5-7.4	1.9-5.5	4.5-5.5
	20-65	2.5-9.9	1.9-7.4	4.5-5.5
34D:				
Macove---------------	0-1	3.6-13	2.7-9.8	4.5-5.5
	1-4	2.5-7.4	1.9-5.5	4.5-5.5
	4-7	2.5-7.4	1.9-5.5	4.5-5.5
	7-65	2.5-9.9	1.9-7.4	4.5-5.5
Berks----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
34E:				
Macove---------------	0-1	3.6-13	2.7-9.8	4.5-5.5
	1-4	2.5-7.4	1.9-5.5	4.5-5.5
	4-7	2.5-7.4	1.9-5.5	4.5-5.5
	7-65	2.5-9.9	1.9-7.4	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
34E:				
Berks----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
35C:				
Mandy----------------	0-4	2.9-13	2.2-9.8	3.5-5.5
	4-6	1.8-8.5	1.3-6.4	3.5-5.5
	6-10	2.5-7.9	1.9-5.9	3.5-5.5
	10-29	2.5-7.9	1.9-5.9	3.5-5.5
	29-37	2.5-7.9	1.9-5.9	3.5-5.5
	37-47	---	---	---
35D:				
Mandy----------------	0-4	2.9-13	2.2-9.8	3.5-5.5
	4-6	1.8-8.5	1.3-6.4	3.5-5.5
	6-10	2.5-7.9	1.9-5.9	3.5-5.5
	10-29	2.5-7.9	1.9-5.9	3.5-5.5
	29-37	2.5-7.9	1.9-5.9	3.5-5.5
	37-47	---	---	---
35E:				
Mandy----------------	0-4	2.9-13	2.2-9.8	3.5-5.5
	4-6	1.8-8.5	1.3-6.4	3.5-5.5
	6-10	2.5-7.9	1.9-5.9	3.5-5.5
	10-29	2.5-7.9	1.9-5.9	3.5-5.5
	29-37	2.5-7.9	1.9-5.9	3.5-5.5
	37-47	---	---	---
36A:				
Maurertown-----------	0-8	12-23	9.0-17	5.1-7.3
	8-26	12-23	9.0-17	5.1-7.3
	26-36	12-23	9.0-17	5.6-7.3
	36-44	12-23	9.0-17	5.6-7.3
	44-58	12-23	9.0-17	5.6-7.3
	58-63	12-23	9.0-17	5.6-7.3
37B:				
McClung--------------	0-3	1.0-6.0	1.0-5.0	4.0-5.5
	3-11	3.0-7.0	2.0-6.0	4.0-5.5
	11-19	3.0-8.0	2.0-6.0	4.0-5.5
	19-65	5.0-11	3.0-8.0	4.0-5.5
Lily-----------------	0-3	2.9-9.5	2.2-7.1	3.5-5.5
	3-17	2.0-6.1	1.5-4.6	3.5-5.5
	17-32	4.7-9.9	3.5-7.4	3.5-5.5
	32-42	---	---	---
38C:				
McClung--------------	0-3	1.0-6.0	1.0-5.0	4.0-5.5
	3-11	3.0-7.0	2.0-6.0	4.0-5.5
	11-19	3.0-8.0	2.0-6.0	4.0-5.5
	19-65	5.0-11	3.0-8.0	4.0-5.5

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
38C:				
Watahala	0-3	3.6-11	2.7-8.0	4.0-5.5
	3-27	2.5-7.4	1.9-5.5	4.0-5.5
	27-37	5.0-9.9	3.8-7.4	4.0-5.5
	37-61	10-19	7.9-14	4.5-5.5
Dekalb	0-2	3.1-9.5	2.3-7.1	3.5-5.5
	2-30	2.0-6.1	1.5-4.6	3.5-5.5
	30-40	---	---	---
38D:				
McClung	0-3	1.0-6.0	1.0-5.0	4.0-5.5
	3-11	3.0-7.0	2.0-6.0	4.0-5.5
	11-19	3.0-8.0	2.0-6.0	4.0-5.5
	19-65	5.0-11	3.0-8.0	4.0-5.5
Watahala	0-3	3.6-11	2.7-8.0	4.0-5.5
	3-27	2.5-7.4	1.9-5.5	4.0-5.5
	27-37	5.0-9.9	3.8-7.4	4.0-5.5
	37-61	10-19	7.9-14	4.5-5.5
Dekalb	0-2	3.1-9.5	2.3-7.1	3.5-5.5
	2-30	2.0-6.1	1.5-4.6	3.5-5.5
	30-40	---	---	---
39B:				
Murrill	0-4	3.6-12	2.7-8.8	4.5-6.0
	4-10	2.5-7.4	1.9-5.5	4.5-6.0
	10-40	4.5-9.9	3.4-7.4	4.5-6.0
	40-65	6.8-15	5.1-11	4.5-6.0
39C:				
Murrill	0-4	3.6-12	2.7-8.8	4.5-6.0
	4-10	2.5-7.4	1.9-5.5	4.5-6.0
	10-40	4.5-9.9	3.4-7.4	4.5-6.0
	40-65	6.8-15	5.1-11	4.5-6.0
39D:				
Murrill	0-4	3.6-12	2.7-8.8	4.5-6.0
	4-10	2.5-7.4	1.9-5.5	4.5-6.0
	10-40	4.5-9.9	3.4-7.4	4.5-6.0
	40-65	6.8-15	5.1-11	4.5-6.0
40C:				
Murrill	0-4	3.6-12	2.7-8.8	4.5-6.0
	4-10	2.5-7.4	1.9-5.5	4.5-6.0
	10-40	4.5-9.9	3.4-7.4	4.5-6.0
	40-65	6.8-15	5.1-11	4.5-6.0
40D:				
Murrill	0-4	3.6-12	2.7-8.8	4.5-6.0
	4-10	2.5-7.4	1.9-5.5	4.5-6.0
	10-40	4.5-9.9	3.4-7.4	4.5-6.0
	40-65	6.8-15	5.1-11	4.5-6.0

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
40E:				
Murrill	0-4	3.6-12	2.7-8.8	4.5-6.0
	4-10	2.5-7.4	1.9-5.5	4.5-6.0
	10-40	4.5-9.9	3.4-7.4	4.5-6.0
	40-65	6.8-15	5.1-11	4.5-6.0
41B:				
Nicelytown	0-5	2.9-14	2.2-10	4.5-5.5
	5-8	2.9-11	2.2-8.4	4.5-5.5
	8-34	4.5-9.9	4.4-7.4	4.5-5.5
