United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with United States Department of Agriculture, Forest Service, and Virginia Polytechnic Institute and State University

Soil Survey of Nelson County, Virginia

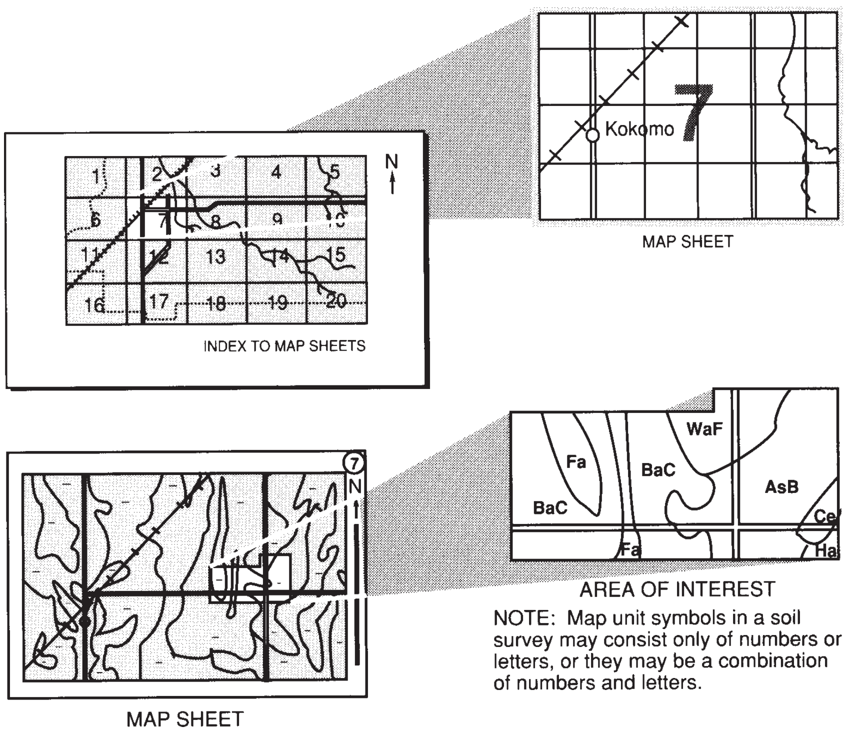
How To Use This Soil Survey

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. This survey was made cooperatively by the Natural Resources Conservation Service; the United States Department of Agriculture, Forest Service; and the Virginia Polytechnic Institute and State University. Financial assistance was provided by the Virginia Department of Conservation and Recreation and the Nelson County Board of Supervisors. The survey is part of the technical assistance furnished to the Thomas Jefferson Soil and Water Conservation District.

Major fieldwork for this soil survey was completed in 1989. Soil names and descriptions were approved in 1992. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1992. The most current official data are available at http://websoilsurvey.nrcs.usda.gov/app/.

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: Corn on Suches loam, 0 to 2 percent slopes, frequently flooded, is in the foreground. Pasture, hay, and farm buildings in an area of Colleen gravelly loam, 7 to 15 percent slopes, are in the middle ground. Mixed hardwoods and pines, in areas that are dominantly Edneytown-Peaks complex, 35 to 55 percent slopes, extremely stony, are in the background on Priest Mountain.

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

Contents

Issued 2010

Foreword

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

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

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

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

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

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

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Soil Survey of
Nelson County, Virginia

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United States Department of Agriculture, Natural Resources Conservation Service,
in cooperation with
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NELSON COUNTY is in the west-central part of Virginia (fig. 1). It has a total area of 303,700 acres, or 474.3 square miles, and includes about 19,476 acres in the George Washington National Forest. The Blue Ridge Parkway runs parallel to the Nelson-Rockbridge and Nelson-Augusta County lines. Lovingston is the county seat.

Nelson County is bounded on the north by Albemarle County, on the east by the James River and Buckingham County, on the south by Appomattox and Amherst Counties, and on the west by Augusta and Rockbridge Counties.

Nelson County was formed from Amherst County in 1807. It was named for General Thomas Nelson, Governor of Virginia in 1781.

General Nature of the Survey Area

This section provides general information about the survey area. It describes physiography, relief, and drainage and climate.

Physiography, Relief, and Drainage

Nelson County is located in two physiographic provinces—the Piedmont and the Blue Ridge. The eastern half of the county is part of the Piedmont Plateau. Elevation in Nelson County ranges from about 300 feet above sea level, on the flood plains of the James River near Howardsville in the eastern part of the county, to about 4,063 feet, on Priest Mountain in the George Washington National Forest in the western part of the county.

The Piedmont is dissected and rolling and is underlain by crystalline rocks, such as gneiss and schist. It consists of gently sloping and strongly sloping ridge summits and strongly sloping to very steep side slopes. The steeper side slopes generally occur along the major drainageways. The soils of the Piedmont commonly are very deep and well drained and have a clayey subsoil. They range from shallow to very deep and from excessively drained to poorly drained and can have a loamy or clayey subsoil. Relief generally ranges from about 20 to 200 feet.

Within the Piedmont are several mountains that have a general northeast-

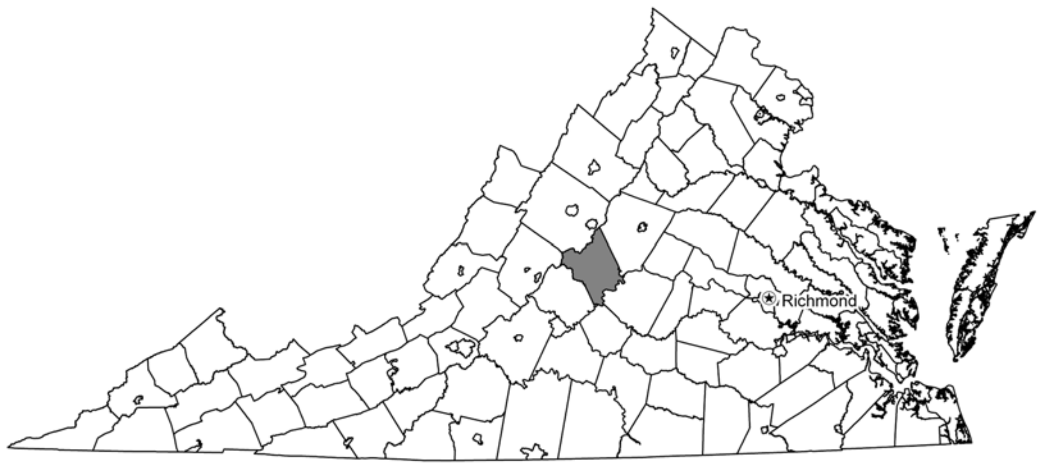

Figure 1.—Location of Nelson County in Virginia.

southwest orientation. The soils in these mountain areas are generally moderately deep to very deep and well drained and somewhat excessively drained. Maximum relief is about 1,800 feet.

The Blue Ridge consists of long, steep and very steep side slopes bordering narrow to broad, strongly sloping and moderately steep ridge summits. It is underlain by a variety of metamorphic, igneous, and metasedimentary rocks. Relief ranges from 100 to 3,500 feet. The Blue Ridge has the highest elevations in the survey area.

Long, narrow to broad flood plains occur along the James, Tye, Piney, and Rockfish Rivers and other large streams in the county. The soils of the flood plains are well drained to poorly drained. Most have a loamy subsoil, but those near the mountains have a cobbly subsoil.

Climate

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

In winter, the average temperature is 37.7 degrees F and the average daily minimum temperature is 26.7 degrees. The lowest temperature on record, which occurred at Tye River on January 21, 1985, is -10 degrees. In summer, the average temperature is 74.2 degrees and the average daily maximum temperature is 85.5 degrees. The highest temperature, which occurred at Tye River on August 21, 1983, is 105 degrees.

Growing degree days are shown in table 1. They are equivalent to “heat units.” During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The average annual total precipitation is 45.85 inches. Of this, 27.9 inches, or about 61 percent, usually falls in April through October. The growing season for most crops falls within this period. The heaviest 1-day rainfall during the period of record was 6.38 inches at Tye River on June 22, 1972. Thunderstorms occur on about 29 days each year, and most occur in May or July.

The average seasonal snowfall is 3.9 inches. The greatest snow depth at any one time during the period of record was 25 inches, recorded on January 26, 1987. On an average, 6 days per year have at least 1 inch of snow on the ground.

The average relative humidity in mid-afternoon is about 53 percent. Humidity is higher at night, and the average at dawn is about 80 percent. The sun shines 63 percent of the time in summer and 53 percent in winter. The prevailing wind is from the southwest. Average windspeed is highest, 9.1 miles per hour, in March.

How This Survey Was Made

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

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

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

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

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

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

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Hayesville loam, 2 to 7 percent slopes, is a phase of the Hayesville series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes. 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. Edneytown-Peaks complex, 35 to 55 percent slopes, extremely stony, is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Pits, quarry, 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.

1D—Arcola gravelly silt loam, 15 to 25 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Side slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—reddish brown gravelly silt loam

Subsoil:
6 to 16 inches—reddish brown silty clay loam
16 to 34 inches—reddish brown gravelly silty clay loam

Soft bedrock:
34 to 58 inches—dark reddish brown and dusky red conglomerate bedrock

Hard bedrock:
58 inches—conglomerate bedrock

Minor Components

Dissimilar components:
- The deep Warminster, Buffstat, and Littlejoe soils that have a clay subsoil and are in landscape positions similar to those of the Arcola soil

Similar components:
- Areas that have less gravel in the surface layer than the Arcola soil

Soil Properties and Qualities

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to soft bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet

Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from Triassic and Jurassic interbedded sandstone and siltstone and conglomerate

Use and Management Considerations

Cropland

Suitability: Moderately suited to wheat and grass-legume hay; poorly suited to corn, soybeans, and alfalfa hay

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

Pastureland

Suitability: Moderately suited to pasture

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

Woodland

Suitability: Moderately suited to northern red oak

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

Building sites

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

Septic tank absorption fields

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

Local roads and streets

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

Interpretive Groups

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

1E—Arcola gravelly silt loam, 25 to 50 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Side slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—reddish brown gravelly silt loam

Subsoil:
6 to 16 inches—reddish brown silty clay loam
16 to 34 inches—reddish brown gravelly silty clay loam

Soft bedrock:
34 to 58 inches—dark reddish brown and dusky red conglomerate bedrock

Hard bedrock:
58 inches—conglomerate bedrock

Minor Components

Dissimilar components:
- The deep Warminster, Buffstat, and Littlejoe soils that have a clay subsoil and are in landscape positions similar to those of the Arcola soil

Similar components:
- Areas that have less gravel in the surface layer than the Arcola soil

Soil Properties and Qualities

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to soft bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from Triassic and Jurassic interbedded sandstone and siltstone and conglomerate

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

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

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

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

Interpretive Groups

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

2A—Batteau loam, 0 to 2 percent slopes, occasionally flooded

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Flood plains
Position on the landform: Treads

Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 13 inches—dark brown loam, dark yellowish brown dry

Subsoil:
13 to 18 inches—dark yellowish brown loam; yellowish brown iron-manganese masses
18 to 32 inches—dark yellowish brown loam; yellowish brown iron-manganese masses and grayish brown iron depletions
32 to 48 inches—brown loam; dark grayish brown iron depletions and dark yellowish brown iron-manganese masses
48 to 62 inches—dark yellowish brown loam; grayish brown iron depletions

Minor Components

Dissimilar components:
- The well drained Galtsmill and Wingina soils, which have less clay in the subsoil than the Batteau soil and are in similar landscape positions
- The poorly drained Yogaville soils, which are at the base of terraces and uplands, in depressions, and in other lower areas
- Areas that have more sand or cobbles, or both, in the subsoil than the Batteau soil

Similar components:
- Areas that have a surface layer that is lighter colored or thinner, or both, than that of the Batteau soil
- Areas that have a gravelly surface layer

Soil Properties and Qualities

Available water capacity: High (about 9.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Moderately well drained
Depth to seasonal water saturation: About 12 to 30 inches
Water table kind: Apparent
Flooding hazard: Occasional
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Recent alluvium

Use and Management Considerations

Cropland

Suitability: Well suited to corn, soybeans, wheat, and grass-legume hay; moderately suited to alfalfa hay
- Frost action may damage the root system of winter grain crops.
- 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: Well suited to pasture

- Flooding may damage pastures.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Well suited to loblolly pine, yellow-poplar, and sweetgum

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

Building sites

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

Septic tank absorption fields

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

Local roads and streets

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

Interpretive Groups

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

3B—Belvoir sandy loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Swales, drainageways, and fans
Position on the landform: Mountainbases, base slopes, and head slopes
Size of areas: 5 to 30 acres
Shape of areas: Concave and irregular

Map Unit Composition

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

Typical Profile

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

Subsoil:
4 to 12 inches—yellowish brown sandy clay loam; light brownish gray iron depletions
12 to 25 inches—yellowish brown sandy clay loam; grayish brown iron depletions
25 to 40 inches—yellowish brown sandy clay loam; light gray iron depletions and strong brown iron-manganese masses

Substratum:
40 to 63 inches—brownish yellow clay; strong brown iron-manganese masses and gray iron depletions

Minor Components

Dissimilar components:
- The poorly drained Chatuge soils on terraces, on toeslopes, and in areas at the head of drainageways
- The well drained Delanco soils on footslopes in drainageways
- The well drained Thurmont soils on backslopes and footslopes

Similar components:
- Somewhat poorly drained areas that do not have a firm, brittle layer in the subsoil

Soil Properties and Qualities

Available water capacity: Low (about 3.9 inches)
Slowest saturated hydraulic conductivity: Low (about 0.00 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: 16 to 30 inches to fragipan
Drainage class: Somewhat poorly drained
Depth to seasonal water saturation: About 12 to 24 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Very high
Surface fragments: None
Parent material: Colluvium

Use and Management Considerations

Cropland
Suitability: Well suited to grass-legume hay; moderately suited to corn and wheat; poorly suited to soybeans; 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 dense soil material restricts the rooting depth of crops.
- The limited available water capacity may cause plants to suffer from moisture stress.
- Frost action may damage the root system of winter grain crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pastureland
Suitability: Well suited to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

- The dense soil layer may restrict the rooting depth of plants.
- Frost action may damage the root systems of plants.

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

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

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4w
Virginia soil management group: BB
Hydric soil: No

4B—Buffstat silt loam, 2 to 7 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

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

Subsoil:
4 to 8 inches—reddish yellow silty clay loam

8 to 28 inches—strong brown silty clay loam
28 to 42 inches—reddish yellow channery clay

Soft bedrock:
42 to 58 inches—brownish yellow and reddish brown sericite schist bedrock

Hard bedrock:
58 inches—sericite schist bedrock

Minor Components

Dissimilar components:
- The somewhat excessively drained Bugley soils that have less clay in the subsoil than the Buffstat soil and are on shoulders and backslopes

Similar components:
- Littlejoe soils that have a red subsoil and are in landscape positions similar to those of the Buffstat soil
- Soils that are underlain by phyllite bedrock

Soil Properties and Qualities

Available water capacity: Moderate (about 6.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
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 mica schist (sericite schist)

Use and Management Considerations

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

Woodland
Suitability: Moderately suited to loblolly pine and northern red oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.

- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

Septic tank absorption fields
- The 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 strength is unfavorable for supporting heavy loads.

Interpretive Groups

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

4C—Buffstat silt loam, 7 to 15 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

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

Subsoil:
4 to 8 inches—reddish yellow silty clay loam
8 to 28 inches—strong brown silty clay loam
28 to 42 inches—reddish yellow channery clay

Soft bedrock:
42 to 58 inches—brownish yellow and reddish brown sericite schist bedrock

Hard bedrock:
58 inches—sericite schist bedrock

Minor Components

Dissimilar components:
- The somewhat excessively drained Bugley soils that have less clay in the subsoil than the Buffstat soil and are in similar landscape positions

Similar components:
- Littlejoe soils that have a red subsoil and are in landscape positions similar to those of the Buffstat soil
- Soils that are underlain by phyllite bedrock

Soil Properties and Qualities

Available water capacity: Moderate (about 6.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
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 mica schist (sericite schist)

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, wheat, 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland
Suitability: Moderately suited to loblolly pine and northern red oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

Interpretive Groups

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

4D—Buffstat silt loam, 15 to 25 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Side slopes
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

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

Subsoil:
4 to 8 inches—reddish yellow silty clay loam
8 to 28 inches—strong brown silty clay loam
28 to 42 inches—reddish yellow channery clay

Soft bedrock:
42 to 58 inches—brownish yellow and reddish brown sercite schist bedrock

Hard bedrock:
58 inches—sercite schist bedrock

Minor Components

Dissimilar components:

- The somewhat excessively drained Bugley soils that have less clay in the subsoil than the Buffstat soil and are in similar landscape positions

Similar components:

- Littlejoe soils that have a red subsoil and are in landscape positions similar to those of the Buffstat soil
- Soils that are underlain by phyllite bedrock

Soil Properties and Qualities

Available water capacity: Moderate (about 6.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
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 mica schist (sericite schist)

Use and Management Considerations

Cropland
Suitability: Moderately suited to wheat, grass-legume hay, and alfalfa hay; poorly suited to corn and soybeans
- 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland
Suitability: Moderately suited to loblolly pine and northern red oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

Interpretive Groups

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

5C—Bugley channery silt loam, 7 to 15 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—yellowish brown channery silt loam

Subsoil:
3 to 13 inches—yellowish brown very channery silt loam

Soft bedrock:
13 to 18 inches—yellowish brown sericite schist bedrock

Hard bedrock:
18 inches—sericite schist bedrock

Minor Components

Dissimilar components:
- The well drained Littlejoe soils that have a subsoil of red clay and are in landscape positions similar to those of the Bugley soil
- The well drained Buffstat soils that have a subsoil of reddish yellow clay and are in landscape positions similar to those of the Bugley soil
- Areas that have a very stony surface layer

Similar components:
- Soils that are underlain by phyllite bedrock

Soil Properties and Qualities

Available water capacity: Very low (about 1.5 inches)

Slowest saturated hydraulic conductivity: High (about 2 in/hr)
Depth class: Shallow (10 to 20 inches)
Depth to root-restrictive feature: 10 to 20 inches to soft bedrock
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from mica schist (sericite schist)

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

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

Woodland
Suitability: Moderately suited to northern red oak; poorly suited to loblolly pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low 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, 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
- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

Virginia soil management group: JJ
Hydric soil: No

5D—Bugley channery silt loam, 15 to 25 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Side slopes
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—yellowish brown channery silt loam

Subsoil:
3 to 13 inches—yellowish brown very channery silt loam

Soft bedrock:
13 to 18 inches—yellowish brown sericite schist bedrock

Hard bedrock:
18 inches—sericite schist bedrock

Minor Components

Dissimilar components:
- The well drained Littlejoe soils that have a subsoil of red clay and are in landscape positions similar to those of the Bugley soil
- The well drained Buffstat soils that have a subsoil of reddish yellow clay and are in landscape positions similar to those of the Bugley soil
- Areas that have a very stony surface layer

Similar components:
- Soils that are underlain by phyllite bedrock

Soil Properties and Qualities

Available water capacity: Very low (about 1.5 inches)
Slowest saturated hydraulic conductivity: High (about 2 in/hr)
Depth class: Shallow (10 to 20 inches)
Depth to root-restrictive feature: 10 to 20 inches to soft bedrock
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from mica schist (sericite schist)

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

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

Woodland
Suitability: Moderately suited to northern red oak; poorly suited to loblolly pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low 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, 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
- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

5E—Bugley channery silt loam, 25 to 50 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes

Position on the landform: Side slopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—yellowish brown channery silt loam

Subsoil:
3 to 13 inches—yellowish brown very channery silt loam

Soft bedrock:
13 to 18 inches—yellowish brown sericite schist bedrock

Hard bedrock:
18 inches—sericite schist bedrock

Minor Components

Dissimilar components:
- The well drained Littlejoe soils that have a subsoil of red clay and are in landscape positions similar to those of the Bugley soil
- The well drained Buffstat soils that have a subsoil of reddish yellow clay and are in landscape positions similar to those of the Bugley soil
- Areas that have a very stony surface layer

Similar components:
- Soils that are underlain by phyllite bedrock

Soil Properties and Qualities

Available water capacity: Very low (about 1.5 inches)
Slowest saturated hydraulic conductivity: High (about 2 in/hr)
Depth class: Shallow (10 to 20 inches)
Depth to root-restrictive feature: 10 to 20 inches to soft bedrock
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from mica schist (sericite schist)

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
- This soil is unsuited to pastureland.

Woodland
Suitability: Moderately suited to northern red oak; poorly suited to loblolly pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A

timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The slope makes the use of mechanical planting equipment impractical.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low 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, 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
- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

6E—Catoctin-Rock outcrop complex, 25 to 75 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes
Position on the landform: Mountainflanks
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

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

Subsoil:
5 to 28 inches—strong brown channery silt loam

Substratum:
28 to 36 inches—yellowish brown extremely channery silt loam

Hard bedrock:
36 inches—greenstone bedrock

Rock outcrop
Areas of Rock outcrop consist of exposures of metabasalts and associated metavolcanic and metasedimentary rocks, primarily greenstone. The outcrops are as much as 50 feet in height and are spaced 10 to 200 feet apart.

Minor Components

Dissimilar components:
- Myersville soils that have fewer rock fragments in the subsoil than the Catoctin soil and are in similar landscape positions

Similar components:
- Areas that have rock outcrops spaced more than 200 feet apart

Properties and Qualities of the Catoctin Soil

Available water capacity: Low (about 4.1 inches)
Slowest saturated hydraulic conductivity: High (about 2 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to hard bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Residuum weathered from greenstone

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

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 in constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

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

Local roads and streets
- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Catoctin—7s; Rock outcrop—8s
Virginia soil management group: Catoctin—JJ; Rock outcrop—none assigned
Hydric soils: Catoctin—no; Rock outcrop—unranked

7B—Chatuge loam, 1 to 4 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Stream terraces and fans
Position on the landform: Treads, base slopes, and head slopes
Size of areas: 5 to 30 acres
Shape of areas: Irregular and concave

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 9 inches—dark brown loam

Subsoil:
9 to 19 inches—gray sandy clay loam; reddish yellow iron-manganese masses
19 to 41 inches—gray clay loam; strong brown iron-manganese masses

Substratum:
41 to 62 inches—gray sandy loam

Minor Components

Dissimilar components:
- The well drained Delanco soils in landscape positions similar to those of the Chatuge soil
- The well drained Suches soils on flood plains
- The somewhat poorly drained Codorus soils on flood plains

Similar components:
- The poorly drained Hatboro soils on flood plains
- Areas that have a subsoil that is sandier than that of the Chatuge soil
- Areas that have a gravelly surface layer

Soil Properties and Qualities

Available water capacity: Moderate (about 8.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 12 to 24 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Alluvium

Use and Management Considerations

Cropland
Suitability: Poorly suited to corn, soybeans, and wheat; not suited to 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.
- Excessive permeability increases the risk of ground-water contamination.
- 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine and northern red oak; moderately suited to yellow-poplar and sweetgum
- Proper planning for timber harvesting is essential in order to minimize the potential

negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- Soil wetness may limit the use of log trucks.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength 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 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.
- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland if drained
Land capability class: 4w
Virginia soil management group: OO
Hydric soil: Yes

8A—Codorus silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Flood plains
Position on the landform: Depressions or low-lying areas on treads
Size of areas: 5 to 50 acres
Shape of areas: Irregular and concave

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—brown silt loam

Subsoil:
3 to 18 inches—brown silt loam; yellowish red iron-manganese masses
18 to 30 inches—brown silty clay loam; strong brown iron-manganese masses and grayish brown iron depletions
30 to 50 inches—brown silty clay loam; dark gray iron depletions and strong brown iron-manganese masses

Substratum:
50 to 72 inches—dark grayish brown stratified loamy sand and gravel

Minor Components

Dissimilar components:
- The well drained Colvard soils in the higher areas on flood plains
- The moderately well drained Suches soils in landscape positions similar to those of the Codorus soil
- The poorly drained Hatboro soils in landscape positions similar to those of the Codorus soil

Similar components:
- Areas that have a surface layer that is darker than that of the Codorus soil
- Areas that have a subsoil that is sandier than that of the Codorus soil
- Areas that have cobbles in the subsoil and substratum
- Areas that have a gravelly surface layer

Soil Properties and Qualities

Available water capacity: Moderate (about 8.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Somewhat poorly drained
Depth to seasonal water saturation: About 12 to 24 inches
Water table kind: Apparent
Flooding hazard: Occasional
Ponding hazard: Occasional
Depth of ponding: 0.1 to 0.3 foot
Shrink-swell potential: Low
Runoff class: Negligible
Surface fragments: None
Parent material: Recent alluvium

Use and Management Considerations

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

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

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

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

Local roads and streets
- Flooding may damage local roads and streets.
- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.
- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland if drained
Land capability class: 4w
Virginia soil management group: A
Hydric soil: No

9B—Colleen gravelly loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes
Position on the landform: Mountaintops
Size of areas: 5 to 30 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 9 inches—dark yellowish brown gravelly loam; many yellowish red mottles

Subsoil:
9 to 29 inches—red gravelly clay
29 to 50 inches—red gravelly clay; many reddish yellow and many white mottles

Substratum:
50 to 72 inches—white, reddish yellow, and red gravelly silty clay loam

Minor Components

Dissimilar components:
- Hayesville soils that have moderate permeability and are in landscape positions similar to those of the Colleen soil

- Minnieville soils that have moderate permeability and are in landscape positions similar to those of the Colleen soil
- The moderately well drained Sketerville soils in landscape positions similar to those of the Colleen soil
- The poorly drained Pineywoods soils in the more level and depressional landscape positions

Similar components:
- Soils that do not have a gravelly surface layer

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 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: 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 anorthosite

Use and Management Considerations

Cropland
Suitability: Moderately suited to grass-legume hay; poorly suited to alfalfa hay, corn, soybeans, and wheat
- 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: Moderately suited to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland
Suitability: Moderately suited to northern red oak and chestnut oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.
- This soil is well suited to haul roads and log landings.

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

Septic tank absorption fields
- The 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 strength is unfavorable for supporting heavy loads.

Interpretive Groups

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

9C—Colleen gravelly loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes
Position on the landform: Mountaintops
Size of areas: 5 to 30 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 9 inches—dark yellowish brown gravelly loam; many yellowish red mottles

Subsoil:
9 to 29 inches—red gravelly clay
29 to 50 inches—red gravelly clay; many reddish yellow and many white mottles

Substratum:
50 to 72 inches—white, reddish yellow, and red gravelly silty clay loam

Minor Components

Dissimilar components:
- Hayesville soils that have moderate permeability and are in landscape positions similar to those of the Colleen soil
- Minnieville soils that have moderate permeability and are in landscape positions similar to those of the Colleen soil
- The moderately well drained Sketerville soils in landscape positions similar to those of the Colleen soil

Similar components:
- Soils that do not have a gravelly surface layer

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 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: 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 anorthosite

Use and Management Considerations

Cropland
Suitability: Poorly suited to corn, soybeans, wheat, 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: Moderately suited to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland
Suitability: Moderately suited to northern red oak and chestnut oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.
- This soil is well suited to 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 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 shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland

Land capability class: 3e
Virginia soil management group: KK
Hydric soil: No

9D—Colleen gravelly loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes
Position on the landform: Mountainflanks
Size of areas: 5 to 30 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 9 inches—dark yellowish brown gravelly loam; many yellowish red mottles

Subsoil:
9 to 29 inches—red gravelly clay
29 to 50 inches—red gravelly clay; many reddish yellow and many white mottles

Substratum:
50 to 72 inches—white, reddish yellow, and red gravelly silty clay loam

Minor Components

Dissimilar components:
- Hayesville soils that have moderate permeability and are in landscape positions similar to those of the Colleen soil
- Minnieville soils that have moderate permeability and are in landscape positions similar to those of the Colleen soil
- The moderately well drained Sketerville soils in landscape positions similar to those of the Colleen soil

Similar components:
- Soils that do not have a gravelly surface layer

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 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: 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 anorthosite

Use and Management Considerations

Cropland
Suitability: Poorly suited to corn, soybeans, wheat, 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: Moderately suited to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

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

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

Interpretive Groups

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

10A—Colvard fine sandy loam, 0 to 2 percent slopes, occasionally flooded

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Flood plains
Position on the landform: Treads
Size of areas: 5 to 25 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

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

Substratum:
5 to 12 inches—dark yellowish brown fine sandy loam
12 to 32 inches—strong brown fine sandy loam; brown manganese masses
32 to 50 inches—strong brown fine sandy loam; strong brown manganese masses

Surface layer:
50 to 56 inches—dark grayish brown loam

Substratum:
56 to 62 inches—strong brown loamy sand

Minor Components

Dissimilar components:
- Delanco soils that have more clay in the subsoil than the Colvard soil and are on terraces and footslopes of adjacent landforms
- The somewhat poorly drained Codorus soils in depressions and at the base of adjacent terraces and uplands
- The moderately well drained Suches soils in depressions and at the base of adjacent terraces and uplands

Soil Properties and Qualities

Available water capacity: Moderate (about 6.5 inches)
Slowest saturated hydraulic conductivity: High (about 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 48 to 79 inches
Water table kind: Apparent
Flooding hazard: Occasional
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Recent alluvium

Use and Management Considerations

Cropland
Suitability: Moderately suited to wheat; poorly suited to corn and soybeans; not suited to alfalfa hay
- Flooding may damage crops.

Pastureland
Suitability: Moderately suited to pasture
- Flooding may damage pastures.

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

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

Septic tank absorption fields
- Flooding is a limitation affecting septic tank absorption fields.

Local roads and streets
- Flooding may damage local roads and streets.

Interpretive Groups

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

11A—Craigsville very cobbly loam, 0 to 2 percent slopes, frequently flooded

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Flood plains
Position on the landform: Treads
Size of areas: 5 to 100 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

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

Subsoil:
6 to 21 inches—strong brown extremely cobbly sandy loam

Substratum:
21 to 50 inches—yellowish brown extremely cobbly loamy sand
50 to 64 inches—dark yellowish brown extremely gravelly loamy sand

Minor Components

Dissimilar components:
- Colvard soils that have fewer rock fragments throughout than the Craigsville soil and are in similar landscape positions
- The well drained Lew soils that have more clay in the subsoil than the Craigsville soil and are on fans, terraces, and upland footslopes
- The moderately well drained Suches soils in depressions and at the base of adjacent terraces and uplands
- The somewhat poorly drained Codorus soils in depressions and at the base of adjacent terraces and uplands
- The poorly drained Hatboro soils in depressions and at the base of adjacent terraces and uplands
- Areas that have a very stony surface layer

Soil Properties and Qualities

Available water capacity: Low (about 4.9 inches)
Slowest saturated hydraulic conductivity: High (about 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: Frequent
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Recent alluvium

Use and Management Considerations

Cropland
Suitability: Moderately suited to wheat; poorly suited to alfalfa hay, grass-legume hay, corn, and soybeans (fig. 2)
- Frequent flooding restricts the use of winter grain crops.
- Flooding may damage crops.

Pastureland
Suitability: Moderately suited to pasture
- Flooding may damage pastures.

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

Figure 2.—Hayland in an area of Craigsville very cobbly loam, 0 to 2 percent slopes, frequently flooded.

- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Building sites
- Flooding is a limitation affecting building site development.

Septic tank absorption fields
- Flooding is a limitation affecting septic tank absorption fields.

Local roads and streets
- Flooding may damage local roads and streets.

Interpretive Groups

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

12B—Delanco loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Stream terraces, drainageways, and fans
Position on the landform: Treads and base slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 5 inches—brown loam

Subsoil:
5 to 18 inches—strong brown clay loam; light yellowish brown and yellowish red iron-manganese masses and brown iron depletions
18 to 31 inches—yellowish brown clay loam; strong brown iron-manganese masses and light brownish gray iron depletions
31 to 45 inches—yellowish brown clay loam; light brownish gray iron depletions and strong brown iron-manganese masses

Substratum:
45 to 65 inches—strong brown loam; light brownish gray iron depletions and yellowish red and light yellowish brown iron-manganese masses

Minor Components

Dissimilar components:
- The well drained Elsinboro soils in landscape positions similar to those of the Delanco soil
- Suches soils that have less subsoil development than the Delanco soil and are on flood plains
- The somewhat poorly drained Codorus soils that have less subsoil development than the Delanco soil and are in slight depressions on flood plains

Soil Properties and Qualities

Available water capacity: High (about 11.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Moderately well drained
Depth to seasonal water saturation: About 12 to 30 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Medium
Surface fragments: None
Parent material: Alluvium

Use and Management Considerations

Cropland

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

- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- Frost action may damage the root system of winter grain crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pastureland

Suitability: Well suited to pasture

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

Woodland

Suitability: Moderately suited to yellow-poplar

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

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

Interpretive Groups

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

12C—Delanco loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)

Landform: Stream terraces, drainageways, and fans
Position on the landform: Treads and base slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 5 inches—brown loam

Subsoil:
5 to 18 inches—strong brown clay loam; light yellowish brown and yellowish red iron-manganese masses and brown iron depletions
18 to 31 inches—yellowish brown clay loam; strong brown iron-manganese masses and light brownish gray iron depletions
31 to 45 inches—yellowish brown clay loam; light brownish gray iron depletions and strong brown iron-manganese masses

Substratum:
45 to 65 inches—strong brown loam; light brownish gray iron depletions and yellowish red and light yellowish brown iron-manganese masses

Minor Components

Dissimilar components:
- The well drained Elsinboro soils in landscape positions similar to those of the Delanco soil
- The well drained Suches soils on flood plains
- The somewhat poorly drained Belvoir soils in landscape positions similar to those of the Delanco soil
- The poorly drained Chatuge soils in landscape positions similar to those of the Delanco soil

Similar components:
- Eroded areas that have a surface layer of clay loam
- Areas that have a clayey subsoil

Soil Properties and Qualities

Available water capacity: High (about 11.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Moderately well drained
Depth to seasonal water saturation: About 12 to 30 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Medium
Surface fragments: None
Parent material: Alluvium

Use and Management Considerations

Cropland

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

- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- Frost action may damage the root system of winter grain crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pastureland

Suitability: Well suited to pasture

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

Woodland

Suitability: Moderately suited to yellow-poplar

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

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

- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

13C—Edneytown loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Interfluves and mountaintops
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Organic layer:
moderately decomposed plant material

Surface layer:
0 to 7 inches—very dark grayish brown loam

Subsoil:
7 to 17 inches—strong brown loam
17 to 34 inches—strong brown loam

Substratum:
34 to 48 inches—strong brown sandy loam; many reddish yellow mottles
48 to 67 inches—yellowish brown sandy loam

Minor Components

Dissimilar components:
- Hayesville soils that have a subsoil of red clay and are in landscape positions similar to those of the Edneytown soil
- Areas that have a very stony surface layer

Simmilar components:
- The well drained and somewhat excessively drained Occoquan soils that have a solum that is thinner than that of the Edneytown soil and are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss and/or granodiorite

Use and Management Considerations

Cropland

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

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

Pastureland

Suitability: Well suited to pasture

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

Woodland

Suitability: Well suited to northern red oak; moderately suited to loblolly pine

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

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

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

Interpretive Groups

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

13D—Edneytown loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Organic layer:
moderately decomposed plant material

Surface layer:
0 to 7 inches—very dark grayish brown loam

Subsoil:
7 to 17 inches—strong brown loam
17 to 34 inches—strong brown loam

Substratum:
34 to 48 inches—strong brown sandy loam; many reddish yellow mottles
48 to 67 inches—yellowish brown sandy loam

Minor Components

Dissimilar components:
- Hayesville soils that have a subsoil of red clay and are in landscape positions similar to those of the Edneytown soil
- Areas that have a very stony surface layer

Similar components:
- The well drained and somewhat excessively drained Occoquan soils that have a solum that is thinner than that of the Edneytown soil and are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss and/or granodiorite

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, wheat, 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland
Suitability: Well suited to northern red oak; moderately suited to loblolly pine
- Proper planning for timber harvesting is essential in order to minimize the potential

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

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

Interpretive Groups

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

13E—Edneytown loam, 25 to 50 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Organic layer:
moderately decomposed plant material

Surface layer:
0 to 7 inches—very dark grayish brown loam

Subsoil:
7 to 17 inches—strong brown loam
17 to 34 inches—strong brown loam

Substratum:
34 to 48 inches—strong brown sandy loam; many reddish yellow mottles
48 to 67 inches—yellowish brown sandy loam

Minor Components

Dissimilar components:
- Hayesville soils that have a subsoil of red clay and are in landscape positions similar to those of the Edneytown soil
- Areas that have a very stony surface layer

Similar components:
- The well drained and somewhat excessively drained Occoquan soils that have a solum that is thinner than that of the Edneytown soil and are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss and/or granodiorite

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
- This soil is unsuited to pastureland.