	34-65	4.5-9.9	4.4-7.4	4.5-5.5
42A:				
Ogles	0-5	6.0-16	4.5-12	4.5-6.0
	5-28	4.1-11	3.1-8.4	4.5-6.0
	28-60	2.5-9.0	1.9-6.8	4.5-6.0
43B:				
Oriskany	0-6	2.4-10	1.8-7.9	4.5-5.5
	6-11	1.2-7.4	0.9-5.5	4.5-5.5
	11-65	3.9-9.5	2.9-7.2	4.5-5.5
44C:				
Oriskany	0-6	2.4-10	1.8-7.9	4.5-5.5
	6-11	1.2-7.4	0.9-5.5	4.5-5.5
	11-65	3.9-9.5	2.9-7.2	4.5-5.5
44D:				
Oriskany	0-6	2.4-10	1.8-7.9	4.5-5.5
	6-11	1.2-7.4	0.9-5.5	4.5-5.5
	11-65	3.9-9.5	2.9-7.2	4.5-5.5
44E:				
Oriskany	0-6	2.4-10	1.8-7.9	4.5-5.5
	6-11	1.2-7.4	0.9-5.5	4.5-5.5
	11-65	3.9-9.5	2.9-7.2	4.5-5.5
45E:				
Oriskany	0-6	2.4-10	1.8-7.9	4.5-5.5
	6-11	1.2-7.4	0.9-5.5	4.5-5.5
	11-65	3.9-9.5	2.9-7.2	4.5-5.5
46C:				
Oriskany	0-6	2.4-10	1.8-7.9	4.5-5.5
	6-11	1.2-7.4	0.9-5.5	4.5-5.5
	11-65	3.9-9.5	2.9-7.2	4.5-5.5
Murrill	0-4	3.6-12	2.7-8.8	4.5-6.0
	4-10	2.5-7.4	1.9-5.5	4.5-6.0
	10-40	4.5-9.9	3.4-7.4	4.5-6.0
	40-65	6.8-15	5.1-11	4.5-6.0
46D:				
Oriskany	0-6	2.4-10	1.8-7.9	4.5-5.5
	6-11	1.2-7.4	0.9-5.5	4.5-5.5
	11-65	3.9-9.5	2.9-7.2	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
46D:				
Murrill--------------	0-4	3.6-12	2.7-8.8	4.5-6.0
	4-10	2.5-7.4	1.9-5.5	4.5-6.0
	10-40	4.5-9.9	3.4-7.4	4.5-6.0
	40-65	6.8-15	5.1-11	4.5-6.0
47E:				
Oriskany-------------	0-6	2.4-10	1.8-7.9	4.5-5.5
	6-11	1.2-7.4	0.9-5.5	4.5-5.5
	11-65	3.9-9.5	2.9-7.2	4.5-5.5
Murrill--------------	0-4	3.6-12	2.7-8.8	4.5-6.0
	4-10	2.5-7.4	1.9-5.5	4.5-6.0
	10-40	4.5-9.9	3.4-7.4	4.5-6.0
	40-65	6.8-15	5.1-11	4.5-6.0
48C:				
Paddyknob------------	0-3	4.0-15	3.0-12	3.5-5.5
	3-6	2.0-12	2.0-10	3.5-5.5
	6-26	2.0-12	2.0-10	3.5-5.5
	26-36	---	---	---
Madsheep-------------	0-4	4.0-15	3.0-12	3.5-5.5
	4-17	3.0-9.0	2.0-8.0	3.5-5.5
	17-30	3.0-9.0	2.0-8.0	3.5-5.5
	30-40	---	---	---
48D:				
Paddyknob------------	0-3	4.0-15	3.0-12	3.5-5.5
	3-6	2.0-12	2.0-10	3.5-5.5
	6-26	2.0-12	2.0-10	3.5-5.5
	26-36	---	---	---
Madsheep-------------	0-4	4.0-15	3.0-12	3.5-5.5
	4-17	3.0-9.0	2.0-8.0	3.5-5.5
	17-30	3.0-9.0	2.0-8.0	3.5-5.5
	30-40	---	---	---
48E:				
Paddyknob------------	0-3	4.0-15	3.0-12	3.5-5.5
	3-6	2.0-12	2.0-10	3.5-5.5
	6-26	2.0-12	2.0-10	3.5-5.5
	26-36	---	---	---
Madsheep-------------	0-4	4.0-15	3.0-12	3.5-5.5
	4-17	3.0-9.0	2.0-8.0	3.5-5.5
	17-30	3.0-9.0	2.0-8.0	3.5-5.5
	30-40	---	---	---
49A:				
Purdy----------------	0-5	7.9-17	5.9-13	3.5-5.5
	5-12	7.6-16	5.5-12	3.5-5.5
	12-32	8.8-16	6.6-12	3.5-5.5
	32-48	8.8-18	6.6-14	3.5-5.5
	48-62	8.8-18	6.6-14	3.5-5.5

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
50C:				
Shelocta-------------	0-2	3.6-13	2.7-10	4.5-5.5
	2-7	2.5-7.4	1.9-5.5	4.5-5.5
	7-60	4.5-9.9	3.4-7.4	4.5-5.5
	60-65	4.5-9.9	3.4-7.4	4.5-5.5
Berks----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
50D:				
Shelocta-------------	0-2	3.6-13	2.7-10	4.5-5.5
	2-7	2.5-7.4	1.9-5.5	4.5-5.5
	7-60	4.5-9.9	3.4-7.4	4.5-5.5
	60-65	4.5-9.9	3.4-7.4	4.5-5.5
Berks----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
50E:				
Shelocta-------------	0-2	3.6-13	2.7-10	4.5-5.5
	2-7	2.5-7.4	1.9-5.5	4.5-5.5
	7-60	4.5-9.9	3.4-7.4	4.5-5.5
	60-65	4.5-9.9	3.4-7.4	4.5-5.5
Berks----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
51B:				
Sugarhol-------------	0-2	4.9-14	3.7-10	3.5-5.5
	2-11	3.8-9.8	2.8-7.3	3.5-5.5
	11-61	8.8-19	6.6-14	3.5-5.5
51C:				
Sugarhol-------------	0-2	4.9-14	3.7-10	3.5-5.5
	2-11	3.8-9.8	2.8-7.3	3.5-5.5
	11-61	8.8-19	6.6-14	3.5-5.5
52.				
Udorthents, dams				
53.				
Udorthents, smoothed				
54.				
Udorthents-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
55E:				
Watahala	0-3	3.6-11	2.7-8.0	4.0-5.5
	3-27	2.5-7.4	1.9-5.5	4.0-5.5
	27-37	5.0-9.9	3.8-7.4	4.0-5.5
	37-61	10-19	7.9-14	4.5-5.5
Frederick	0-3	4.4-12	3.3-9.3	4.5-6.0
	3-8	3.8-12	2.8-9.2	4.5-6.0
	8-20	8.8-16	6.6-12	4.5-6.0
	20-72	10-21	7.5-16	4.5-6.0
56E:				
Weikert	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-16	2.5-7.4	1.9-5.5	3.5-5.5
	16-26	---	---	---
Berks	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
57D:				
Weikert	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-16	2.5-7.4	1.9-5.5	3.5-5.5
	16-26	---	---	---
Berks	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
Rough	0-1	3.6-11	2.7-8.1	3.5-5.5
	1-5	2.5-7.4	1.9-5.5	3.5-5.5
	5-7	2.5-7.4	1.9-5.5	3.5-5.5
	7-17	---	---	---
57E:				
Weikert	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-16	2.5-7.4	1.9-5.5	3.5-5.5
	16-26	---	---	---
Berks	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
Rough	0-1	3.6-11	2.7-8.1	3.5-5.5
	1-5	2.5-7.4	1.9-5.5	3.5-5.5
	5-7	2.5-7.4	1.9-5.5	3.5-5.5
	7-17	---	---	---
58F:				
Weikert	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-16	2.5-7.4	1.9-5.5	3.5-5.5
	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
58F:				
Berks	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-11	2.5-9.1	1.9-6.8	3.5-5.5
	11-22	2.5-9.1	1.9-6.8	3.5-5.5
	22-27	2.5-7.4	1.9-5.5	3.5-5.5
	27-37	---	---	---
Rough	0-1	3.6-11	2.7-8.1	3.5-5.5
	1-5	2.5-7.4	1.9-5.5	3.5-5.5
	5-7	2.5-7.4	1.9-5.5	3.5-5.5
	7-17	---	---	---
59F:				
Weikert	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-16	2.5-7.4	1.9-5.5	3.5-5.5
	16-26	---	---	---
Rock outcrop.				
Rough	0-1	3.6-11	2.7-8.1	3.5-5.5
	1-5	2.5-7.4	1.9-5.5	3.5-5.5
	5-7	2.5-7.4	1.9-5.5	3.5-5.5
	7-17	---	---	---
60F:				
Weikert	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-16	2.5-7.4	1.9-5.5	3.5-5.5
	16-26	---	---	---
Rough	0-1	3.6-11	2.7-8.1	3.5-5.5
	1-5	2.5-7.4	1.9-5.5	3.5-5.5
	5-7	2.5-7.4	1.9-5.5	3.5-5.5
	7-17	---	---	---
61C:				
Wharton	0-3	3.6-12	2.7-8.9	4.0-5.5
	3-8	6.8-8.6	2.8-6.5	4.0-5.5
	8-44	4.5-11	3.4-8.3	4.0-5.5
	44-62	4.5-11	3.4-8.3	4.0-5.5
Blairton	0-9	3.6-12	2.7-9.8	3.5-5.0
	9-31	4.5-9.9	3.4-7.4	3.5-5.0
	31-38	5.0-14	3.9-10	3.5-5.0
	38-48	---	---	---
61D:				
Wharton	0-3	3.6-12	2.7-8.9	4.0-5.5
	3-8	6.8-8.6	2.8-6.5	4.0-5.5
	8-44	4.5-11	3.4-8.3	4.0-5.5
	44-62	4.5-11	3.4-8.3	4.0-5.5
Blairton	0-9	3.6-12	2.7-9.8	3.5-5.0
	9-31	4.5-9.9	3.4-7.4	3.5-5.0
	31-38	5.0-14	3.9-10	3.5-5.0
	38-48	---	---	---

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
62A:				
Wolfgap--------------	0-22	5.2-16	3.9-12	6.1-7.3
	22-52	5.1-16	3.8-12	6.1-7.3
	52-65	3.1-14	2.3-10	6.1-7.3
63A:				
Wolfgap--------------	0-22	5.2-16	3.9-12	6.1-7.3
	22-52	5.1-16	3.8-12	6.1-7.3
	52-65	3.1-14	2.3-10	6.1-7.3
64B:				
Zoar-----------------	0-8	4.9-14	3.7-10	4.5-5.5
	8-15	4.3-12	3.2-9.1	4.5-5.5
	15-42	8.8-16	6.6-12	4.5-5.5
	42-60	8.8-14	6.6-10	4.5-5.5
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	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
1A:										
Alonzville----------------	B	Low	Jan-May	---	---	---	---	None	Very brief	Rare
			Jun-Oct	---	---	---	---	None	Very brief	Very rare
			Nov-Dec	---	---	---	---	None	Very brief	Rare
2B:										
Alonzville----------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
3C:										
Alticrest-----------------	B	High	Jan-Dec	---	---	---	---	None	---	None
Dekalb--------------------	C	High	Jan-Dec	---	---	---	---	None	---	None
4A:										
Atkins--------------------	D	Negligible	Jan-May	0.0-1.0	>6.0	0.0-0.5	Brief	Occasional	Brief	Occasional
			June	0.0-1.0	>6.0	0.0-0.5	Brief	Occasional	Brief	Rare
			July-Sept	1.0-6.6	>6.0	---	---	None	Brief	Rare
			October	1.0-6.6	>6.0	0.0-0.5	Brief	Occasional	Brief	Rare
			Nov-Dec	0.0-1.0	>6.0	0.0-0.5	Brief	Occasional	Brief	Occasional
5D:										
Berks---------------------	C	High	Jan-Dec	---	---	---	---	None	---	None
5E:										
Berks---------------------	C	High	Jan-Dec	---	---	---	---	None	---	None
6B:										
Berks---------------------	C	Medium	Jan-Dec	---	---	---	---	None	---	None
Weikert-------------------	D	Medium	Jan-Dec	---	---	---	---	None	---	None
6C:										
Berks---------------------	C	Medium	Jan-Dec	---	---	---	---	None	---	None
Weikert-------------------	D	Medium	Jan-Dec	---	---	---	---	None	---	None
7C:										
Berks---------------------	C	Medium	Jan-Dec	---	---	---	---	None	---	None
Weikert-------------------	D	Medium	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				
7D:										
Berks	C	High	Jan-Dec	---	---	---	---	None	---	None
Weikert	D	High	Jan-Dec	---	---	---	---	None	---	None
8B:										
Blairton	C	High	Jan-Apr	0.5-3.0	1.7-3.3	---	---	None	---	None
			May-Oct	---	---	---	---	None	---	None
			Nov-Dec	0.5-3.0	1.7-3.3	---	---	None	---	None
Wharton	C	Medium	Jan-Apr	1.5-3.0	3.3-6.5	---	---	None	---	None
			May-Oct	---	---	---	---	None	---	None
			Nov-Dec	1.5-3.0	3.3-6.5	---	---	None	---	None
9C:										