Woodland
Suitability: Well suited to northern red oak; moderately suited to loblolly pine
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The slope makes the use of mechanical planting equipment impractical.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for 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
- The low strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

14C—Edneytown-Peaks complex, 7 to 15 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Interfluves and mountaintops
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Edneytown
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 7 inches—very dark grayish brown loam

Subsoil:
7 to 17 inches—strong brown loam
17 to 34 inches—strong brown loam

Substratum:
34 to 48 inches—strong brown sandy loam; many reddish yellow mottles
48 to 67 inches—yellowish brown sandy loam

Peaks
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 2 inches—very dark grayish brown very gravelly loam

Subsurface layer:
2 to 7 inches—dark yellowish brown very gravelly loam

Subsoil:
7 to 25 inches—strong brown very gravelly loam

Soft bedrock:
25 to 36 inches—yellowish brown granodiorite bedrock

Hard bedrock:
36 inches—granodiorite bedrock

Minor Components

Dissimilar components:
- Hayesville soils that have a subsoil of red clay and are in landscape positions similar to those of the Edneytown and Peaks soils
- Areas that have a very stony surface layer

Similar components:
- The well drained and somewhat excessively drained Occoquan soils that have a solum that is thinner than that of the Edneytown and Peaks soils and are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Edneytown—moderate (about 7.3 inches); Peaks—very low (about 2.1 inches)
Slowest saturated hydraulic conductivity: Edneytown—moderately high (about 0.60 in/hr); Peaks—high (about 6.0 in/hr)
Depth class: Edneytown—very deep (more than 60 inches); Peaks—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Edneytown—more than 60 inches; Peaks—20 to 40 inches to soft bedrock
Drainage class: Edneytown—well drained; Peaks—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Edneytown—medium; Peaks—very high
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Edneytown—residuum weathered from granite and gneiss and/or granodiorite; Peaks—residuum weathered from granite and/or granodiorite and/or gneiss

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; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The volume of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.

- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low 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, 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
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: Edneytown—L; Peaks—JJ
Hydric soils: No

14D—Edneytown-Peaks complex, 15 to 35 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Edneytown
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 7 inches—very dark grayish brown loam

Subsoil:
7 to 17 inches—strong brown loam
17 to 34 inches—strong brown loam

Substratum:
34 to 48 inches—strong brown sandy loam; many reddish yellow mottles
48 to 67 inches—yellowish brown sandy loam

Peaks
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 2 inches—very dark grayish brown very gravelly loam

Subsurface layer:
2 to 7 inches—dark yellowish brown very gravelly loam

Subsoil:
7 to 25 inches—strong brown very gravelly loam

Soft bedrock:
25 to 36 inches—yellowish brown granodiorite bedrock

Hard bedrock:
36 inches—granodiorite bedrock

Minor Components

Dissimilar components:
- Saunook soils that have a surface layer that is darker than that of the Edneytown and Peaks soils and that are on backslopes and footslopes
- Areas that do not a have stony surface layer

Similar components:
- The well drained and somewhat excessively drained Occoquan soils in landscape positions similar to those of the Edneytown and Peaks soils
- Areas that have a surface layer that is darker than that of the Edneytown and Peaks soils

Soil Properties and Qualities

Available water capacity: Edneytown—moderate (about 7.3 inches); Peaks—very low (about 2.1 inches)
Slowest saturated hydraulic conductivity: Edneytown—moderately high (about 0.60 in/hr); Peaks—high (about 6.0 in/hr)
Depth class: Edneytown—very deep (more than 60 inches); Peaks—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Edneytown—more than 60 inches; Peaks—20 to 40 inches to soft bedrock
Drainage class: Edneytown—well drained; Peaks—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Edneytown—high; Peaks—very high
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Edneytown—residuum weathered from granite and gneiss and/or granodiorite; Peaks—residuum weathered from granite and/or granodiorite and/or gneiss

Figure 3.—Pasture in an area of Edneytown-Peaks complex, 15 to 35 percent slopes, extremely stony, and Saunook loam, 7 to 15 percent slopes, very stony.

Use and Management Considerations

Cropland
- These soils are unsuited to cropland.

Pastureland
- These soils are unsuited to pastureland (fig. 3).

Woodland
Suitability: Well suited to northern red oak; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope makes the use of mechanical planting equipment impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The volume of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.

- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

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

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: Edneytown—L; Peaks—JJ
Hydric soils: No

14E—Edneytown-Peaks complex, 35 to 55 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Edneytown
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 7 inches—very dark grayish brown loam

Subsoil:
7 to 17 inches—strong brown loam
17 to 34 inches—strong brown loam

Substratum:
34 to 48 inches—strong brown sandy loam; many reddish yellow mottles
48 to 67 inches—yellowish brown sandy loam

Peaks
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 2 inches—very dark grayish brown very gravelly loam

Subsurface layer:
2 to 7 inches—dark yellowish brown very gravelly loam

Subsoil:
7 to 25 inches—strong brown very gravelly loam

Soft bedrock:
25 to 36 inches—yellowish brown granodiorite bedrock

Hard bedrock:
36 inches—granodiorite bedrock

Minor Components

Dissimilar components:
- Saunook soils that have a surface layer that is darker than that of the Edneytown and Peaks soils and that are on backslopes and footslopes
- Areas that do not have a stony surface layer

Similar components:
- The well drained and somewhat excessively drained Occoquan soils in landscape positions similar to those of the Edneytown and Peaks soils
- Areas that have a surface layer that is darker than that of the Edneytown and Peaks soils

Soil Properties and Qualities

Available water capacity: Edneytown—moderate (about 7.3 inches); Peaks—very low (about 2.1 inches)
Slowest saturated hydraulic conductivity: Edneytown—moderately high (about 0.60 in/hr); Peaks—high (about 6.0 in/hr)
Depth class: Edneytown—very deep (more than 60 inches); Peaks—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Edneytown—more than 60 inches; Peaks—20 to 40 inches to soft bedrock
Drainage class: Edneytown—well drained; Peaks—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Edneytown—high; Peaks—very high
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Edneytown—residuum weathered from granite and gneiss and/or

granodiorite; Peaks—residuum weathered from granite and/or granodiorite and/or gneiss

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

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

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e

Virginia soil management group: Edneytown—L; Peaks—JJ
Hydric soils: No

14F—Edneytown-Peaks complex, 55 to 75 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Edneytown
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 7 inches—very dark grayish brown loam

Subsoil:
7 to 17 inches—strong brown loam
17 to 34 inches—strong brown loam

Substratum:
34 to 48 inches—strong brown sandy loam; many reddish yellow mottles
48 to 67 inches—yellowish brown sandy loam

Peaks
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 2 inches—very dark grayish brown very gravelly loam

Subsurface layer:
2 to 7 inches—dark yellowish brown very gravelly loam

Subsoil:
7 to 25 inches—strong brown very gravelly loam

Soft bedrock:
25 to 36 inches—yellowish brown granodiorite bedrock

Hard bedrock:
36 inches—granodiorite bedrock

Minor Components

Dissimilar components:
- Saunook soils that have a surface layer that is darker than that of the Edneytown and Peaks soils and that are on backslopes and footslopes
- Areas that do not have a stony surface layer

Similar components:
- The well drained and somewhat excessively drained Occoquan soils in landscape positions similar to those of the Edneytown and Peaks soils
- Areas that have a surface layer that is darker than that of the Edneytown and Peaks soils

Soil Properties and Qualities

Available water capacity: Edneytown—moderate (about 7.3 inches); Peaks—very low (about 2.1 inches)
Slowest saturated hydraulic conductivity: Edneytown—moderately high (about 0.60 in/hr); Peaks—high (about 6.0 in/hr)
Depth class: Edneytown—very deep (more than 60 inches); Peaks—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Edneytown—more than 60 inches; Peaks—20 to 40 inches to soft bedrock
Drainage class: Edneytown—well drained; Peaks—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Edneytown—high; Peaks—very high
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Edneytown—residuum weathered from granite and gneiss and/or granodiorite; Peaks—residuum weathered from granite and/or granodiorite and/or gneiss

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; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The slope makes the use of mechanical planting equipment impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The volume of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.

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

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

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Edneytown—L; Peaks—JJ
Hydric soils: No

15B—Elioak loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130) and Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—dark yellowish brown loam

Subsurface layer:
3 to 8 inches—brown loam

Subsoil:
8 to 26 inches—red clay
26 to 40 inches—red clay loam; few yellowish brown mottles

Substratum:
40 to 60 inches—strong brown and red loam

Minor Components

Dissimilar components:
- The well drained Glenelg soils that have a yellowish brown and strong brown subsoil containing less clay than that of the Elioak soil and that are in similar landscape positions
- The moderately well drained Delanco soils on footslopes in drainageways
- The excessively drained, moderately deep Hazel soils in landscape positions similar to those of the Elioak soil, in areas near the boundaries of delineations

Similar components:
- Hayesville soils that have granite and quartz rock fragments and are in landscape positions similar to those of the Elioak soil
- Eroded areas that have a surface layer of clay loam
- Areas that have parent material of sandstone residuum

Soil Properties and Qualities

Available water capacity: Moderate (about 6.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from phyllite and/or schist

Use and Management Considerations

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

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

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 strength is unfavorable for supporting heavy loads.

Interpretive Groups

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

15C—Elioak loam, 7 to 15 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136) and Northern Piedmont (MLRA 148)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—dark yellowish brown loam

Subsurface layer:
3 to 8 inches—brown loam

Subsoil:
8 to 26 inches—red clay
26 to 40 inches—red clay loam; few yellowish brown mottles

Substratum:
40 to 60 inches—strong brown and red loam

Minor Components

Dissimilar components:
- The well drained Glenelg soils that have a yellowish brown and strong brown subsoil containing less clay than that of the Elioak soil and that are in similar landscape positions
- The moderately well drained Delanco soils on footslopes in drainageways
- The excessively drained, moderately deep Hazel soils in landscape positions similar to those of the Elioak soil, in areas near the boundaries of delineations

Similar components:
- Hayesville soils that have granite and quartz rock fragments and are in landscape positions similar to those of the Elioak soil

- Eroded areas that have a surface layer of clay loam
- Areas that have parent material of sandstone residuum

Soil Properties and Qualities

Available water capacity: Moderate (about 6.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from phyllite and/or schist

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, wheat, 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

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

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

Interpretive Groups

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

15D—Elioak loam, 15 to 25 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136) and Northern Piedmont (MLRA 148)
Landform: Hillslopes
Position on the landform: Side slopes
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—dark yellowish brown loam

Subsurface layer:
3 to 8 inches—brown loam

Subsoil:
8 to 26 inches—red clay
26 to 40 inches—red clay loam; few yellowish brown mottles

Substratum:
40 to 60 inches—strong brown and red loam

Minor Components

Dissimilar components:
- The well drained Glenelg soils that have a yellowish brown and strong brown subsoil containing less clay than that of the Elioak soil and that are in similar landscape positions
- The moderately well drained Delanco soils on footslopes in drainageways
- The excessively drained, moderately deep Hazel soils in landscape positions similar to those of the Elioak soil, in areas near the boundaries of delineations

Similar components:
- Hayesville soils that have granite and quartz rock fragments and are in landscape positions similar to those of the Elioak soil
- Eroded areas that have a surface layer of clay loam
- Areas that have parent material of sandstone residuum

Soil Properties and Qualities

Available water capacity: Moderate (about 6.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained

Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from phyllite and/or schist

Use and Management Considerations

Cropland

Suitability: Moderately suited to wheat, grass-legume hay, and alfalfa hay; poorly suited to corn and soybeans

- 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 to pasture

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

Woodland

Suitability: Moderately suited to yellow-poplar

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

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

Interpretive Groups

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

16C—Elioak clay loam, 7 to 15 percent slopes, severely eroded

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

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

Subsoil:
6 to 26 inches—red clay
26 to 40 inches—red clay loam

Substratum:
40 to 63 inches—strong brown and red loam

Minor Components

Dissimilar components:
- The well drained Glenelg soils that have a yellowish brown and strong brown subsoil containing less clay than that of the Elioak soil and that are in similar landscape positions
- The moderately well drained Delanco soils on footslopes in drainageways
- The excessively drained, moderately deep Hazel soils in landscape positions similar to those of the Elioak soil, in areas near the boundaries of delineations

Similar components:
- Hayesville soils that have granite and quartz rock fragments and are in landscape positions similar to those of the Elioak soil
- Noneroded areas that have a surface layer of loam
- Areas that have parent material of sandstone residuum

Soil Properties and Qualities

Available water capacity: Low (about 6.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: 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 phyllite and/or schist

Use and Management Considerations

Cropland
Suitability: Poorly suited to corn, soybeans, wheat, 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.
- Clods may form if the soil is tilled when wet.
- The risk of compaction increases when the soil is wet.

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

Woodland
Suitability: Moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

Interpretive Groups

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

16D—Elioak clay loam, 15 to 25 percent slopes, severely eroded

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes

Position on the landform: Side slopes
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

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

Subsoil:
6 to 26 inches—red clay
26 to 40 inches—red clay loam

Substratum:
40 to 63 inches—strong brown and red loam

Minor Components

Dissimilar components:
- The well drained Glenelg soils that have a yellowish brown and strong brown subsoil containing less clay than that of the Elioak soil and that are in similar landscape positions
- The moderately well drained Delanco soils on footslopes in drainageways
- The excessively drained, moderately deep Hazel soils in landscape positions similar to those of the Elioak soil, in areas near the boundaries of delineations

Similar components:
- Hayesville soils that have granite and quartz rock fragments and are in landscape positions similar to those of the Elioak soil
- Noneroded areas that have a surface layer of loam
- Areas that have parent material of sandstone residuum

Soil Properties and Qualities

Available water capacity: Low (about 6.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: 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 phyllite and/or schist

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

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

Woodland
Suitability: Moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

Interpretive Groups

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

17B—Elsinboro loam, 2 to 7 percent slopes, rarely flooded

Setting

Major land resource area: Blue Ridge (MLRA 130) and Southern Piedmont (MLRA 136)
Landform: Stream terraces
Position on the landform: Treads
Size of areas: 5 to 50 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 11 inches—dark yellowish brown loam

Subsoil:
11 to 38 inches—strong brown clay loam

Substratum:
38 to 55 inches—strong brown sandy clay loam
55 to 72 inches—strong brown sandy clay loam; brown iron depletions

Minor Components

Dissimilar components:
- The moderately well drained Suches soils on flood plains
- The somewhat poorly drained Codorus soils in slight depressions on flood plains

Similar components:
- The well drained Delanco soils in landscape positions similar to those of the Elsinboro soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 60 inches
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Alluvium

Use and Management Considerations

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

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

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

Building sites

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

Septic tank absorption fields

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

Local roads and streets

- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

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

18C—Fauquier loam, 7 to 15 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Interfluves and mountaintops
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Organic layer:
moderately decomposed plant material

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 40 inches—red clay; many reddish yellow mottles

Soft bedrock:
40 to 50 inches—reddish yellow gabbro bedrock

Hard bedrock:
50 inches—gabbro bedrock

Minor Components

Dissimilar components:

- The very deep Minnieville soils in landscape positions similar to those of the Fauquier soil
- Spriggs soils that have less clay in the subsoil than the Fauquier soil and are in similar landscape positions

Similar components:
- Areas that do not have stones on the surface

Soil Properties and Qualities

Available water capacity: Moderate (about 6.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
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 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from greenstone and/or gabbro and/or diorite

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
Suitability: Well suited to pasture
- 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 yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

Interpretive Groups

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

18D—Fauquier loam, 15 to 25 percent slopes, very stony

Setting

Major land resource area: Southern Piedmont (MLRA 136) and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Organic layer:
moderately decomposed plant material

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 40 inches—red clay; many reddish yellow mottles

Soft bedrock:
40 to 50 inches—reddish yellow gabbro bedrock

Hard bedrock:
50 inches—gabbro bedrock

Minor Components

Dissimilar components:
- The very deep Minnieville soils in landscape positions similar to those of the Fauquier soil
- Spriggs soils that have less clay in the subsoil than the Fauquier soil and are in similar landscape positions

Similar components:
- Areas that do not have stones on the surface

Soil Properties and Qualities

Available water capacity: Moderate (about 6.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Deep (40 to 60 inches)

Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
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 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from greenstone and/or gabbro and/or diorite

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 yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

Interpretive Groups

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

18E—Fauquier loam, 25 to 50 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Organic layer:
moderately decomposed plant material

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 40 inches—red clay; many reddish yellow mottles

Soft bedrock:
40 to 50 inches—reddish yellow gabbro bedrock

Hard bedrock:
50 inches—gabbro bedrock

Minor Components

Dissimilar components:
- The very deep Minnieville soils in landscape positions similar to those of the Fauquier soil
- Spriggs soils that have less clay in the subsoil than the Fauquier soil and are in similar landscape positions

Similar components:
- Areas that do not have stones on the surface

Soil Properties and Qualities

Available water capacity: Moderate (about 6.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
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 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from greenstone and/or gabbro and/or diorite

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 yellow-poplar

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The slope makes the use of mechanical planting equipment impractical.
- The low strength interferes with the construction of haul roads and log landings.
- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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 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

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

Interpretive Groups

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

19A—Galtsmill fine sandy loam, 0 to 2 percent slopes, occasionally flooded

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Flood plains
Position on the landform: Treads
Size of areas: 5 to 25 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 15 inches—dark brown and very dark grayish brown fine sandy loam, brown dry

Subsoil:
15 to 35 inches—brown fine sandy loam
35 to 48 inches—brown loam
48 to 72 inches—brown fine sandy loam

Minor Components

Dissimilar components:
- Wingina soils that have more clay in the subsoil than the Galtsmill soil and are in similar landscape positions
- The somewhat poorly drained Batteau soils in landscape positions similar to those of the Galtsmill soil
- The poorly drained Yogaville soils in depressions and other low areas of flood plains

Soil Properties and Qualities

Available water capacity: High (about 9.6 inches)
Slowest saturated hydraulic conductivity: High (about 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: Occasional
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Recent alluvium

Use and Management Considerations

Cropland
Suitability: Moderately suited to wheat and grass-legume hay; poorly suited to alfalfa hay, corn, and soybeans
- Flooding may damage crops.