Caneyville	C	High	Jan-Dec	---	---	---	---	None	---	None
9D:										
Caneyville	C	Very high	Jan-Dec	---	---	---	---	None	---	None
9E:										
Caneyville	C	Very high	Jan-Dec	---	---	---	---	None	---	None
10B:										
Cottonbend	B	Medium	Jan-Dec	---	---	---	---	None	---	None
11A:										
Coursey	C	Low	Jan-May	2.0-3.0	>6.0	---	---	None	Very brief	Rare
			June	3.0-6.6	>6.0	---	---	None	Very brief	Very rare
			Jul-Sept	---	---	---	---	None	Very brief	Very rare
			October	3.0-6.6	>6.0	---	---	None	Very brief	Very rare
			Nov-Dec	2.0-3.0	>6.0	---	---	None	Very brief	Rare
12D:										
Dekalb	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Alticrest	B	Very high	Jan-Dec	---	---	---	---	None	---	None
12E:										
Dekalb	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Alticrest	B	Very high	Jan-Dec	---	---	---	---	None	---	None
13D:										
Dekalb	C	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				
13D:										
Lily	B	Very high	Jan-Dec	---	---	---	---	None	---	None
McClung	B	High	Jan-Dec	---	---	---	---	None	---	None
14E:										
Dekalb	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Lily	B	Very high	Jan-Dec	---	---	---	---	None	---	None
15D:										
Dekalb	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.										
15E:										
Dekalb	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.										
16E:										
Dekalb	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Watahala	B	High	Jan-Dec	---	---	---	---	None	---	None
McClung	B	High	Jan-Dec	---	---	---	---	None	---	None
17A:										
Derroc	B	Very low	Jan-April	3.5-6.0	>6.0	---	---	None	Brief	Occasional
			May	6.0-6.6	>6.0	---	---	None	Brief	Occasional
			June	---	---	---	---	None	Brief	Occasional
			July-Sept	---	---	---	---	None	Brief	Rare
			October	6.0-6.6	>6.0	---	---	None	Brief	Rare
			Nov-Dec	3.5-6.0	>6.0	---	---	None	Brief	Occasional
18B:										
Escatawba	B	Medium	Jan-May	2.5-4.0	4.0-5.0	---	---	None	---	None
			Jun-Oct	---	---	---	---	None	---	None
			Nov-Dec	2.5-4.0	4.0-5.0	---	---	None	---	None
18C:										
Escatawba	B	Medium	Jan-May	2.5-4.0	4.0-5.0	---	---	None	---	None
			Jun-Oct	---	---	---	---	None	---	None
			Nov-Dec	2.5-4.0	4.0-5.0	---	---	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				
18D:										
Escatawba	B	High	Jan-May	2.5-4.0	4.0-5.0	---	---	None	---	None
			Jun-Oct	---	---	---	---	None	---	None
			Nov-Dec	2.5-4.0	4.0-5.0	---	---	None	---	None
19B:										
Escatawba	B	Medium	Jan-May	2.5-4.0	4.0-5.0	---	---	None	---	None
			Jun-Oct	---	---	---	---	None	---	None
			Nov-Dec	2.5-4.0	4.0-5.0	---	---	None	---	None
19C:										
Escatawba	B	Medium	Jan-May	2.5-4.0	4.0-5.0	---	---	None	---	None
			Jun-Oct	---	---	---	---	None	---	None
			Nov-Dec	2.5-4.0	4.0-5.0	---	---	None	---	None
20C:										
Faywood	C	High	Jan-Dec	---	---	---	---	None	---	None
Poplimento	C	Medium	Jan-Dec	---	---	---	---	None	---	None
20D:										
Faywood	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Poplimento	C	High	Jan-Dec	---	---	---	---	None	---	None
20E:										
Faywood	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Poplimento	C	High	Jan-Dec	---	---	---	---	None	---	None
21A:										
Feedstone	B	Very low	Jan-May	1.5-3.0	>6.0	---	---	None	Very brief	Rare
			June	3.0-6.6	>6.0	---	---	None	Very brief	Very rare
			July-Sept	---	---	---	---	None	Very brief	Very rare
			October	3.0-6.6	>6.0	---	---	None	Very brief	Very rare
			Nov-Dec	1.5-3.0	>6.0	---	---	None	Very brief	Rare
22C:										
Frederick	B	Medium	Jan-Dec	---	---	---	---	None	---	None
22D:										
Frederick	B	High	Jan-Dec	---	---	---	---	None	---	None
23C:										
Frederick	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Watahala	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				
23D:										
Frederick	B	High	Jan-Dec	---	---	---	---	None	---	None
Watahala	B	High	Jan-Dec	---	---	---	---	None	---	None
24B:										
Gilpin	C	Medium	Jan-Dec	---	---	---	---	None	---	None
24C:										
Gilpin	C	Medium	Jan-Dec	---	---	---	---	None	---	None
24D:										
Gilpin	C	High	Jan-Dec	---	---	---	---	None	---	None
25A:										
Gladehill	B	Very low	Jan-Jun	---	---	---	---	None	Brief	Frequent
			Jul-Oct	---	---	---	---	None	Brief	Occasional
			Nov-Dec	---	---	---	---	None	Brief	Frequent
26A:										
Irongate	B	Low	Jan-May	1.5-3.0	>6.0	---	---	None	Brief	Occasional
			June	3.0-6.6	>6.0	---	---	None	Brief	Rare
			July-Sept	---	---	---	---	None	Brief	Rare
			October	3.0-6.6	>6.0	---	---	None	Brief	Rare
			Nov-Dec	1.5-3.0	>6.0	---	---	None	Brief	Occasional
27C:										
Lehew	C	High	Jan-Dec	---	---	---	---	None	---	None
Berks	C	Medium	Jan-Dec	---	---	---	---	None	---	None
27D:										
Lehew	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Berks	C	High	Jan-Dec	---	---	---	---	None	---	None
27E:										
Lehew	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Berks	C	High	Jan-Dec	---	---	---	---	None	---	None
28F:										
Lehew	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Berks	C	High	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.										

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				
29C:										
Lily	B	High	Jan-Dec	---	---	---	---	None	---	None
30D:										
Lily	B	Very high	Jan-Dec	---	---	---	---	None	---	None
31C:										
Lily	B	High	Jan-Dec	---	---	---	---	None	---	None
McClung	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Dekalb	C	High	Jan-Dec	---	---	---	---	None	---	None
32C:										
Macove	B	Low	Jan-Dec	---	---	---	---	None	---	None
32D:										
Macove	B	Medium	Jan-Dec	---	---	---	---	None	---	None
33E:										
Macove	B	Medium	Jan-Dec	---	---	---	---	None	---	None
34D:										
Macove	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Berks	C	High	Jan-Dec	---	---	---	---	None	---	None
34E:										
Macove	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Berks	C	High	Jan-Dec	---	---	---	---	None	---	None
35C:										
Mandy	C	High	Jan-Dec	---	---	---	---	None	---	None
35D:										
Mandy	C	Very high	Jan-Dec	---	---	---	---	None	---	None
35E:										
Mandy	C	Very high	Jan-Dec	---	---	---	---	None	---	None
36A:										
Maurertown	D	Negligible	Jan-May	0.0-0.5	>6.0	0.3-0.5	Brief	Occasional	Very brief	Rare
			June	0.0-0.5	>6.0	0.2-0.3	Brief	Occasional	Very brief	Very rare
			July-Sept	0.5-6.6	>6.0	0.1-0.3	Very brief	Rare	Very brief	Very rare
			October	0.5-6.6	>6.0	0.2-0.3	Brief	Occasional	Very brief	Very rare
			Nov-Dec	0.0-0.5	>6.0	0.3-0.5	Brief	Occasional	Very brief	Rare

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				
37B:										
McClung	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Lily	B	High	Jan-Dec	---	---	---	---	None	---	None
38C:										
McClung	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Watahala	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Dekalb	C	High	Jan-Dec	---	---	---	---	None	---	None
38D:										
McClung	B	High	Jan-Dec	---	---	---	---	None	---	None
Watahala	B	High	Jan-Dec	---	---	---	---	None	---	None
Dekalb	C	Very high	Jan-Dec	---	---	---	---	None	---	None
39B:										
Murrill	B	Medium	Jan-Dec	---	---	---	---	None	---	None
39C:										
Murrill	B	Medium	Jan-Dec	---	---	---	---	None	---	None
39D:										
Murrill	B	High	Jan-Dec	---	---	---	---	None	---	None
40C:										
Murrill	B	Medium	Jan-Dec	---	---	---	---	None	---	None
40D:										
Murrill	B	High	Jan-Dec	---	---	---	---	None	---	None
40E:										
Murrill	B	High	Jan-Dec	---	---	---	---	None	---	None
41B:										
Nicelytown	C	High	Jan-May	1.5-2.5	>6.0	---	---	None	---	None
			June	2.5-6.6	>6.0	---	---	None	---	None
			July-Sept	---	---	---	---	None	---	None
			October	2.5-6.6	>6.0	---	---	None	---	None
			Nov-Dec	1.5-2.5	>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				
42A:										
Ogles	B	Very low	Jan-Apr	3.5-6.0	>6.0	---	---	None	Brief	Occasional
			May	6.0-6.6	>6.0	---	---	None	Brief	Occasional
			June-Sept	---	---	---	---	None	Brief	Rare
			October	6.0-6.6	>6.0	---	---	None	Brief	Rare
			Nov-Dec	3.5-6.0	>6.0	---	---	None	Brief	Occasional
43B:										
Oriskany	B	Low	Jan-Dec	---	---	---	---	None	---	None
44C:										
Oriskany	B	Low	Jan-Dec	---	---	---	---	None	---	None
44D:										
Oriskany	B	Medium	Jan-Dec	---	---	---	---	None	---	None
44E:										
Oriskany	B	Medium	Jan-Dec	---	---	---	---	None	---	None
45E:										
Oriskany	B	Medium	Jan-Dec	---	---	---	---	None	---	None
46C:										
Oriskany	B	Low	Jan-Dec	---	---	---	---	None	---	None
Murrill	B	Medium	Jan-Dec	---	---	---	---	None	---	None
46D:										
Oriskany	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Murrill	B	High	Jan-Dec	---	---	---	---	None	---	None
47E:										
Oriskany	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Murrill	B	High	Jan-Dec	---	---	---	---	None	---	None
48C:										
Paddyknob	C	High	Jan-Dec	---	---	---	---	None	---	None
Madsheep	C	High	Jan-Dec	---	---	---	---	None	---	None
48D:										
Paddyknob	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Madsheep	C	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				
48E:										
Paddyknob	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Madsheep	C	Very high	Jan-Dec	---	---	---	---	None	---	None
49A:										
Purdy	D	Negligible	Jan-May	0.0-1.0	>6.0	0.0-0.5	Brief	Occasional	---	None
			June	0.0-1.0	>6.0	0.0-0.3	Very brief	Rare	---	None
			July-Oct	1.0-6.6	>6.0	---	---	None	---	None
			November	0.0-1.0	>6.0	0.0-0.3	Very brief	Rare	---	None
			December	0.0-1.0	>6.0	0.0-0.5	Brief	Occasional	---	None
50C:										
Shelocta	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Berks	C	Medium	Jan-Dec	---	---	---	---	None	---	None
50D:										
Shelocta	B	High	Jan-Dec	---	---	---	---	None	---	None
Berks	C	High	Jan-Dec	---	---	---	---	None	---	None
50E:										
Shelocta	B	High	Jan-Dec	---	---	---	---	None	---	None
Berks	C	High	Jan-Dec	---	---	---	---	None	---	None
51B:										
Sugarhol	B	Medium	Jan-Dec	---	---	---	---	None	---	None
51C:										
Sugarhol	B	Medium	Jan-Dec	---	---	---	---	None	---	None
52. Udorthents, dams										
53. Udorthents, smoothed										