Pastureland
Suitability: Moderately suited to pasture
- Flooding may damage pastures.

Woodland

Suitability: Well suited to loblolly pine and yellow-poplar; moderately suited to sweetgum

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should focus on streamside management zones and stream crossings and should include general adherence to all applicable best management practices.
- Flooding may damage haul roads.
- Flooding restricts the safe use of roads by log trucks.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

Building sites

- Flooding is a limitation affecting building site development.

Septic tank absorption fields

- Flooding is a limitation affecting septic tank absorption fields.

Local roads and streets

- Flooding may damage local roads and streets.

Interpretive Groups

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

20D—Glenelg silt loam, 15 to 25 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136) and Northern Piedmont (MLRA 148)
Landform: Hillslopes
Position on the landform: Side slopes
Size of areas: 5 to 30 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

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

Subsurface layer:
4 to 9 inches—yellowish brown loam

Subsoil:
9 to 27 inches—yellowish red clay loam; few brownish yellow and few yellowish brown mottles

Substratum:
27 to 52 inches—red and reddish yellow loam
52 to 65 inches—yellowish red, yellowish brown, and pale brown loam

Minor Components

Dissimilar components:
- Elioak soils that have a subsoil of red clay and are in landscape positions similar to those of the Glenelg soil
- The well drained and somewhat excessively drained, moderately deep Hazel soils in landscape positions similar to those of the Glenelg soil

Similar components:
- Areas that have a surface layer of loam

Soil Properties and Qualities

Available water capacity: High (about 9.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from phyllite and/or schist and/or sandstone

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn, soybeans, wheat, 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

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

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
- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

21A—Hatboro loam, 0 to 2 percent slopes, frequently flooded

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Flood plains
Position on the landform: Depressions or low-lying areas on treads
Size of areas: 5 to 50 acres
Shape of areas: Irregular, concave, and linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 12 inches—dark grayish brown loam; strong brown and yellowish red iron-manganese masses

Subsoil:
12 to 30 inches—dark gray clay loam; yellowish brown iron-manganese masses
30 to 50 inches—gray clay loam; yellowish brown and strong brown iron-manganese masses

Substratum:
50 to 65 inches—light brownish gray sandy clay loam; yellowish brown and strong brown iron-manganese masses
65 to 70 inches—light brownish gray stratified fine sandy loam and gravel; yellowish brown iron-manganese masses

Minor Components

Dissimilar components:
- The moderately well drained Suches soils in landscape positions similar to those of the Hatboro soil
- The somewhat poorly drained Codorus soils in landscape positions similar to those of the Hatboro soil

Similar components:
- Areas that have a surface layer that is darker than that of the Hatboro soil

- Areas that have a sandy subsoil
- Areas that have cobbles in the subsoil and substratum
- Areas that have a gravelly surface layer

Soil Properties and Qualities

Available water capacity: High (about 10.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Poorly drained
Depth to seasonal water saturation: About 0 to 6 inches
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: Frequent
Depth of ponding: 0.1 to 0.3 foot
Shrink-swell potential: Low
Runoff class: Negligible
Surface fragments: None
Parent material: Recent alluvium

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

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

Woodland
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should focus on streamside management zones and stream crossings and should include general adherence to all applicable best management practices.
- Flooding may damage haul roads.
- Flooding and ponding restrict the safe use of roads by log trucks.
- Soil wetness may limit the use of log trucks.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.

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

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

Local roads and streets
- Flooding may damage local roads and streets.
- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.
- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Land capability class: 6w
Virginia soil management group: HH
Hydric soil: Yes

22B—Hayesville loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Interfluves and mountaintops
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 26 inches—red clay
26 to 40 inches—red clay
40 to 57 inches—red clay loam

Substratum:
57 to 62 inches—red loam; common reddish yellow mottles

Minor Components

Dissimilar components:
- Delanco soils that have less clay than the Hayesville soil and are on footslopes in drainageways of terraces and fans
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Hayesville soil and are on the edges of delineations

Similar components:
- Areas that have a strong brown subsoil
- Eroded areas that have a surface layer of clay loam

Soil Properties and Qualities

Available water capacity: High (about 10.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium

Surface fragments: None
Parent material: Residuum weathered from granite and gneiss

Use and Management Considerations

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

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

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

Septic tank absorption fields
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

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

22C—Hayesville loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Interfluves and mountaintops
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 26 inches—red clay
26 to 40 inches—red clay
40 to 57 inches—red clay loam

Substratum:
57 to 62 inches—red loam; common reddish yellow mottles

Minor Components

Dissimilar components:
- Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Hayesville soil
- Delanco soils that have less clay than the Hayesville soil and are on footslopes in drainageways of terraces and fans
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Hayesville soil and are on the edges of delineations

Similar components:
- Areas that have a strong brown subsoil
- Eroded areas that have a surface layer of clay loam

Soil Properties and Qualities

Available water capacity: High (about 10.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss

Use and Management Considerations

Cropland

Suitability: Well suited to tobacco; moderately suited to alfalfa hay, grass-legume hay, corn, soybeans, and wheat (fig. 4)
- 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Figure 4.—Small grain on Hayesville loam, 7 to 15 percent slopes, is in the foreground; orchards and mixed hardwoods on Wintergreen loam, 15 to 25 percent slopes, are in the middle ground; and mixed hardwoods and pines on Edneytown-Peaks complex, 35 to 55 percent slopes, extremely stony, are in the background.

Woodland

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

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

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

Interpretive Groups

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

22D—Hayesville loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 26 inches—red clay
26 to 40 inches—red clay
40 to 57 inches—red clay loam

Substratum:
57 to 62 inches—red loam; common reddish yellow mottles

Minor Components

Dissimilar components:
- Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Hayesville soil
- Delanco soils that have less clay than the Hayesville soil and are on footslopes in drainageways of terraces and fans
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Hayesville soil and are on the edges of delineations

Similar components:
- Areas that have a strong brown subsoil
- Eroded areas that have a surface layer of clay loam

Soil Properties and Qualities

Available water capacity: High (about 10.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None

Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss

Use and Management Considerations

Cropland

Suitability: Moderately suited to wheat, grass-legume hay, and alfalfa hay; poorly suited to corn and soybeans

- 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 to pasture

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

Woodland

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

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

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

Interpretive Groups

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

22E—Hayesville loam, 25 to 50 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 26 inches—red clay
26 to 40 inches—red clay
40 to 57 inches—red clay loam

Substratum:
57 to 62 inches—red loam; common reddish yellow mottles

Minor Components

Dissimilar components:
- Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Hayesville soil
- Delanco soils that have less clay than the Hayesville soil and are on footslopes in drainageways of terraces and fans
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Hayesville soil and are on the edges of delineations

Similar components:
- Areas that have a strong brown subsoil
- Eroded areas that have a surface layer of clay loam

Soil Properties and Qualities

Available water capacity: High (about 10.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
- This soil is unsuited to pastureland.

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

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

Interpretive Groups

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

23B—Hayesville clay loam, 2 to 7 percent slopes, severely eroded

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Interfluves and mountaintops
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—brown clay loam

Subsoil:
6 to 26 inches—red clay
26 to 40 inches—red clay
40 to 57 inches—red clay loam

Substratum:
57 to 62 inches—red loam; common reddish yellow mottles

Minor Components

Dissimilar components:
- Delanco soils that have less clay than the Hayesville soil and are on footslopes in drainageways of terraces and fans
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Hayesville soil and are on the edges of delineations

Similar components:
- Areas that have a strong brown subsoil
- Noneroded areas that have a surface layer of loam

Soil Properties and Qualities

Available water capacity: High (about 10.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss

Use and Management Considerations

Cropland

Suitability: Moderately suited to wheat, tobacco, and grass-legume hay; poorly suited to alfalfa hay, corn, and soybeans (fig. 5)
- 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Moderately suited to northern red oak, yellow-poplar, and eastern white pine

Figure 5.—Corn and small grain on Hayesville clay loam, 2 to 7 percent slopes, severely eroded.

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

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

Septic tank absorption fields
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

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

23C—Hayesville clay loam, 7 to 15 percent slopes, severely eroded

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Interfluves and mountaintops
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—brown clay loam

Subsoil:
6 to 26 inches—red clay
26 to 40 inches—red clay
40 to 57 inches—red clay loam

Substratum:
57 to 62 inches—red loam; common reddish yellow mottles

Minor Components

Dissimilar components:
- Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Hayesville soil
- Delanco soils that have less clay than the Hayesville soil and are on footslopes in drainageways of terraces and fans
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Hayesville soil and are on the edges of delineations

Similar components:
- Areas that have a strong brown subsoil
- Noneroded areas that have a surface layer of loam

Soil Properties and Qualities

Available water capacity: High (about 10.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss

Use and Management Considerations

Cropland
Suitability: Poorly suited to corn, soybeans, wheat, 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

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

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

Interpretive Groups

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

23D—Hayesville clay loam, 15 to 25 percent slopes, severely eroded

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes

Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—brown clay loam

Subsoil:
6 to 26 inches—red clay
26 to 40 inches—red clay
40 to 57 inches—red clay loam

Substratum:
57 to 62 inches—red loam; common reddish yellow mottles

Minor Components

Dissimilar components:
- Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Hayesville soil
- Delanco soils that have less clay than the Hayesville soil and are on footslopes in drainageways of terraces and fans
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Hayesville soil and are on the edges of delineations

Similar components:
- Areas that have a strong brown subsoil
- Noneroded areas that have a surface layer of loam

Soil Properties and Qualities

Available water capacity: High (about 10.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

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

Woodland

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

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

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

Interpretive Groups

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

23E—Hayesville clay loam, 25 to 50 percent slopes, severely eroded

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—brown clay loam

Subsoil:
6 to 26 inches—red clay

26 to 40 inches—red clay
40 to 57 inches—red clay loam

Substratum:
57 to 62 inches—red loam; common reddish yellow mottles

Minor Components

Dissimilar components:
- Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Hayesville soil
- Delanco soils that have less clay than the Hayesville soil and are on footslopes in drainageways of terraces and fans
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Hayesville soil and are on the edges of delineations

Similar components:
- Areas that have a strong brown subsoil
- Noneroded areas that have a surface layer of loam

Soil Properties and Qualities

Available water capacity: High (about 10.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
- This soil is unsuited to pastureland.

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

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

Interpretive Groups

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

24C—Hayesville loam, 7 to 15 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Interfluves and mountaintops
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 26 inches—red clay
26 to 40 inches—red clay
40 to 57 inches—red clay loam

Substratum:
57 to 62 inches—red loam; common reddish yellow mottles

Minor Components

Dissimilar components:
- Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Hayesville soil
- Delanco soils that have less clay than the Hayesville soil and are on footslopes in drainageways of terraces and fans
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Hayesville soil and are on the edges of delineations

Similar components:
- Areas that have a strong brown subsoil

Soil Properties and Qualities

Available water capacity: High (about 10.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from granite and gneiss

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

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

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

Interpretive Groups

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

24D—Hayesville loam, 15 to 25 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 26 inches—red clay
26 to 40 inches—red clay
40 to 57 inches—red clay loam

Substratum:
57 to 62 inches—red loam; common reddish yellow mottles

Minor Components

Dissimilar components:
- Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Hayesville soil
- Delanco soils that have less clay than the Hayesville soil and are on footslopes in drainageways of terraces and fans
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Hayesville soil and are on the edges of delineations

Similar components:
- Areas that have a strong brown subsoil

Soil Properties and Qualities

Available water capacity: High (about 10.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from granite and gneiss

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
- This soil is unsuited to pastureland.

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

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

Interpretive Groups

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

24E—Hayesville loam, 25 to 50 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 26 inches—red clay
26 to 40 inches—red clay
40 to 57 inches—red clay loam

Substratum:
57 to 62 inches—red loam; common reddish yellow mottles

Minor Components

Dissimilar components:
- Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Hayesville soil
- Delanco soils that have less clay than the Hayesville soil and are on footslopes in drainageways of terraces and fans
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Hayesville soil and are on the edges of delineations

Similar components:
- Areas that have a strong brown subsoil

Soil Properties and Qualities

Available water capacity: High (about 10.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from granite and gneiss

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
- This soil is unsuited to pastureland.

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

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

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

Interpretive Groups

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

25C—Hazel channery loam, 7 to 15 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136) and Northern Piedmont (MLRA 148)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

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

Subsoil:
5 to 19 inches—strong brown channery sandy loam

Substratum:
19 to 31 inches—yellowish brown very channery sandy loam

Hard bedrock:
31 inches—graywacke sandstone bedrock

Minor Components

Dissimilar components:
- The well drained, very deep Elioak soils that have a subsoil of red clay and are in landscape positions similar to those of the Hazel soil
- The well drained, very deep Glenelg soils in landscape positions similar to those of the Hazel soil
- Areas that have stones on the surface

Soil Properties and Qualities

Available water capacity: Low (about 3.9 inches)
Slowest saturated hydraulic conductivity: High (about 2 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to hard bedrock
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: Low
Surface fragments: None
Parent material: Residuum weathered from phyllite and/or schist and/or sandstone

Use and Management Considerations

Cropland

Suitability: Poorly suited to corn, soybeans, wheat, 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 limited available water capacity may cause plants to suffer from moisture stress.

Pastureland

Suitability: Poorly suited to pasture

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

Woodland

Suitability: Moderately suited to northern red oak and chestnut oak

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

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 in constructing foundations and installing utilities is increased.

Septic tank absorption fields

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

Local roads and streets

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

Interpretive Groups

Prime farmland: Not prime farmland

Land capability class: 3e
Virginia soil management group: JJ
Hydric soil: No

25D—Hazel channery loam, 15 to 25 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136) and Northern Piedmont (MLRA 148)
Landform: Hillslopes
Position on the landform: Side slopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

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

Subsoil:
5 to 19 inches—strong brown channery sandy loam

Substratum:
19 to 31 inches—yellowish brown very channery sandy loam

Hard bedrock:
31 inches—graywacke sandstone bedrock

Minor Components

Dissimilar components:
- The well drained, very deep Elioak soils that have a subsoil of red clay and are in landscape positions similar to those of the Hazel soil
- The well drained, very deep Glenelg soils in landscape positions similar to those of the Hazel soil
- Areas that have stones on the surface

Soil Properties and Qualities

Available water capacity: Low (about 3.9 inches)
Slowest saturated hydraulic conductivity: High (about 2 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to hard bedrock
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: Medium
Surface fragments: None
Parent material: Residuum weathered from phyllite and/or schist and/or sandstone

Use and Management Considerations

Cropland
Suitability: Poorly suited to corn, soybeans, wheat, 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 limited available water capacity may cause plants to suffer from moisture stress.

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

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

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 in constructing foundations and installing utilities is increased.

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

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

Interpretive Groups

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

25E—Hazel channery loam, 25 to 50 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136) and Northern Piedmont (MLRA 148)
Landform: Hillslopes
Position on the landform: Side slopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

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

Subsoil:
5 to 19 inches—strong brown channery sandy loam

Substratum:
19 to 31 inches—yellowish brown very channery sandy loam

Hard bedrock:
31 inches—graywacke sandstone bedrock

Minor Components

Dissimilar components:
- The well drained, very deep Elioak soils that have a subsoil of red clay and are in landscape positions similar to those of the Hazel soil
- The well drained, very deep Glenelg soils in landscape positions similar to those of the Hazel soil
- Areas that have stones on the surface

Soil Properties and Qualities

Available water capacity: Low (about 3.9 inches)
Slowest saturated hydraulic conductivity: High (about 2 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to hard bedrock
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: Medium
Surface fragments: None
Parent material: Residuum weathered from phyllite and/or schist and/or sandstone

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
- This soil is unsuited to pastureland.

Woodland
Suitability: Moderately suited to chestnut oak; poorly suited to northern red oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The slope makes the use of mechanical planting equipment impractical.
- Coarse textured soil layers increase the maintenance 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 in constructing foundations and installing utilities is increased.

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

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

Interpretive Groups

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

26D—Hazel loam, 15 to 25 percent slopes, very stony

Setting

Major land resource area: Southern Piedmont (MLRA 136) and Northern Piedmont (MLRA 148)
Landform: Hillslopes
Position on the landform: Side slopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 5 inches—yellowish brown loam

Subsoil:
5 to 19 inches—strong brown channery sandy loam

Substratum:
19 to 31 inches—yellowish brown very channery sandy loam

Hard bedrock:
31 inches—graywacke sandstone bedrock

Minor Components

Dissimilar components:
- The well drained, very deep Elioak soils that have a subsoil of red clay and are in landscape positions similar to those of the Hazel soil
- The well drained, very deep Glenelg soils in landscape positions similar to those of the Hazel soil
- Areas that have stones on the surface and are in landscape positions similar to those of the Hazel soil
- Areas that do not have stones on the surface

Soil Properties and Qualities

Available water capacity: Low (about 3.9 inches)
Slowest saturated hydraulic conductivity: High (about 2 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to hard bedrock
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: Medium
Surface fragments: About 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from phyllite and/or schist and/or 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 and chestnut oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength 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 in constructing foundations and installing utilities is increased.