54. Udorthents-Rock outcrop										
55E:										
Watahala	B	High	Jan-Dec	---	---	---	---	None	---	None
Frederick	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				
56E:										
Weikert	D	High	Jan-Dec	---	---	---	---	None	---	None
Berks	C	High	Jan-Dec	---	---	---	---	None	---	None
57D:										
Weikert	D	High	Jan-Dec	---	---	---	---	None	---	None
Berks	C	High	Jan-Dec	---	---	---	---	None	---	None
Rough	D	Very high	Jan-Dec	---	---	---	---	None	---	None
57E:										
Weikert	D	High	Jan-Dec	---	---	---	---	None	---	None
Berks	C	High	Jan-Dec	---	---	---	---	None	---	None
Rough	D	Very high	Jan-Dec	---	---	---	---	None	---	None
58F:										
Weikert	D	High	Jan-Dec	---	---	---	---	None	---	None
Berks	C	High	Jan-Dec	---	---	---	---	None	---	None
Rough	D	Very high	Jan-Dec	---	---	---	---	None	---	None
59F:										
Weikert	D	High	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.										
Rough	D	Very high	Jan-Dec	---	---	---	---	None	---	None
60F:										
Weikert	D	High	Jan-Dec	---	---	---	---	None	---	None
Rough	D	Very high	Jan-Dec	---	---	---	---	None	---	None
61C:										
Wharton	C	Medium	Jan-Apr	1.5-3.0	3.3-6.5	---	---	None	---	None
			May-Oct	---	---	---	---	None	---	None
			Nov-Dec	1.5-3.0	3.3-6.5	---	---	None	---	None
Blairton	C	High	Jan-Apr	0.5-3.0	1.7-3.3	---	---	None	---	None
			May-Oct	---	---	---	---	None	---	None
			Nov-Dec	0.5-3.0	1.7-3.3	---	---	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				
61D:										
Wharton-------------------	C	High	Jan-Apr	1.5-3.0	3.3-6.5	---	---	None	---	None
			May-Oct	---	---	---	---	None	---	None
			Nov-Dec	1.5-3.0	3.3-6.5	---	---	None	---	None
Blairton------------------	C	Very high	Jan-Apr	0.5-3.0	1.7-3.3	---	---	None	---	None
			May-Oct	---	---	---	---	None	---	None
			Nov-Dec	0.5-3.0	1.7-3.3	---	---	None	---	None
62A:										
Wolfgap-------------------	B	Low	Jan-May	---	---	---	---	None	Brief	Occasional
			Jun-Oct	---	---	---	---	None	Brief	Rare
			Nov-Dec	---	---	---	---	None	Brief	Occasional
63A:										
Wolfgap-------------------	B	Low	Jan-May	---	---	---	---	None	Very brief	Rare
			Jun-Oct	---	---	---	---	None	Very brief	Very rare
			Nov-Dec	---	---	---	---	None	Very brief	Rare
64B:										
Zoar----------------------	C	High	Jan-May	1.5-2.5	>6.0	---	---	None	---	None
			June	2.5-6.6	>6.0	---	---	None	---	None
			July-Sept	---	---	---	---	None	---	None
			October	2.5-6.6	>6.0	---	---	None	---	None
			Nov-Dec	1.5-2.5	>6.0	---	---	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				
1A:						
Alonzville--------	---	---	---	Moderate	Low	High
2B:						
Alonzville--------	---	---	---	Moderate	Low	High
3C:						
Alticrest---------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Dekalb------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
4A:						
Atkins------------	---	---	---	High	High	Moderate
5D:						
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
5E:						
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
6B:						
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
Weikert-----------	Bedrock (lithic)	10-20	Very strongly cemented	Moderate	Moderate	Moderate
6C:						
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
Weikert-----------	Bedrock (lithic)	10-20	Very strongly cemented	Moderate	Moderate	Moderate
7C:						
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
Weikert-----------	Bedrock (lithic)	10-20	Very strongly cemented	Moderate	Moderate	Moderate
7D:						
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
Weikert-----------	Bedrock (lithic)	10-20	Very strongly cemented	Moderate	Moderate	Moderate
8B:						
Blairton----------	Bedrock (lithic)	20-40	Very strongly cemented	High	High	High
Wharton-----------	Bedrock (paralithic)	40-72	Strongly cemented	High	High	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				
9C:						
Caneyville--------	Bedrock (lithic)	20-40	Indurated	Moderate	High	Moderate
9D:						
Caneyville--------	Bedrock (lithic)	20-40	Indurated	Moderate	High	Moderate
9E:						
Caneyville--------	Bedrock (lithic)	20-40	Indurated	Moderate	High	Moderate
10B:						
Cottonbend--------	---	---	---	Moderate	Moderate	High
11A:						
Coursey-----------	---	---	---	High	Moderate	High
12D:						
Dekalb------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Alticrest---------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
12E:						
Dekalb------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Alticrest---------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
13D:						
Dekalb------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Lily--------------	Bedrock (lithic)	20-40	Indurated	Moderate	Moderate	High
McClung-----------	---	---	---	Moderate	High	High
14E:						
Dekalb------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Lily--------------	Bedrock (lithic)	20-40	Indurated	Moderate	Moderate	High
15D:						
Dekalb------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Rock outcrop.						