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

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

Interpretive Groups

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

26E—Hazel loam, 25 to 50 percent slopes, very stony

Setting

Major land resource area: Southern Piedmont (MLRA 136) and Northern Piedmont (MLRA 148)
Landform: Hillslopes
Position on the landform: Side slopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 5 inches—yellowish brown loam

Subsoil:
5 to 19 inches—strong brown channery sandy loam

Substratum:
19 to 31 inches—yellowish brown very channery sandy loam

Hard bedrock:
31 inches—graywacke sandstone bedrock

Minor Components

Dissimilar components:
- The well drained, very deep Elioak soils that have a subsoil of red clay and are in landscape positions similar to those of the Hazel soil
- The well drained, very deep Glenelg soils in landscape positions similar to those of the Hazel soil
- Areas that have stones on the surface and are in landscape positions similar to those of the Hazel soil
- Areas that do not have stones on the surface
- Areas of Rock outcrop

Soil Properties and Qualities

Available water capacity: Low (about 3.9 inches)
Slowest saturated hydraulic conductivity: High (about 2 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to hard bedrock
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: Medium
Surface fragments: About 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from phyllite and/or schist and/or 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 and chestnut oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The slope makes the use of mechanical planting equipment impractical.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low 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 in constructing foundations and installing utilities is increased.

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

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

Interpretive Groups

Prime farmland: Not prime farmland

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

27B—Jackland gravelly silt loam, 2 to 7 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 75 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 9 inches—brown gravelly silt loam; iron-manganese nodules

Subsoil:
9 to 30 inches—dark yellowish brown clay; iron-manganese nodules, grayish brown iron depletions, and black manganese masses

Substratum:
30 to 61 inches—pale yellow, light olive brown, and black sandy clay loam; iron-manganese nodules

Minor Components

Dissimilar components:
- The well drained Minnieville soils that have a subsoil of red clay and are in landscape positions similar to those of the Jackland soil
- The well drained Spriggs soils that have less clay in the subsoil than the Jackland soil and are in similar landscape positions
- Areas that have stones on the surface

Soil Properties and Qualities

Available water capacity: Moderate (about 7.4 inches)
Slowest saturated hydraulic conductivity: Low (about 0.00 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Somewhat poorly drained
Depth to seasonal water saturation: About 12 to 24 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Very high
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from gabbro and/or diorite and/or greenstone

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay; poorly suited to corn, soybeans, and wheat; 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 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 to pasture

- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Moderately suited to northern red oak; poorly suited to loblolly pine

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- Soil wetness may limit the use of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.
- This soil is well suited to haul roads and log landings.

Building sites

- The seasonal high water table may restrict the period when excavations can be made.
- Shrinking and swelling of the soil may crack foundations and basement walls.
- 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 seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4w
Virginia soil management group: KK
Hydric soil: No

27C—Jackland gravelly silt loam, 7 to 15 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 9 inches—brown gravelly silt loam; iron-manganese nodules

Subsoil:
9 to 30 inches—dark yellowish brown clay; iron-manganese nodules, grayish brown iron depletions, and black manganese masses

Substratum:
30 to 61 inches—pale yellow, light olive brown, and black sandy clay loam; iron-manganese nodules

Minor Components

Dissimilar components:
- The well drained Minnieville soils that have a subsoil of red clay and are in landscape positions similar to those of the Jackland soil
- The well drained Spriggs soils that have less clay in the subsoil than the Jackland soil and are in similar landscape positions
- Areas that have stones on the surface

Soil Properties and Qualities

Available water capacity: Moderate (about 7.4 inches)
Slowest saturated hydraulic conductivity: Low (about 0.00 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Somewhat poorly drained
Depth to seasonal water saturation: About 12 to 24 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Very high
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from gabbro and/or diorite and/or greenstone

Use and Management Considerations

Cropland

Suitability: Poorly suited to corn, soybeans, wheat, 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 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 to pasture

- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Moderately suited to northern red oak; poorly suited to loblolly pine

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

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

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4w
Virginia soil management group: KK
Hydric soil: No

28B—Lew silt loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Fans on mountains
Position on the landform: Mountainbases
Size of areas: 5 to 50 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 8 inches—dark yellowish brown silt loam

Subsoil:
8 to 36 inches—dark yellowish brown very channery silty clay loam
36 to 62 inches—strong brown extremely channery silty clay loam

Minor Components

Dissimilar components:
- Craigsville soils that have gravel and cobbles and are on flood plains
- Areas that have an extremely stony surface layer

Soil Properties and Qualities

Available water capacity: Moderate (about 8.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 and/or local alluvium

Use and Management Considerations

Cropland
Suitability: Well suited to grass-legume hay; moderately suited to corn and wheat; poorly suited to alfalfa hay and soybeans

- 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 to pasture

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

Woodland

Suitability: Well suited to northern red oak; moderately suited to yellow-poplar

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

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

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

Interpretive Groups

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

29B—Lew silt loam, 2 to 7 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Fans on mountains
Position on the landform: Mountainbases
Size of areas: 5 to 75 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 8 inches—dark yellowish brown silt loam

Subsoil:
8 to 36 inches—dark yellowish brown very channery silty clay loam
36 to 62 inches—strong brown extremely channery silty clay loam

Minor Components

Dissimilar components:
- Craigsville soils that have gravel and cobbles and are on flood plains
- Areas that do not have an extremely stony surface layer

Soil Properties and Qualities

Available water capacity: Moderate (about 8.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 3.00 to 15.00 percent angular stones
Parent material: Colluvium and/or local alluvium

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
- This soil is unsuited to pastureland.

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

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

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

Interpretive Groups

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

30C—Lew channery silt loam, 7 to 15 percent slopes, extremely bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Fans and drainageways on mountains
Position on the landform: Mountainbases
Size of areas: 5 to 200 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Organic layer:
moderately decomposed plant material

Surface layer:
0 to 8 inches—dark yellowish brown channery silt loam

Subsoil:
8 to 36 inches—dark yellowish brown very channery silty clay loam
36 to 62 inches—strong brown extremely channery silty clay loam

Minor Components

Dissimilar components:

- Myersville soils that have fewer rock fragments in the subsoil than the Lew soil and are in similar landscape positions
- The moderately deep Catoctin soils in landscape positions similar to those of the Lew soil
- Areas that do not have a bouldery surface

Similar components:

- Areas that have a very stony or extremely stony surface layer

Soil Properties and Qualities

Available water capacity: Moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 3.00 to 15.00 percent angular boulders
Parent material: Colluvium and/or local alluvium

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
- This soil is unsuited to pastureland.

Woodland
Suitability: Well suited to northern red oak; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- 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.
- Because of the high content of surface rock fragments, this soil is unsuited to mechanical site preparation for planting and seeding.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Coarse textured soil layers increase the maintenance 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.

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

Interpretive Groups

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

30D—Lew channery silt loam, 15 to 25 percent slopes, extremely bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Fans and drainageways on mountains
Position on the landform: Mountainbases
Size of areas: 5 to 200 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Organic layer:
moderately decomposed plant material

Surface layer:
0 to 8 inches—dark yellowish brown channery silt loam

Subsoil:
8 to 36 inches—dark yellowish brown very channery silty clay loam
36 to 62 inches—strong brown extremely channery silty clay loam

Minor Components

Dissimilar components:
- Myersville soils that have fewer rock fragments in the subsoil than the Lew soil and are in similar landscape positions
- The moderately deep Catoctin soils in landscape positions similar to those of the Lew soil
- Areas that do not have a bouldery surface

Similar components:
- Areas that have a very stony or extremely stony surface layer

Soil Properties and Qualities

Available water capacity: Moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 3.00 to 15.00 percent angular boulders
Parent material: Colluvium and/or local alluvium

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
- This soil is unsuited to pastureland.

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

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

Interpretive Groups

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

30E—Lew channery silt loam, 25 to 75 percent slopes, extremely bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Fans and drainageways on mountains
Position on the landform: Mountainbases

Size of areas: 5 to 200 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Organic layer:
moderately decomposed plant material

Surface layer:
0 to 8 inches—dark yellowish brown channery silt loam

Subsoil:
8 to 36 inches—dark yellowish brown very channery silty clay loam
36 to 62 inches—strong brown extremely channery silty clay loam

Minor Components

Dissimilar components:
- Myersville soils that have fewer rock fragments in the subsoil than the Lew soil and are in similar landscape positions
- The moderately deep Catoctin soils in landscape positions similar to those of the Lew soil
- Areas that do not have a bouldery surface

Similar components:
- Areas that have a very stony or extremely stony surface layer

Soil Properties and Qualities

Available water capacity: Moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 3.00 to 15.00 percent angular boulders
Parent material: Colluvium and/or local alluvium

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
- This soil is unsuited to pastureland.

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

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The slope makes the use of mechanical planting equipment 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.
- Because of the high content of surface rock fragments, this soil is unsuited to mechanical site preparation for planting and seeding.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Coarse textured soil layers increase the maintenance 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.

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

Interpretive Groups

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

31B—Littlejoe silt loam, 2 to 7 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

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

Subsurface layer:
2 to 8 inches—brownish yellow loam

Subsoil:
8 to 28 inches—red silty clay
28 to 41 inches—red silty clay loam; common yellowish red mottles

Soft bedrock:
41 inches—reddish brown sericite schist bedrock

Minor Components

Dissimilar components:
- The very deep Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Littlejoe soil
- The very deep Delanco soils that formed in alluvium and are on footslopes in drainageways
- The excessively drained, shallow Bugley soils on the edges of delineations

Similar components:
- Buffstat soils that have a reddish yellow subsoil and are in landscape positions similar to those of the Littlejoe soil
- Eroded areas that have a surface layer of clay loam
- Soils that are underlain by phyllite bedrock

Soil Properties and Qualities

Available water capacity: Moderate (about 6.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
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 mica schist (sericite schist)

Use and Management Considerations

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

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

- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

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

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

Interpretive Groups

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

31C—Littlejoe silt loam, 7 to 15 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

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

Subsurface layer:
2 to 8 inches—brownish yellow loam

Subsoil:
8 to 28 inches—red silty clay
28 to 41 inches—red silty clay loam; common yellowish red mottles

Soft bedrock:
41 inches—reddish brown sericite schist bedrock

Minor Components

Dissimilar components:
- The very deep Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Littlejoe soil

- The very deep Delanco soils that formed in alluvium and are on footslopes in drainageways
- The excessively drained, shallow Bugley soils on the edges of delineations

Similar components:
- Buffstat soils that have a reddish yellow subsoil and are in landscape positions similar to those of the Littlejoe soil
- Eroded areas that have a surface layer of clay loam
- Soils that are underlain by phyllite bedrock

Soil Properties and Qualities

Available water capacity: Moderate (about 6.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
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 mica schist (sericite schist)

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, wheat, 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland
Suitability: Moderately suited to loblolly pine, northern red oak, and yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

Interpretive Groups

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

32B—Minnieville loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130) and Southern Piedmont (MLRA 136)
Landform: Hillslopes and mountain slopes
Position on the landform: Interfluves and mountaintops
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 12 inches—brown loam

Subsoil:
12 to 32 inches—red clay
32 to 49 inches—red clay; few brownish yellow mottles

Substratum:
49 to 72 inches—red clay; common brownish yellow mottles

Minor Components

Dissimilar components:
- The somewhat poorly drained Jackland soils in landscape positions similar to those of the Minnieville soil
- Delanco soils that formed in alluvium and are on footslopes in drainageways
- The somewhat excessively drained Spriggs soils that have less clay in the subsoil than the Minnieville soil and are on the edges of delineations

Similar components:
- Eroded areas that have a surface layer of clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)

Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 greenstone and/or gabbro and/or gneiss

Use and Management Considerations

Cropland

Suitability: Well suited to corn, soybeans, wheat, 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.

Pastureland

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

Woodland

Suitability: Moderately suited to northern red oak; poorly suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

Building sites

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

Septic tank absorption fields

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

Local roads and streets

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

Interpretive Groups

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

32C—Minnieville loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Interfluves and mountaintops
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 12 inches—brown loam

Subsoil:
12 to 32 inches—red clay
32 to 49 inches—red clay; few brownish yellow mottles

Substratum:
49 to 72 inches—red clay; common brownish yellow mottles

Minor Components

Dissimilar components:
- The somewhat poorly drained Jackland soils in landscape positions similar to those of the Minnieville soil
- Delanco soils that formed in alluvium and are on footslopes in drainageways
- The somewhat excessively drained Spriggs soils that have less clay in the subsoil than the Minnieville soil and are on the edges of delineations

Similar components:
- Eroded areas that have a surface layer of clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 greenstone and/or gabbro and/or gneiss

Use and Management Considerations

Cropland

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

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

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

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

Interpretive Groups

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

32D—Minnieville loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 12 inches—brown loam

Subsoil:
12 to 32 inches—red clay
32 to 49 inches—red clay; few brownish yellow mottles

Substratum:
49 to 72 inches—red clay; common brownish yellow mottles

Minor Components

Dissimilar components:
- The somewhat excessively drained Spriggs soils that have less clay in the subsoil than the Minnieville soil and are on the edges of delineations
- The deep Fauquier soils in landscape positions similar to those of the Minnieville soil

Similar components:
- Eroded areas that have a surface layer of clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 greenstone and/or gabbro and/or gneiss

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, wheat, 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland
Suitability: Moderately suited to northern red oak; poorly suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.

- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

Interpretive Groups

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

32E—Minnieville loam, 25 to 50 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130) and Southern Piedmont (MLRA 136)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 12 inches—brown loam

Subsoil:
12 to 32 inches—red clay
32 to 49 inches—red clay; few brownish yellow mottles

Substratum:
49 to 72 inches—red clay; common brownish yellow mottles

Minor Components

Dissimilar components:
- The somewhat excessively drained Spriggs soils that have less clay in the subsoil than the Minnieville soil and are on the edges of delineations
- The deep Fauquier soils in landscape positions similar to those of the Minnieville soil

Similar components:
- Eroded areas that have a surface layer of clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 greenstone and/or gabbro and/or gneiss

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

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

Interpretive Groups

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

33C—Myersville-Catoctin complex, 7 to 15 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130) and Northern Piedmont (MLRA 148)
Landform: Mountain slopes
Position on the landform: Mountaintops
Size of areas: 5 to 100 acres
Shape of areas: Irregular to linear

Map Unit Composition

Myersville and similar soils: Typically 55 percent, ranging from about 55 to 60 percent
Catoctin and similar soils: Typically 35 percent, ranging from about 30 to 35 percent

Typical Profile

Myersville
Surface layer:
0 to 11 inches—brown channery silt loam

Subsoil:
11 to 25 inches—yellowish brown channery clay loam
25 to 40 inches—yellowish brown channery clay loam; common brownish yellow and common black mottles

Substratum:
40 to 47 inches—very pale brown very channery silt loam; common black and common yellowish brown mottles

Soft bedrock:
47 inches—yellow greenstone bedrock; common black mottles

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

Subsoil:
5 to 28 inches—strong brown channery silt loam

Substratum:
28 to 36 inches—yellowish brown extremely channery silt loam

Hard bedrock:
36 inches—greenstone bedrock

Minor Components

Dissimilar components:
- Fauquier soils that have a subsoil of red clay and are in landscape positions similar to those of the Myersville and Catoctin soils
- The very deep Lew soils on colluvial benches and in drainageways
- Areas that do not have a stony surface layer

Soil Properties and Qualities

Available water capacity: Myersville—moderate (about 7.0 inches); Catoctin—low (about 4.1 inches)
Slowest saturated hydraulic conductivity: Myersville—moderately high (about 0.60 in/hr); Catoctin—high (about 2 in/hr)
Depth class: Myersville—deep (40 to 60 inches); Catoctin—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Myersville—40 to 60 inches to soft bedrock; Catoctin—20 to 40 inches to hard bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Myersville—medium; Catoctin—very high
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Residuum weathered from greenstone

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

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.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: Myersville—D; Catoctin—JJ
Hydric soils: No

33D—Myersville-Catoctin complex, 15 to 35 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes
Position on the landform: Mountainflanks
Size of areas: 5 to 100 acres
Shape of areas: Irregular to linear

Map Unit Composition

Myersville and similar soils: Typically 55 percent, ranging from about 55 to 60 percent
Catoctin and similar soils: Typically 35 percent, ranging from about 30 to 35 percent

Typical Profile

Myersville
Surface layer:
0 to 11 inches—brown channery silt loam

Subsoil:
11 to 25 inches—yellowish brown channery clay loam
25 to 40 inches—yellowish brown channery clay loam; common brownish yellow and common black mottles

Substratum:
40 to 47 inches—very pale brown very channery silt loam; common black and common yellowish brown mottles

Soft bedrock:
47 inches—yellow greenstone bedrock; common black mottles

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

Subsoil:
5 to 28 inches—strong brown channery silt loam

Substratum:
28 to 36 inches—yellowish brown extremely channery silt loam

Hard bedrock:
36 inches—greenstone bedrock

Minor Components

Dissimilar components:
- Fauquier soils that have a subsoil of red clay and are in landscape positions similar to those of the Myersville and Catoctin soils
- The very deep Lew soils on colluvial benches and in drainageways
- Areas that do not have a stony surface layer

Soil Properties and Qualities

Available water capacity: Myersville—moderate (about 7.0 inches); Catoctin—low (about 4.1 inches)
Slowest saturated hydraulic conductivity: Myersville—moderately high (about 0.60 in/hr); Catoctin—high (about 2 in/hr)
Depth class: Myersville—deep (40 to 60 inches); Catoctin—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Myersville—40 to 60 inches to soft bedrock; Catoctin—20 to 40 inches to hard bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Myersville—high; Catoctin—very high
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Residuum weathered from greenstone

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

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

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.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: Myersville—D; Catoctin—JJ
Hydric soils: No

33E—Myersville-Catoctin complex, 35 to 55 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes
Position on the landform: Mountainflanks
Size of areas: 5 to 100 acres
Shape of areas: Irregular to linear

Map Unit Composition

Myersville and similar soils: Typically 55 percent, ranging from about 55 to 60 percent
Catoctin and similar soils: Typically 35 percent, ranging from about 30 to 35 percent

Typical Profile

Myersville
Surface layer:
0 to 11 inches—brown channery silt loam

Subsoil:
11 to 25 inches—yellowish brown channery clay loam
25 to 40 inches—yellowish brown channery clay loam; common brownish yellow and common black mottles

Substratum:
40 to 47 inches—very pale brown very channery silt loam; common black and common yellowish brown mottles

Soft bedrock:
47 inches—yellow greenstone bedrock; common black mottles

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

Subsoil:
5 to 28 inches—strong brown channery silt loam

Substratum:
28 to 36 inches—yellowish brown extremely channery silt loam

Hard bedrock:
36 inches—greenstone bedrock

Minor Components

Dissimilar components:
- Fauquier soils that have a subsoil of red clay and are in landscape positions similar to those of the Myersville and Catoctin soils
- The very deep Lew soils on colluvial benches and in drainageways
- Areas that do not have a stony surface layer

Soil Properties and Qualities

Available water capacity: Myersville—moderate (about 7.0 inches); Catoctin—low (about 4.1 inches)
Slowest saturated hydraulic conductivity: Myersville—moderately high (about 0.60 in/hr); Catoctin—high (about 2 in/hr)
Depth class: Myersville—deep (40 to 60 inches); Catoctin—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Myersville—40 to 60 inches to soft bedrock; Catoctin—20 to 40 inches to hard bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Myersville—high; Catoctin—very high
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Residuum weathered from greenstone

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

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

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.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Myersville—D; Catoctin—JJ
Hydric soils: No

34C—Occoquan loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Interfluves and mountaintops
Size of areas: 5 to 25 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsoil:
4 to 13 inches—yellowish red sandy clay loam

Substratum:
13 to 41 inches—yellowish red sandy loam

Soft bedrock:
41 inches—strong brown gneiss bedrock

Minor Components

Dissimilar components:
- The very deep Hayesville soils that have a subsoil of red clay and are in landscape positions similar to those of the Occoquan soil
- The very deep Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Occoquan soil
- Areas that have stones on the surface

Soil Properties and Qualities

Available water capacity: Low (about 4.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss and/or granodiorite

Use and Management Considerations

Cropland
Suitability: Moderately suited to wheat and grass-legume hay; poorly suited to corn and soybeans; 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 limited available water capacity may cause plants to suffer from moisture stress.