15E:						
Dekalb------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Rock outcrop.						
16E:						
Dekalb------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Watahala----------	---	---	---	Moderate	High	High
McClung-----------	---	---	---	Moderate	High	High
17A:						
Derroc------------	---	---	---	Moderate	Low	Moderate
18B:						
Escatawba---------	---	---	---	Moderate	High	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				
18C:						
Escatawba---------	---	---	---	Moderate	High	Moderate
18D:						
Escatawba---------	---	---	---	Moderate	High	Moderate
19B:						
Escatawba---------	---	---	---	Moderate	High	Moderate
19C:						
Escatawba---------	---	---	---	Moderate	High	Moderate
20C:						
Faywood-----------	Bedrock (lithic)	20-40	Indurated	Moderate	High	Moderate
Poplimento--------	---	---	---	Moderate	High	Moderate
20D:						
Faywood-----------	Bedrock (lithic)	20-40	Indurated	Moderate	High	Moderate
Poplimento--------	---	---	---	Moderate	High	Moderate
20E:						
Faywood-----------	Bedrock (lithic)	20-40	Indurated	Moderate	High	Moderate
Poplimento--------	---	---	---	Moderate	High	Moderate
21A:						
Feedstone---------	---	---	---	Moderate	Low	Moderate
22C:						
Frederick---------	---	---	---	Moderate	Moderate	High
22D:						
Frederick---------	---	---	---	Moderate	Moderate	High
23C:						
Frederick---------	---	---	---	Moderate	Moderate	High
Watahala----------	---	---	---	Moderate	High	High
23D:						
Frederick---------	---	---	---	Moderate	Moderate	High
Watahala----------	---	---	---	Moderate	High	High
24B:						
Gilpin------------	Bedrock (paralithic)	20-40	Moderately cemented	Moderate	Low	High
24C:						
Gilpin------------	Bedrock (paralithic)	20-40	Moderately cemented	Moderate	Low	High
24D:						
Gilpin------------	Bedrock (paralithic)	20-40	Moderately cemented	Moderate	Low	High
25A:						
Gladehill---------	---	---	---	Moderate	Low	Low

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				
26A:						
Irongate----------	---	---	---	High	Low	High
27C:						
Lehew-------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
27D:						
Lehew-------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
27E:						
Lehew-------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
28F:						
Lehew-------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
Rock outcrop.						
29C:						
Lily--------------	Bedrock (lithic)	20-40	Indurated	Moderate	Moderate	High
30D:						
Lily--------------	Bedrock (lithic)	20-40	Indurated	Moderate	Moderate	High
31C:						
Lily--------------	Bedrock (lithic)	20-40	Indurated	Moderate	Moderate	High
McClung-----------	---	---	---	Moderate	High	High
Dekalb------------	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
32C:						
Macove------------	---	---	---	Moderate	Moderate	Moderate
32D:						
Macove------------	---	---	---	Moderate	Moderate	Moderate
33E:						
Macove------------	---	---	---	Moderate	Moderate	Moderate
34D:						
Macove------------	---	---	---	Moderate	Moderate	Moderate
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	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				
34E:						
Macove	---	---	---	Moderate	Moderate	Moderate
Berks	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
35C:						
Mandy	Bedrock (paralithic)	20-40	Strongly cemented	Moderate	Low	High
35D:						
Mandy	Bedrock (paralithic)	20-40	Strongly cemented	Moderate	Low	High
35E:						
Mandy	Bedrock (paralithic)	20-40	Strongly cemented	Moderate	Low	High
36A:						
Maurertown	---	---	---	High	High	High
37B:						
McClung	---	---	---	Moderate	High	High
Lily	Bedrock (lithic)	20-40	Indurated	Moderate	Moderate	High
38C:						
McClung	---	---	---	Moderate	High	High
Watahala	---	---	---	Moderate	High	High
Dekalb	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
38D:						
McClung	---	---	---	Moderate	High	High
Watahala	---	---	---	Moderate	High	High
Dekalb	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
39B:						
Murrill	---	---	---	Moderate	Moderate	High
39C:						
Murrill	---	---	---	Moderate	Moderate	High
39D:						
Murrill	---	---	---	Moderate	Moderate	High
40C:						
Murrill	---	---	---	Moderate	Moderate	High
40D:						
Murrill	---	---	---	Moderate	Moderate	High
40E:						
Murrill	---	---	---	Moderate	Moderate	High
41B:						
Nicelytown	---	---	---	High	Moderate	High

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				
42A:						
Ogles	---	---	---	Moderate	Low	Moderate
43B:						
Oriskany	---	---	---	Moderate	Moderate	High
44C:						
Oriskany	---	---	---	Moderate	Moderate	High
44D:						
Oriskany	---	---	---	Moderate	Moderate	High
44E:						
Oriskany	---	---	---	Moderate	Moderate	High
45E:						
Oriskany	---	---	---	Moderate	Moderate	High
46C:						
Oriskany	---	---	---	Moderate	Moderate	High
Murrill	---	---	---	Moderate	Moderate	High
46D:						
Oriskany	---	---	---	Moderate	Moderate	High
Murrill	---	---	---	Moderate	Moderate	High
47E:						
Oriskany	---	---	---	Moderate	Moderate	High
Murrill	---	---	---	Moderate	Moderate	High
48C:						
Paddyknob	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Madsheep	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
48D:						
Paddyknob	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Madsheep	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
48E:						
Paddyknob	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
Madsheep	Bedrock (lithic)	20-40	Indurated	Moderate	Low	High
49A:						
Purdy	---	---	---	High	High	High
50C:						
Shelocta	---	---	---	Moderate	Low	High
Berks	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High

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				
50D:						
Shelocta----------	---	---	---	Moderate	Low	High
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
50E:						
Shelocta----------	---	---	---	Moderate	Low	High
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
51B:						
Sugarhol----------	---	---	---	Moderate	High	Moderate
51C:						
Sugarhol----------	---	---	---	Moderate	High	Moderate
52.						