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

Woodland
Suitability: Moderately suited to northern red oak; poorly suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength may create unsafe conditions for log trucks.

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

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

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

Interpretive Groups

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

34D—Occoquan loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsoil:
4 to 13 inches—yellowish red sandy clay loam

Substratum:
13 to 41 inches—yellowish red sandy loam

Soft bedrock:
41 inches—strong brown gneiss bedrock

Minor Components

Dissimilar components:
- The very deep Hayesville soils that have a subsoil of red clay and are in landscape positions similar to those of the Occoquan soil
- The very deep Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Occoquan soil
- Areas that have stones on the surface

Soil Properties and Qualities

Available water capacity: Low (about 4.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss and/or granodiorite

Use and Management Considerations

Cropland
Suitability: Moderately suited to wheat and grass-legume hay; poorly suited to corn and soybeans; 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 limited available water capacity may cause plants to suffer from moisture stress.

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

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

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

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

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

Interpretive Groups

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

34E—Occoquan loam, 25 to 50 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsoil:
4 to 13 inches—yellowish red sandy clay loam

Substratum:
13 to 41 inches—yellowish red sandy loam

Soft bedrock:
41 inches—strong brown gneiss bedrock

Minor Components

Dissimilar components:
- The very deep Hayesville soils that have a subsoil of red clay and are in landscape positions similar to those of the Occoquan soil
- The very deep Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Occoquan soil
- The somewhat excessively drained Peaks soils that have more rock fragments in the subsoil than the Occoquan soil and are in similar landscape positions
- Areas that have stones on the surface

Similar components:
- Edneytown soils that have a subsoil that is thicker than that of the Occoquan soil and that are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Low (about 4.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from granite and gneiss and/or granodiorite

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

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The slope makes the use of mechanical planting equipment impractical.
- The low strength may create unsafe conditions for log trucks.

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

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

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

Interpretive Groups

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

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

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsoil:
4 to 13 inches—yellowish red sandy clay loam

Substratum:
13 to 41 inches—yellowish red sandy loam

Soft bedrock:
41 inches—strong brown gneiss bedrock

Minor Components

Dissimilar components:
- The very deep Hayesville soils that have a subsoil of red clay and are in landscape positions similar to those of the Occoquan soil
- The very deep Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Occoquan soil

- The somewhat excessively drained Peaks soils that have more rock fragments in the subsoil than the Occoquan soil and are in similar landscape positions
- Areas that have stones on the surface

Similar components:
- Edneytown soils that have a subsoil that is thicker than that of the Occoquan soil and that are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Low (about 4.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from granite and gneiss and/or granodiorite

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

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

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

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

Interpretive Groups

Prime farmland: Not prime farmland

Land capability class: 7s
Virginia soil management group: DD
Hydric soil: No

35E—Occoquan loam, 25 to 50 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsoil:
4 to 13 inches—yellowish red sandy clay loam

Substratum:
13 to 41 inches—yellowish red sandy loam

Soft bedrock:
41 inches—strong brown gneiss bedrock

Minor Components

Dissimilar components:
- The very deep Hayesville soils that have a subsoil of red clay and are in landscape positions similar to those of the Occoquan soil
- The very deep Wintergreen soils that formed in colluvial material and are in landscape positions similar to those of the Occoquan soil
- The somewhat excessively drained Peaks soils that have more rock fragments in the subsoil than the Occoquan soil and that are in similar landscape positions
- Areas that have stones on the surface

Similar components:
- Edneytown soils that have a subsoil that is thicker than that of the Occoquan soil and that are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Low (about 4.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High

Surface fragments: About 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from granite and gneiss and/or granodiorite

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

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

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

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

Interpretive Groups

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

36D—Peaks-Rock outcrop complex, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes
Position on the landform: Mountainflanks
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Peaks
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 2 inches—very dark grayish brown very gravelly loam

Subsurface layer:
2 to 7 inches—dark yellowish brown very gravelly loam

Subsoil:
7 to 25 inches—strong brown very gravelly loam

Soft bedrock:
25 to 36 inches—yellowish brown granodiorite bedrock

Hard bedrock:
36 inches—granodiorite bedrock

Rock outcrop
Areas of Rock outcrop consist of exposures of gneiss, granite, and granodiorite bedrock. The outcrops are as much as 50 feet in height and are spaced 10 to 200 feet apart.

Minor Components

Dissimilar components:
- The well drained Edneytown soils that have fewer rock fragments in the subsoil than the Peaks soil and that are in similar landscape positions
- Areas that have rock outcrops spaced more than 200 feet apart

Properties and Qualities of the Peaks Soil

Available water capacity: Very low (about 2.1 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 soft bedrock
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from granite and/or granodiorite and/or gneiss

Use and Management Considerations

Cropland
- This map unit is unsuited to cropland.

Pastureland
- This map unit is unsuited to pastureland.

Woodland
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope makes the use of mechanical planting equipment impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance 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.
- Because of rock outcrops, rock removal may be needed.

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

Local roads and streets
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Peaks—7s; Rock outcrop—8s
Virginia soil management group: Peaks—JJ; Rock outcrop—none assigned
Hydric soils: Peaks—no; Rock outcrop—unranked

36E—Peaks-Rock outcrop complex, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Peaks
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 2 inches—very dark grayish brown very gravelly loam

Subsurface layer:
2 to 7 inches—dark yellowish brown very gravelly loam

Subsoil:
7 to 25 inches—strong brown very gravelly loam

Soft bedrock:
25 to 36 inches—yellowish brown granodiorite bedrock

Hard bedrock:
36 inches—granodiorite bedrock

Rock outcrop
Areas of Rock outcrop consist of exposures of gneiss, granite, and granodiorite bedrock. The outcrops are as much as 50 feet in height and are spaced 10 to 200 feet apart.

Minor Components

Dissimilar components:
- The well drained Edneytown soils that have fewer rock fragments in the subsoil than the Peaks soil and that are in similar landscape positions
- Areas that have rock outcrops spaced more than 200 feet apart

Properties and Qualities of the Peaks Soil

Available water capacity: Very low (about 2.1 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 soft bedrock
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from granite and/or granodiorite and/or gneiss

Use and Management Considerations

Cropland
- This map unit is unsuited to cropland.

Pastureland
- This map unit is unsuited to pastureland.

Woodland

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

Septic tank absorption fields

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

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Peaks—7s; Rock outcrop—8s
Virginia soil management group: Peaks—JJ; Rock outcrop—none assigned
Hydric soils: Peaks—no; Rock outcrop—unranked

36F—Peaks-Rock outcrop complex, 55 to 75 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountains slopes and escarpments

Position on the landform: Mountainflanks and free faces
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Peaks
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 2 inches—very dark grayish brown very gravelly loam

Subsurface layer:
2 to 7 inches—dark yellowish brown very gravelly loam

Subsoil:
7 to 25 inches—strong brown very gravelly loam

Soft bedrock:
25 to 36 inches—yellowish brown granodiorite bedrock

Hard bedrock:
36 inches—granodiorite bedrock

Rock outcrop
Areas of Rock outcrop consist of exposures of gneiss, granite, and granodiorite bedrock. The outcrops are as much as 50 feet in height and are spaced 10 to 200 feet apart.

Minor Components

Dissimilar components:
- The well drained Edneytown soils that have fewer rock fragments in the subsoil than the Peaks soil and that are in similar landscape positions
- Areas that have rock outcrops spaced more than 200 feet apart

Properties and Qualities of the Peaks Soil

Available water capacity: Very low (about 2.1 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 soft bedrock
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from granite and/or granodiorite and/or gneiss

Use and Management Considerations

Cropland
- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

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

Septic tank absorption fields

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

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Peaks—7s; Rock outcrop—8s
Virginia soil management group: Peaks—JJ; Rock outcrop—none assigned
Hydric soils: Peaks—no; Rock outcrop—unranked

37A—Pineywoods silt loam, 0 to 2 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)

Landform: Mountain slopes
Position on the landform: Mountaintops
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 1 inch—dark gray silt loam

Subsurface layer:
1 to 6 inches—light brownish gray silt loam; brownish yellow iron-manganese masses

Subsoil:
6 to 15 inches—light brownish gray silty clay; brownish yellow iron-manganese masses
15 to 22 inches—light brownish gray clay; pale brown iron-manganese masses

Substratum:
22 to 41 inches—white loam; reddish yellow iron-manganese masses and gray manganese coatings

Soft bedrock:
41 inches—light gray anorthosite bedrock

Minor Components

Dissimilar components:
- The well drained, very deep Colleen soils in the more rolling, convex landscape positions
- The moderately well drained, very deep Sketerville soils in landscape positions similar to those of the Pineywoods soil

Similar components:
- Areas that have a gravelly surface layer

Soil Properties and Qualities

Available water capacity: Low (about 5.7 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
Drainage class: Poorly drained
Depth to seasonal water saturation: About 0 to 12 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from anorthosite

Use and Management Considerations

Cropland

Suitability: Poorly suited to corn, soybeans, and wheat; 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: Poorly suited to pasture
- 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 northern red oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- Soil wetness may limit the use of log trucks.
- The low strength interferes with the construction of haul roads and log landings.
- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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.

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

Interpretive Groups

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

38—Pits, quarry

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)

Landform: Quarries on hillslopes and mountain slopes
Position on the landform: Variable
Size of areas: 5 to 100 acres
Shape of areas: Variable

Map Unit Composition

Pits: Typically 100 percent

Definition

Areas of this map unit primarily consist of open excavations from which soil and underlying rock have been removed, exposing bedrock. These pits are associated with mining or quarry activities. They may contain water. A typical profile is not given due to the variability of the soil material.

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: 8s
Virginia soil management group: None assigned
Hydric soils: Unranked

39C—Saunook loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Drainageways and fans
Position on the landform: Mountainbases and head slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 9 inches—very dark grayish brown loam

Subsoil:
9 to 29 inches—brown clay loam
29 to 52 inches—strong brown clay loam

Substratum:
52 to 61 inches—yellowish brown very cobbly sandy loam

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The moderately deep Peaks soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The well drained and somewhat excessively drained, deep Occoquan soils that

formed in residual material and are in landscape positions similar to those of the Saunook soil
- The somewhat poorly drained Belvoir soils on footslopes
- Areas that have a very stony surface layer

Similar components:
- Thurmont soils that have less organic matter in the surface layer than the Saunook soil and that are in similar landscape positions

Soil Properties and Qualities

Available water capacity: High (about 9.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Colluvium

Use and Management Considerations

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

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

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

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
- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

39D—Saunook loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Drainageways and fans
Position on the landform: Mountainbases and head slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 9 inches—very dark grayish brown loam

Subsoil:
9 to 29 inches—brown clay loam
29 to 52 inches—strong brown clay loam

Substratum:
52 to 61 inches—yellowish brown very cobbly sandy loam

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The moderately deep Peaks soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The well drained and somewhat excessively drained, deep Occoquan soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The somewhat poorly drained Belvoir soils on footslopes
- Areas that have a very stony surface layer

Similar components:
- Thurmont soils that have less organic matter in the surface layer than the Saunook soil and are in similar landscape positions

Soil Properties and Qualities

Available water capacity: High (about 9.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None

Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Colluvium

Use and Management Considerations

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

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

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

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
- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

40C—Saunook loam, 7 to 15 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Drainageways and fans

Position on the landform: Mountainbases and head slopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 9 inches—very dark grayish brown loam

Subsoil:
9 to 29 inches—brown clay loam
29 to 52 inches—strong brown clay loam

Substratum:
52 to 61 inches—yellowish brown very cobbly sandy loam

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The moderately deep Peaks soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The well drained and somewhat excessively drained, deep Occoquan soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The somewhat poorly drained Belvoir soils on footslopes
- Areas that do not have a very stony surface layer

Similar components:
- Thurmont soils that have less organic matter in the surface layer than the Saunook soil and that are in similar landscape positions

Soil Properties and Qualities

Available water capacity: High (about 9.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent angular stones
Parent material: Colluvium

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

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

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

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

- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

40D—Saunook loam, 15 to 25 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Drainageways and fans
Position on the landform: Mountainbases and head slopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 9 inches—very dark grayish brown loam

Subsoil:
9 to 29 inches—brown clay loam
29 to 52 inches—strong brown clay loam

Substratum:
52 to 61 inches—yellowish brown very cobbly sandy loam

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The moderately deep Peaks soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The well drained and somewhat excessively drained, deep Occoquan soils that formed in residual material and that are in landscape positions similar to those of the Saunook soil
- The somewhat poorly drained Belvoir soils on footslopes
- Areas that do not have a very stony surface layer

Similar components:
- Thurmont soils that have less organic matter in the surface layer than the Saunook soil and are in similar landscape positions

Soil Properties and Qualities

Available water capacity: High (about 9.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent angular stones
Parent material: Colluvium

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

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
- The low strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

40E—Saunook loam, 25 to 50 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Drainageways and fans
Position on the landform: Mountainbases and head slopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 9 inches—very dark grayish brown loam

Subsoil:
9 to 29 inches—brown clay loam
29 to 52 inches—strong brown clay loam

Substratum:
52 to 61 inches—yellowish brown very cobbly sandy loam

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The moderately deep Peaks soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The well drained and somewhat excessively drained, deep Occoquan soils that formed in residual material and are in landscape positions similar to those of the Saunook soil
- The somewhat poorly drained Belvoir soils on footslopes
- Areas that do not have a very stony surface layer

Similar components:
- Thurmont soils that have less organic matter in the surface layer than the Saunook soil and that are in similar landscape positions

Soil Properties and Qualities

Available water capacity: High (about 9.2 inches)

Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent angular stones
Parent material: Colluvium

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

Interpretive Groups

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

41B—Sketerville silt loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes

Position on the landform: Mountaintops
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 4 inches—very pale brown, dark brown, and dark grayish brown silt loam

Subsoil:
4 to 12 inches—light yellowish brown clay; very pale brown iron depletions and brownish yellow iron-manganese masses
12 to 42 inches—yellowish brown clay; brownish yellow iron-manganese masses and light brownish gray iron depletions

Substratum:
42 to 52 inches—light brownish gray and gray clay; brownish yellow iron-manganese masses
52 to 70 inches—light gray, light brownish gray, and white silty clay loam; brownish yellow iron-manganese masses

Hard bedrock:
70 inches—white anorthosite bedrock

Minor Components

Dissimilar components:
- The well drained Colleen soils in the more rolling, convex landscape positions
- The poorly drained, deep Pineywoods soils in landscape positions similar to those of the Sketerville soil

Similar components:
- Areas that have a gravelly surface layer

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 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: Medium
Surface fragments: None
Parent material: Residuum weathered from anorthosite

Use and Management Considerations

Cropland

Suitability: Poorly suited to corn, soybeans, and wheat; not suited to 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: Poorly suited to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland
Suitability: Poorly suited to northern red oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

Interpretive Groups

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

42C—Spriggs loam, 7 to 15 percent slopes, very stony

Setting

Major land resource area: Southern Piedmont (MLRA 136) and Northern Piedmont (MLRA 148)
Landform: Hillslopes

Position on the landform: Interfluves
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 4 inches—brown loam; black iron-manganese nodules

Subsoil:
4 to 14 inches—yellowish brown gravelly loam; black iron-manganese nodules

Substratum:
14 to 20 inches—yellowish brown gravelly loam; black iron-manganese nodules

Soft bedrock:
20 to 41 inches—yellowish brown, light brownish gray, and strong brown gabbro bedrock

Hard bedrock:
41 inches—gabbro bedrock

Minor Components

Dissimilar components:
- The very deep Minnieville soils that have a subsoil of red clay and that are in landscape positions similar to those of the Spriggs soil
- The deep Fauquier soils that have a subsoil of red clay and that are in landscape positions similar to those of the Spriggs soil
- The somewhat poorly drained Jackland soils in landscape positions similar to those of the Spriggs soil
- Areas that do not have stones on the surface

Soil Properties and Qualities

Available water capacity: Low (about 3.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to soft bedrock
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 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from gabbro and/or diorite and/or greenstone

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

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

- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.
- Large stones on the surface may restrict the operation of some farm machinery.

Woodland
Suitability: Moderately suited to northern red oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low strength 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
- 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
- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

42D—Spriggs loam, 15 to 25 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 4 inches—brown loam; black iron-manganese nodules

Subsoil:
4 to 14 inches—yellowish brown gravelly loam; black iron-manganese nodules

Substratum:
14 to 20 inches—yellowish brown gravelly loam; black iron-manganese nodules

Soft bedrock:
20 to 41 inches—yellowish brown, light brownish gray, and strong brown gabbro bedrock

Hard bedrock:
41 inches—gabbro bedrock

Minor Components

Dissimilar components:
- The very deep Minnieville soils that have a subsoil of red clay and that are in landscape positions similar to those of the Spriggs soil
- The deep Fauquier soils that have a subsoil of red clay and that are in landscape positions similar to those of the Spriggs soil
- The somewhat poorly drained Jackland soils in landscape positions similar to those of the Spriggs soil
- Areas that do not have stones on the surface

Soil Properties and Qualities

Available water capacity: Low (about 3.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to soft bedrock
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 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from gabbro and/or diorite and/or greenstone

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

- Bedrock may interfere with the construction of haul roads and log landings.
- The low strength 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
- 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
- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

42E—Spriggs loam, 25 to 50 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Hillslopes and mountain slopes
Position on the landform: Side slopes and mountainflanks
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 4 inches—brown loam; black iron-manganese nodules

Subsoil:
4 to 14 inches—yellowish brown gravelly loam; black iron-manganese nodules

Substratum:
14 to 20 inches—yellowish brown gravelly loam; black iron-manganese nodules

Soft bedrock:
20 to 41 inches—yellowish brown, light brownish gray, and strong brown gabbro bedrock

Hard bedrock:
41 inches—gabbro bedrock

Minor Components

Dissimilar components:
- The very deep Minnieville soils that have a subsoil of red clay and that are in landscape positions similar to those of the Spriggs soil
- The deep Fauquier soils that have a subsoil of red clay and that are in landscape positions similar to those of the Spriggs soil
- The somewhat poorly drained Jackland soils in landscape positions similar to those of the Spriggs soil
- Areas that do not have stones on the surface

Soil Properties and Qualities

Available water capacity: Low (about 3.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to soft bedrock
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 0.10 to 3.00 percent angular stones
Parent material: Residuum weathered from gabbro and/or diorite and/or greenstone

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

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

Interpretive Groups

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

43A—Suches loam, 0 to 2 percent slopes, frequently flooded

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Flood plains
Position on the landform: Treads
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 11 inches—brown loam

Subsoil:
11 to 23 inches—strong brown loam
23 to 30 inches—brown clay loam
30 to 43 inches—dark yellowish brown sandy clay loam

Substratum:
43 to 61 inches—light brownish gray and yellowish brown sandy loam

Minor Components

Dissimilar components:

- The well drained Colvard soils that have less clay in the subsoil than the Suches soil and that are in the higher flood plain areas, nearest to the streams
- The well drained Craigsville soils that have more rock fragments in the subsoil than the Suches soil and that are in the higher flood plain areas, nearest to the streams
- The somewhat poorly drained Codorus soils in landscape positions similar to those of the Suches soil
- The poorly drained Hatboro soils in landscape positions similar to those of the Suches soil

Similar components:

- Areas that have a surface layer that is darker than that of the Suches soil

Figure 6.—Corn on Suches loam, 0 to 2 percent slopes, frequently flooded.

Soil Properties and Qualities

Available water capacity: High (about 9.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 30 to 48 inches
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Recent alluvium

Use and Management Considerations

Cropland

Suitability: Well suited to corn, soybeans, wheat, grass-legume hay, and alfalfa hay (fig. 6)
- Frequent flooding restricts the use of winter grain crops.
- Flooding may damage crops.

Pastureland

Suitability: Well suited to pasture
- Flooding may damage pastures.

Woodland

Suitability: Well suited to loblolly pine, northern red oak, yellow-poplar, and eastern white pine

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should focus on streamside management zones and stream crossings and should include general adherence to all applicable best management practices.
- Flooding may damage haul roads.
- Flooding restricts the safe use of roads by log trucks.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

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

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

Local roads and streets
- Flooding may damage local roads and streets.
- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3w
Virginia soil management group: A
Hydric soil: No

44C—Sylco-Sylvatus complex, 7 to 15 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes
Position on the landform: Mountaintops
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

Sylco and similar soils: Typically 55 percent, ranging from about 50 to 55 percent
Sylvatus and similar soils: Typically 35 percent, ranging from about 35 to 40 percent

Typical Profile

Sylco
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 3 inches—dark yellowish brown channery silt loam

Subsoil:
3 to 25 inches—yellowish brown very channery silty clay loam; common pale yellow and common strong brown mottles

25 to 34 inches—yellowish brown very channery clay loam; common strong brown and common pale yellow mottles

Soft bedrock:
34 to 38 inches—yellowish brown phyllite bedrock

Hard bedrock:
38 inches—phyllite bedrock

Sylvatus
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 1 inch—yellowish brown very channery silt loam

Subsoil:
1 to 9 inches—yellowish brown very channery silty clay loam
9 to 15 inches—yellowish brown extremely channery clay loam

Soft bedrock:
15 to 19 inches—yellowish brown phyllite bedrock

Hard bedrock:
19 inches—phyllite bedrock

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in granite gneiss and granodiorite and are in landscape positions similar to those of the Sylco and Sylvatus soils
- Peaks soils that have rock fragments derived from granite gneiss and granodiorite and that are in landscape positions similar to those of the Sylco and Sylvatus soils
- Areas that do not have a stony surface layer

Soil Properties and Qualities

Available water capacity: Sylco—very low (about 2.9 inches); Sylvatus—very low (about 1.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Sylco—moderately deep (20 to 40 inches); Sylvatus—shallow (10 to 20 inches)
Depth to root-restrictive feature: Sylco—20 to 40 inches to soft bedrock; Sylvatus—10 to 20 inches to soft bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Residuum weathered from phyllite and/or siltstone and/or slate

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; poorly suited to northern red oak

- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The 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.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength 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 nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

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

Local roads and streets

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

Interpretive Groups

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

44D—Sylco-Sylvatus complex, 15 to 35 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes

Position on the landform: Mountainflanks
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Sylco and similar soils: Typically 55 percent, ranging from about 50 to 55 percent
Sylvatus and similar soils: Typically 35 percent, ranging from about 35 to 40 percent

Typical Profile

Sylco
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 3 inches—dark yellowish brown channery silt loam

Subsoil:
3 to 25 inches—yellowish brown very channery silty clay loam; common pale yellow and common strong brown mottles
25 to 34 inches—yellowish brown very channery clay loam; common strong brown and common pale yellow mottles

Soft bedrock:
34 to 38 inches—yellowish brown phyllite bedrock

Hard bedrock:
38 inches—phyllite bedrock

Sylvatus
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 1 inch—yellowish brown very channery silt loam

Subsoil:
1 to 9 inches—yellowish brown very channery silty clay loam
9 to 15 inches—yellowish brown extremely channery clay loam

Soft bedrock:
15 to 19 inches—yellowish brown phyllite bedrock

Hard bedrock:
19 inches—phyllite bedrock

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in granite gneiss and granodiorite and that are in landscape positions similar to those of the Sylco and Sylvatus soils
- Peaks soils that have rock fragments derived from granite gneiss and granodiorite and that are in landscape positions similar to those of the Sylco and Sylvatus soils
- Areas that do not have a stony surface layer

Soil Properties and Qualities

Available water capacity: Sylco—very low (about 2.9 inches); Sylvatus—very low (about 1.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Sylco—moderately deep (20 to 40 inches); Sylvatus—shallow (10 to 20 inches)

Depth to root-restrictive feature: Sylco—20 to 40 inches to soft bedrock; Sylvatus—10 to 20 inches to soft bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Residuum weathered from phyllite and/or siltstone and/or slate

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; poorly suited to northern red oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope makes the use of mechanical planting equipment 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.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength 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 nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

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

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

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

Interpretive Groups

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

44E—Sylco-Sylvatus complex, 35 to 55 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes
Position on the landform: Mountainflanks
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Sylco and similar soils: Typically 55 percent, ranging from about 50 to 55 percent
Sylvatus and similar soils: Typically 35 percent, ranging from about 35 to 40 percent

Typical Profile

Sylco
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 3 inches—dark yellowish brown channery silt loam

Subsoil:
3 to 25 inches—yellowish brown very channery silty clay loam; common pale yellow and common strong brown mottles
25 to 34 inches—yellowish brown very channery clay loam; common strong brown and common pale yellow mottles

Soft bedrock:
34 to 38 inches—yellowish brown phyllite bedrock

Hard bedrock:
38 inches—phyllite bedrock

Sylvatus
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 1 inch—yellowish brown very channery silt loam

Subsoil:
1 to 9 inches—yellowish brown very channery silty clay loam
9 to 15 inches—yellowish brown extremely channery clay loam

Soft bedrock:
15 to 19 inches—yellowish brown phyllite bedrock

Hard bedrock:
19 inches—phyllite bedrock

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in granite gneiss and granodiorite and that are in landscape positions similar to those of the Sylco and Sylvatus soils
- Peaks soils that have rock fragments derived from granite gneiss and granodiorite and that are in landscape positions similar to those of the Sylco and Sylvatus soils
- Areas that do not have a stony surface layer

Soil Properties and Qualities

Available water capacity: Sylco—very low (about 2.9 inches); Sylvatus—very low (about 1.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Sylco—moderately deep (20 to 40 inches); Sylvatus—shallow (10 to 20 inches)
Depth to root-restrictive feature: Sylco—20 to 40 inches to soft bedrock; Sylvatus—10 to 20 inches to soft bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Residuum weathered from phyllite and/or siltstone and/or slate

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; poorly suited to northern red oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The slope makes the use of mechanical planting equipment 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.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low strength 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 nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

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

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

Interpretive Groups

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

45E—Sylvatus-Rock outcrop complex, 35 to 55 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes
Position on the landform: Mountainflanks
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Sylvatus
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 1 inch—yellowish brown very channery silt loam

Subsoil:
1 to 9 inches—yellowish brown very channery silty clay loam
9 to 15 inches—yellowish brown extremely channery clay loam

Soft bedrock:
15 to 19 inches—yellowish brown phyllite bedrock

Hard bedrock:
19 inches—phyllite bedrock

Rock outcrop

Areas of Rock outcrop consist of exposures of granodiorite, granite, and gneiss bedrock interbedded with phyllite, siltstone, and slate. The outcrops are as much as 50 feet in height and are spaced 10 to 200 feet apart.

Minor Components

Dissimilar components:
- The moderately deep Sylco soils in landscape positions similar to those of the Sylvatus soil
- The deep Edneytown soils that formed in granite gneiss and granodiorite and that are in landscape positions similar to those of the Sylvatus soil
- Peaks soils that have rock fragments derived from granite gneiss and granodiorite and that are in landscape positions similar to those of the Sylvatus soil
- Areas that do not have a stony surface layer
- Areas that have rock outcrops spaced more than 200 feet apart

Properties and Qualities of the Sylvatus Soil

Available water capacity: Very low (about 1.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Shallow (10 to 20 inches)
Depth to root-restrictive feature: 10 to 20 inches to soft bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Residuum weathered from phyllite and/or siltstone and/or slate

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; poorly suited to northern red oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The slope makes the use of mechanical planting equipment 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.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The 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 nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields
- 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.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets
- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Sylvatus—7s; Rock outcrop—8s
Virginia soil management group: Sylvatus—JJ; Rock outcrop—none assigned
Hydric soils: Sylvatus—no; Rock outcrop—unranked

45F—Sylvatus-Rock outcrop complex, 55 to 70 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Mountain slopes
Position on the landform: Mountainflanks
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Sylvatus
Organic layer:
moderately decomposed plant material

Surface layer:
0 to 1 inch—yellowish brown very channery silt loam

Subsoil:
1 to 9 inches—yellowish brown very channery silty clay loam
9 to 15 inches—yellowish brown extremely channery clay loam

Soft bedrock:
15 to 19 inches—yellowish brown phyllite bedrock

Hard bedrock:
19 inches—phyllite bedrock

Rock outcrop
Areas of Rock outcrop consist of exposures of granodiorite, granite, and gneiss bedrock interbedded with phyllite, siltstone, and slate. The outcrops are as much as 50 feet in height and are spaced 10 to 200 feet apart.

Minor Components

Dissimilar components:
- The moderately deep Sylco soils in landscape positions similar to those of the Sylvatus soil
- The deep Edneytown soils that formed in granite gneiss and granodiorite and that are in landscape positions similar to those of the Sylvatus soil
- Peaks soils that have rock fragments derived from granite gneiss and granodiorite and that are in landscape positions similar to those of the Sylvatus soil
- Areas that do not have a stony surface layer
- Areas that have rock outcrops spaced more than 200 feet apart

Properties and Qualities of the Sylvatus Soil

Available water capacity: Very low (about 1.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Shallow (10 to 20 inches)
Depth to root-restrictive feature: 10 to 20 inches to soft bedrock
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent angular stones
Parent material: Residuum weathered from phyllite and/or siltstone and/or slate

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; poorly suited to northern red oak
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality, especially in areas on the steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The slope makes the use of mechanical planting equipment 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.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The 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 nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields
- 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.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets
- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Sylvatus—7s; Rock outcrop—8s
Virginia soil management group: Sylvatus—JJ; Rock outcrop—none assigned
Hydric soils: Sylvatus—no; Rock outcrop—unranked

46B—Thurmont loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans and drainageways
Position on the landform: Mountainbases and head slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 5 inches—dark brown loam

Subsoil:
5 to 24 inches—strong brown clay loam
24 to 31 inches—strong brown sandy clay loam
31 to 40 inches—strong brown sandy loam

Substratum:
40 to 62 inches—brown, strong brown, and yellowish brown very cobbly loam

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- The moderately deep Peaks soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- The well drained and somewhat excessively drained, deep Occoquan soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- Craigsville soils that have more rock fragments in the subsoil than the Thurmont soil and that are on narrow flood plains
- The somewhat poorly drained Belvoir soils on footslopes
- Areas that have a very stony surface layer

Similar components:
- Saunook soils that have more organic matter in the surface layer than the Thurmont soil and that are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Moderate (about 6.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 48 to 79 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium

Surface fragments: None
Parent material: Colluvium and/or local alluvium

Use and Management Considerations

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

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

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

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

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

Local roads and streets
- This soil is well suited to 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

46C—Thurmont loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans and drainageways
Position on the landform: Mountainbases and head slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 5 inches—dark brown loam

Subsoil:
5 to 24 inches—strong brown clay loam
24 to 31 inches—strong brown sandy clay loam
31 to 40 inches—strong brown sandy loam

Substratum:
40 to 62 inches—brown, strong brown, and yellowish brown very cobbly loam

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- The moderately deep Peaks soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- The well drained and somewhat excessively drained, deep Occoquan soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- Craigsville soils that have more rock fragments in the subsoil that the Thurmont soil and that are on narrow flood plains
- The somewhat poorly drained Belvoir soils on footslopes
- Areas that have a very stony surface layer

Similar components:
- Saunook soils that have more organic matter in the surface layer than the Thurmont soil and are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Moderate (about 6.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 48 to 79 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Colluvium and/or local alluvium

Use and Management Considerations

Cropland

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

Pastureland

Suitability: Well suited to pasture

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

Woodland

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

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

Interpretive Groups

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

46D—Thurmont loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans and drainageways
Position on the landform: Mountainbases and head slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 5 inches—dark brown loam

Subsoil:
5 to 24 inches—strong brown clay loam
24 to 31 inches—strong brown sandy clay loam
31 to 40 inches—strong brown sandy loam

Substratum:
40 to 62 inches—brown, strong brown, and yellowish brown very cobbly loam

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- The moderately deep Peaks soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- The well drained and somewhat excessively drained, deep Occoquan soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- Craigsville soils that have more rock fragments in the subsoil than the Thurmont soil and are on narrow flood plains
- The somewhat poorly drained Belvoir soils on footslopes
- Areas that have a very stony surface layer

Similar components:
- Saunook soils that have more organic matter in the surface layer than the Thurmont soil and are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Moderate (about 6.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 48 to 79 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Colluvium and/or local alluvium

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn, soybeans, wheat, 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

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

- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength 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 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.

Interpretive Groups

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

47B—Thurmont loam, 2 to 7 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans and drainageways
Position on the landform: Mountainbases and head slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 5 inches—dark brown loam

Subsoil:
5 to 24 inches—strong brown clay loam
24 to 31 inches—strong brown sandy clay loam
31 to 40 inches—strong brown sandy loam

Substratum:
40 to 62 inches—brown, strong brown, and yellowish brown very cobbly loam

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- The moderately deep Peaks soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- The well drained and somewhat excessively drained, deep Occoquan soils that

formed in residual material and are in landscape positions similar to those of the Thurmont soil
- Craigsville soils that have more rock fragments in the subsoil than the Thurmont soil and are on narrow flood plains
- The somewhat poorly drained Belvoir soils on footslopes
- Areas that do not have a very stony surface layer

Similar components:
- Saunook soils that have more organic matter in the surface layer than the Thurmont soil and are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Moderate (about 6.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 48 to 79 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent subangular stones
Parent material: Colluvium and/or local alluvium

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

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

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

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

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretive Groups

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

47C—Thurmont loam, 7 to 15 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans and drainageways
Position on the landform: Mountainbases and head slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 5 inches—dark brown loam

Subsoil:
5 to 24 inches—strong brown clay loam
24 to 31 inches—strong brown sandy clay loam
31 to 40 inches—strong brown sandy loam

Substratum:
40 to 62 inches—brown, strong brown, and yellowish brown very cobbly loam

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- The moderately deep Peaks soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- The well drained and somewhat excessively drained, deep Occoquan soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- Craigsville soils that have more rock fragments in the subsoil than the Thurmont soil and are on narrow flood plains
- The somewhat poorly drained Belvoir soils on footslopes
- Areas that do not have a very stony surface layer

Similar components:
- Saunook soils that have more organic matter in the surface layer than the Thurmont soil and are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Moderate (about 6.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 48 to 79 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent subangular stones
Parent material: Colluvium and/or local alluvium

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

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

Interpretive Groups

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

47D—Thurmont loam, 15 to 25 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans and drainageways

Position on the landform: Mountainbases and head slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 5 inches—dark brown loam

Subsoil:
5 to 24 inches—strong brown clay loam
24 to 31 inches—strong brown sandy clay loam
31 to 40 inches—strong brown sandy loam

Substratum:
40 to 62 inches—brown, strong brown, and yellowish brown very cobbly loam

Minor Components

Dissimilar components:
- The deep Edneytown soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- The moderately deep Peaks soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- The well drained and somewhat excessively drained, deep Occoquan soils that formed in residual material and are in landscape positions similar to those of the Thurmont soil
- Craigsville soils that have more rock fragments in the subsoil than the Thurmont soil and are on narrow flood plains
- The somewhat poorly drained Belvoir soils on footslopes
- Areas that do not have a very stony surface layer

Similar components:
- Saunook soils that have more organic matter in the surface layer than the Thurmont soil and are in similar landscape positions

Soil Properties and Qualities

Available water capacity: Moderate (about 6.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 48 to 79 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent subangular stones
Parent material: Colluvium and/or local alluvium

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

Pastureland
- This soil is unsuited to pastureland.