Udorthents, dams						
53.						
Udorthents, smoothed						
54.						
Udorthents-Rock outcrop						
55E:						
Watahala----------	---	---	---	Moderate	High	High
Frederick---------	---	---	---	Moderate	Moderate	High
56E:						
Weikert-----------	Bedrock (lithic)	10-20	Very strongly cemented	Moderate	Moderate	Moderate
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
57D:						
Weikert-----------	Bedrock (lithic)	10-20	Very strongly cemented	Moderate	Moderate	Moderate
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
Rough-------------	Bedrock (lithic)	4-10	Very strongly cemented	Moderate	High	High
57E:						
Weikert-----------	Bedrock (lithic)	10-20	Very strongly cemented	Moderate	Moderate	Moderate
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
Rough-------------	Bedrock (lithic)	4-10	Very strongly cemented	Moderate	High	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				
58F:						
Weikert-----------	Bedrock (lithic)	10-20	Very strongly cemented	Moderate	Moderate	Moderate
Berks-------------	Bedrock (lithic)	20-40	Very strongly cemented	Moderate	Low	High
Rough-------------	Bedrock (lithic)	4-10	Very strongly cemented	Moderate	High	High
59F:						
Weikert-----------	Bedrock (lithic)	10-20	Very strongly cemented	Moderate	Moderate	Moderate
Rock outcrop.						
Rough-------------	Bedrock (lithic)	4-10	Very strongly cemented	Moderate	High	High
60F:						
Weikert-----------	Bedrock (lithic)	10-20	Very strongly cemented	Moderate	Moderate	Moderate
Rough-------------	Bedrock (lithic)	4-10	Very strongly cemented	Moderate	High	High
61C:						
Wharton-----------	Bedrock (paralithic)	40-72	Strongly cemented	High	High	High
Blairton----------	Bedrock (lithic)	20-40	Very strongly cemented	High	High	High
61D:						
Wharton-----------	Bedrock (paralithic)	40-72	Strongly cemented	High	High	High
Blairton----------	Bedrock (lithic)	20-40	Very strongly cemented	High	High	High
62A:						
Wolfgap-----------	---	---	---	Moderate	Low	Moderate
63A:						
Wolfgap-----------	---	---	---	Moderate	Low	Moderate
64B:						
Zoar--------------	---	---	---	High	High	High
W.						
Water						

Table 20.—Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series)

Soil name	Family or higher taxonomic class
Alonzville	Fine-loamy, siliceous, semiactive, mesic Typic Hapludults
Alticrest	Coarse-loamy, siliceous, semiactive, mesic Typic Dystrudepts
Atkins	Fine-loamy, mixed, active, acid, mesic Fluvaquentic Endoaquepts
Berks	Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
Blairton	Fine-loamy, mixed, active, mesic Aquic Hapludults
Caneyville	Fine, mixed, active, mesic Typic Hapludalfs
Cottonbend	Fine-loamy, siliceous, semiactive, mesic Typic Paleudults
Coursey	Fine-loamy, siliceous, semiactive, mesic Aquic Hapludults
Dekalb	Loamy-skeletal, siliceous, active, mesic Typic Dystrudepts
Derroc	Loamy-skeletal, siliceous, active, mesic Dystric Fluventic Eutrudepts
Escatawba	Fine-loamy, siliceous, semiactive, mesic Oxyaquic Paleudults
Faywood	Fine, mixed, active, mesic Typic Hapludalfs
Feedstone	Fine-loamy, siliceous, active, mesic Cumulic Hapludolls
Frederick	Fine, mixed, semiactive, mesic Typic Paleudults
Gilpin	Fine-loamy, mixed, active, mesic Typic Hapludults
Gladehill	Coarse-loamy, siliceous, superactive, mesic Fluventic Hapludolls
Irongate	Coarse-loamy, siliceous, active, mesic Fluvaquentic Hapludolls
Lehew	Loamy-skeletal, siliceous, semiactive, mesic Typic Dystrudepts
Lily	Fine-loamy, siliceous, semiactive, mesic Typic Hapludults
Macove	Loamy-skeletal, mixed, active, mesic Typic Hapludults
Madsheep	Loamy-skeletal, siliceous, active, frigid Typic Dystrudepts
Mandy	Loamy-skeletal, mixed, active, frigid Typic Dystrudepts
Maurertown	Fine, mixed, semiactive, mesic Typic Endoaqualfs
McClung	Fine-loamy, siliceous, semiactive, mesic Typic Paleudults
Murrill	Fine-loamy, mixed, semiactive, mesic Typic Hapludults
Nicelytown	Fine-loamy, siliceous, semiactive, mesic Aquic Paleudults
Ogles	Loamy-skeletal, siliceous, active, mesic Fluventic Dystrudepts
Oriskany	Loamy-skeletal, siliceous, semiactive, mesic Typic Hapludults
Paddyknob	Loamy-skeletal, siliceous, superactive, frigid Typic Dystrudepts
Poplimento	Fine, mixed, subactive, mesic Ultic Hapludalfs
*Purdy	Fine, mixed, semiactive, mesic Typic Endoaquults
Rough	Loamy, mixed, active, acid, mesic Lithic Udorthents
Shelocta	Fine-loamy, mixed, active, mesic Typic Hapludults
Sugarhol	Fine, mixed, semiactive, mesic Typic Paleudults
Udorthents	Udorthents
Watahala	Fine-loamy over clayey, siliceous over mixed, subactive, mesic Typic Paleudults
Weikert	Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts
Wharton	Fine-loamy, mixed, active, mesic Aquic Hapludults
Wolfgap	Fine-loamy, siliceous, active, mesic Fluventic Hapludolls
Zoar	Fine, mixed, semiactive, mesic Aquic Hapludults

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