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

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 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.

Interpretive Groups

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

48—Udorthents, smoothed

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: River valleys, valleys, and mountain slopes
Position on the landform: Variable
Size of areas: 5 to 200 acres
Shape of areas: Variable

Map Unit Composition

Because of the variability of areas of this map unit and the intricate pattern in which Udorthents occur, the composition is not given.

Definition

Udorthents consist of excavations and fill material. The thickness of the fill material varies but is generally more than 20 inches. The fill material is generally soil materials ranging from loamy sand to clay. Rock outcrops are common in the excavations.

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: Unspecified
Virginia soil management group: None assigned
Hydric soils: Unranked

49B—Unison loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans, drainageways, and stream terraces
Position on the landform: Mountainbases, head slopes, and treads
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—dark yellowish brown loam

Subsoil:
3 to 27 inches—strong brown silty clay loam
27 to 44 inches—strong brown clay loam
44 to 48 inches—strong brown cobbly loam

Substratum:
48 to 62 inches—strong brown, red, and light brown silty clay

Minor Components

Dissimilar components:
- The somewhat excessively drained Occoquan soils on the steeper slopes
- Hayesville soils that formed in red clayey residual material and are in landscape positions similar to those of the Unison soil
- Elioak soils that formed in red clayey residual material and are in landscape positions similar to those of the Unison soil
- Littlejoe soils that formed in red clayey residual material and are in landscape positions similar to those of the Unison soil

Similar components:
- Eroded areas that have a surface layer of clay loam
- Areas that have a red subsoil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 and/or local alluvium

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, wheat, 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.

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

Woodland
Suitability: Well suited to northern red oak; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- 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
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

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

Interpretive Groups

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

49C—Unison loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)

Landform: Fans, drainageways, and stream terraces
Position on the landform: Mountainbases, head slopes, and treads
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—dark yellowish brown loam

Subsoil:
3 to 27 inches—strong brown silty clay loam
27 to 44 inches—strong brown clay loam
44 to 48 inches—strong brown cobbly loam

Substratum:
48 to 62 inches—strong brown, red, and light brown silty clay

Minor Components

Dissimilar components:
- The somewhat excessively drained Occoquan soils on the steeper slopes
- Hayesville soils that formed in red clayey residual material and are in landscape positions similar to those of the Unison soil
- Elioak soils that formed in red clayey residual material and are in landscape positions similar to those of the Unison soil
- Littlejoe soils that formed in red clayey residual material and are in landscape positions similar to those of the Unison soil

Similar components:
- Eroded areas that have a surface layer of clay loam
- Areas that have a red subsoil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 and/or local alluvium

Use and Management Considerations

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

Woodland
Suitability: Well suited to northern red oak; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- 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 strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

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

49D—Unison loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans, drainageways, and stream terraces
Position on the landform: Mountainbases, head slopes, and treads
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—dark yellowish brown loam

Subsoil:
3 to 27 inches—strong brown silty clay loam
27 to 44 inches—strong brown clay loam
44 to 48 inches—strong brown cobbly loam

Substratum:
48 to 62 inches—strong brown, red, and light brown silty clay

Minor Components

Dissimilar components:
- The somewhat excessively drained Occoquan soils on the steeper slopes
- Hayesville soils that formed in red clayey residual material and are in landscape positions similar to those of the Unison soil
- Elioak soils that formed in red clayey residual material and are in landscape positions similar to those of the Unison soil
- Littlejoe soils that formed in red clayey residual material and are in landscape positions similar to those of the Unison soil

Similar components:
- Eroded areas that have a surface layer of clay loam
- Areas that have a red subsoil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 and/or local alluvium

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, wheat, 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

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

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

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

Interpretive Groups

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

50B—Warminster clay loam, 2 to 7 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 8 inches—red clay loam

Subsoil:
8 to 38 inches—red clay
38 to 45 inches—red clay

Substratum:
45 to 55 inches—red clay loam

Soft bedrock:
55 inches—red shale bedrock

Minor Components

Dissimilar components:
- The moderately deep Arcola soils in landscape positions similar to those of the Warminster soil
- The very deep Minnieville soils in landscape positions similar to those of the Warminster soil
- The deep Wintergreen soils that formed in colluvial or alluvial material and are in landscape positions similar to those of the Warminster soil

Similar components:
- Eroded areas that have a surface layer of clay loam or silty clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 8.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
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 Triassic red shale

Use and Management Considerations

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

Woodland
Suitability: Moderately suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

Septic tank absorption fields
- The 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 strength is unfavorable for supporting heavy loads.

Interpretive Groups

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

50C—Warminster clay loam, 7 to 15 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Interfluves
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 8 inches—red clay loam

Subsoil:
8 to 38 inches—red clay
38 to 45 inches—red clay

Substratum:
45 to 55 inches—red clay loam

Soft bedrock:
55 inches—red shale bedrock

Minor Components

Dissimilar components:
- The moderately deep Arcola soils in landscape positions similar to those of the Warminster soil
- The very deep Minnieville soils in landscape positions similar to those of the Warminster soil
- The deep Wintergreen soils that formed in colluvial or alluvial material and are in landscape positions similar to those of the Warminster soil

Similar components:
- Eroded areas that have a surface layer of clay loam or silty clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 8.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Deep (40 to 60 inches)
Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
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 Triassic red shale

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, wheat, 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

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

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

Interpretive Groups

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

50D—Warminster clay loam, 15 to 25 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hillslopes
Position on the landform: Side slopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 8 inches—red clay loam

Subsoil:
8 to 38 inches—red clay
38 to 45 inches—red clay

Substratum:
45 to 55 inches—red clay loam

Soft bedrock:
55 inches—red shale bedrock

Minor Components

Dissimilar components:

- The moderately deep Arcola soils in landscape positions similar to those of the Warminster soil
- The very deep Minnieville soils in landscape positions similar to those of the Warminster soil
- The deep Wintergreen soils that formed in colluvial or alluvial material and are in landscape positions similar to those of the Warminster soil

Similar components:

- Eroded areas that have a surface layer of clay loam or silty clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 8.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Deep (40 to 60 inches)

Depth to root-restrictive feature: 40 to 60 inches to soft bedrock
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 Triassic red shale

Use and Management Considerations

Cropland
Suitability: Moderately suited to wheat, grass-legume hay, and alfalfa hay; poorly suited to corn and soybeans
- 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 to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

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

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

Interpretive Groups

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

51A—Wingina loam, 0 to 2 percent slopes, occasionally flooded

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Flood plains
Position on the landform: Treads
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 9 inches—dark brown and very dark grayish brown loam, yellowish brown dry
9 to 23 inches—dark brown loam

Subsoil:
23 to 40 inches—brown loam
40 to 65 inches—brown fine sandy loam

Substratum:
65 to 72 inches—dark yellowish brown loamy sand

Minor Components

Dissimilar components:
- Galtsmill soils that have less clay in the subsoil than the Wingina soil and that are in similar landscape positions
- The moderately well drained Batteau soils in depressions and at the base of adjacent terraces and uplands
- The poorly drained Yogaville soils in depressions and at the base of adjacent terraces and uplands

Similar components:
- Areas that have a lighter colored surface layer than the Wingina soil
- Areas that have a thinner surface layer than the Wingina soil

Soil Properties and Qualities

Available water capacity: High (about 11.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 48 inches
Water table kind: Apparent
Flooding hazard: Occasional
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Recent alluvium

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, wheat, grass-legume hay, and alfalfa hay
- Flooding may damage crops.

Pastureland
Suitability: Well suited to pasture
- Flooding may damage pastures.

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

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

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

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

52B—Wintergreen loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)

Landform: Fans, drainageways, and stream terraces
Position on the landform: Mountainbases, head slopes, and treads
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—brown loam

Subsurface layer:
3 to 7 inches—strong brown loam

Subsoil:
7 to 24 inches—red clay
24 to 35 inches—red clay
35 to 62 inches—red clay; few pinkish white and few strong brown mottles

Minor Components

Dissimilar components:
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Wintergreen soil and that are on the steeper backslopes
- Hayesville soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Elioak soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Littlejoe soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil

Similar components:
- Eroded areas that have a surface layer of clay loam
- Areas that are yellowish brown to yellowish red in the subsoil

Soil Properties and Qualities

Available water capacity: High (about 9.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 and/or alluvium

Use and Management Considerations

Cropland

Suitability: Well suited to corn, soybeans, wheat, and grass-legume hay; moderately suited to alfalfa hay (fig. 7)

Figure 7.—No-till corn on Wintergreen loam, 2 to 7 percent slopes.

- 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 to pasture

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

Woodland

Suitability: Well suited to northern red oak; moderately suited to yellow-poplar

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

Building sites

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

Septic tank absorption fields

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

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

Interpretive Groups

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

52C—Wintergreen loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans, drainageways, and stream terraces
Position on the landform: Mountainbases, head slopes, and treads
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—brown loam

Subsurface layer:
3 to 7 inches—strong brown loam

Subsoil:
7 to 24 inches—red clay
24 to 35 inches—red clay
35 to 62 inches—red clay; few pinkish white and few strong brown mottles

Minor Components

Dissimilar components:
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Wintergreen soil and that are on the steeper backslopes
- Hayesville soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Elioak soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Littlejoe soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil

Similar components:
- Eroded areas that have a surface layer of clay loam
- Areas that are yellowish brown to yellowish red in the subsoil

Soil Properties and Qualities

Available water capacity: High (about 9.1 inches)

Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 and/or alluvium

Use and Management Considerations

Cropland

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

- 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: Moderately suited to pasture

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

Woodland

Suitability: Well suited to northern red oak; moderately suited to yellow-poplar

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

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

Interpretive Groups

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

Virginia soil management group: O
Hydric soil: No

52D—Wintergreen loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans, drainageways, and stream terraces
Position on the landform: Mountainbases, head slopes, and treads
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—brown loam

Subsurface layer:
3 to 7 inches—strong brown loam

Subsoil:
7 to 24 inches—red clay
24 to 35 inches—red clay
35 to 62 inches—red clay; few pinkish white and few strong brown mottles

Minor Components

Dissimilar components:
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Wintergreen soil and are on the steeper backslopes
- Hayesville soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Elioak soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Littlejoe soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil

Similar components:
- Eroded areas that have a surface layer of clay loam
- Areas that are yellowish brown to yellowish red in the subsoil

Soil Properties and Qualities

Available water capacity: High (about 9.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 and/or alluvium

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, wheat, 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: Moderately suited to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

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

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

Interpretive Groups

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

53B—Wintergreen clay loam, 2 to 7 percent slopes, severely eroded

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans, drainageways, and stream terraces
Position on the landform: Mountainbases, head slopes, and treads
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—strong brown clay loam

Subsoil:
3 to 7 inches—strong brown clay loam
7 to 35 inches—red clay
35 to 62 inches—red clay; few pinkish white and few strong brown mottles

Minor Components

Dissimilar components:
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Wintergreen soil and that are on the steeper backslopes
- Hayesville soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Elioak soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Littlejoe soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil

Similar components:
- Noneroded areas that have a surface layer of loam
- Areas that are yellowish brown to yellowish red in the subsoil

Soil Properties and Qualities

Available water capacity: High (about 9.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 and/or alluvium

Use and Management Considerations

Cropland
Suitability: Moderately suited to alfalfa hay, grass-legume hay, wheat, and corn; poorly suited to soybeans
- 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.
- Clods may form if the soil is tilled when wet.
- 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: Moderately suited to pasture
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

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

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

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

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

Interpretive Groups

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

53C—Wintergreen clay loam, 7 to 15 percent slopes, severely eroded

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans, drainageways, and stream terraces

Position on the landform: Mountainbases, head slopes, and treads
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—strong brown clay loam

Subsoil:
3 to 7 inches—strong brown clay loam
7 to 35 inches—red clay
35 to 62 inches—red clay; few pinkish white and few strong brown mottles

Minor Components

Dissimilar components:
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Wintergreen soil and that are on the steeper backslopes
- Hayesville soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Elioak soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Littlejoe soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil

Similar components:
- Noneroded areas that have a surface layer of loam
- Areas that are yellowish brown to yellowish red in the subsoil

Soil Properties and Qualities

Available water capacity: High (about 9.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 and/or alluvium

Use and Management Considerations

Cropland

Suitability: Moderately suited to alfalfa hay and wheat; poorly suited to corn, grass-legume hay, and soybeans
- 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.
- Clods may form if the soil is tilled when wet.

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

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

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

Interpretive Groups

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

53D—Wintergreen clay loam, 15 to 25 percent slopes, severely eroded

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans, drainageways, and stream terraces
Position on the landform: Mountainbases, head slopes, and treads
Size of areas: 5 to 50 acres
Shape of areas: Linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—strong brown clay loam

Subsoil:
3 to 7 inches—strong brown clay loam
7 to 35 inches—red clay
35 to 62 inches—red clay; few pinkish white and few strong brown mottles

Minor Components

Dissimilar components:
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Wintergreen soil and that are on the steeper backslopes
- Hayesville soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Elioak soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Littlejoe soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil

Similar components:
- Noneroded areas that have a surface layer of loam
- Areas that are yellowish brown to yellowish red in the subsoil

Soil Properties and Qualities

Available water capacity: High (about 9.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 and/or alluvium

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

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

Woodland
Suitability: Well suited to northern red oak; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in order to minimize the potential

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

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

Interpretive Groups

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

54C—Wintergreen loam, 7 to 15 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)
Landform: Fans, drainageways, and stream terraces
Position on the landform: Mountainbases, head slopes, and treads
Size of areas: 5 to 30 acres
Shape of areas: Irregular to linear

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 3 inches—brown loam

Subsurface layer:
3 to 7 inches—strong brown loam

Subsoil:
7 to 24 inches—red clay
24 to 35 inches—red clay
35 to 62 inches—red clay; few pinkish white and few strong brown mottles

Minor Components

Dissimilar components:
- The well drained and somewhat excessively drained Occoquan soils that have less clay in the subsoil than the Wintergreen soil and that are on the steeper backslopes
- Hayesville soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Elioak soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Littlejoe soils that formed in residual material and are in landscape positions similar to those of the Wintergreen soil
- Areas that do not have stones on the surface

Similar components:
- Areas that are yellowish brown to yellowish red in the subsoil

Soil Properties and Qualities

Available water capacity: High (about 9.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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 0.10 to 3.00 percent angular stones
Parent material: Colluvium and/or alluvium

Use and Management Considerations

Cropland
- This soil is unsuited to cropland.

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

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

- The low strength interferes with the construction of haul roads and log landings.
- The low strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to the drier periods.

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

Interpretive Groups

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

55A—Yogaville loam, 0 to 2 percent slopes, occasionally flooded

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Flood plains
Position on the landform: Depressions or low-lying areas on treads
Size of areas: 5 to 50 acres
Shape of areas: Irregular, linear, and concave

Map Unit Composition

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

Typical Profile

Surface layer:
0 to 7 inches—dark brown loam, brown dry
7 to 20 inches—very dark grayish brown loam; dark yellowish brown iron-manganese masses

Subsoil:
20 to 42 inches—dark grayish brown clay loam; dark yellowish brown iron-manganese masses
42 to 50 inches—gray clay loam; strong brown iron-manganese masses and dark yellowish brown iron-manganese masses

Substratum:
50 to 72 inches—dark gray, grayish brown, and very dark gray clay loam

Minor Components

Dissimilar components:
- The well drained Galtsmill soils in the higher flood plain positions, nearest to the streams
- The moderately well drained Batteau soils in landscape positions similar to those of the Yogaville soil
- Sandy soils, cobbly soils, and soils that have a gravelly surface layer

Similar components:
- Areas that have a lighter colored surface layer than the Yogaville soil

Soil Properties and Qualities

Available water capacity: High (about 10.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 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: 0.1 to 0.3 foot
Shrink-swell potential: Low
Runoff class: Negligible
Surface fragments: None
Parent material: Recent alluvium

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay; poorly suited to corn, soybeans, and wheat; not suited to alfalfa hay
- Frost action may damage the root system of winter grain crops.
- 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 to pasture
- Flooding may damage pastures.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- Frost action may damage the root systems of plants.

Woodland

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

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

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

Local roads and streets
- Flooding may damage local roads and streets.
- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.
- The low strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Land capability class: 4w
Virginia soil management group: MM
Hydric soil: Yes

W—Water

Setting

Major land resource area: Blue Ridge (MLRA 130), Southern Piedmont (MLRA 136), and Northern Piedmont (MLRA 148)

Definition

Areas of this map unit include streams, rivers, lakes, and ponds or other areas covered with water most of the time.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Unspecified
Virginia soil management group: None assigned
Hydric soil: Unranked

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 rangeland and forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

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

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

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

Interpretive Ratings

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

Rating Class Terms

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

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

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 is explained, and Virginia soil management groups are 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.

According to the 1987 Census of Agriculture Advance County Report, Nelson County has about 31,800 acres of cropland. This total consists of about 1,700 acres used for row crops (such as corn), 2,100 acres used for orchards (such as apples), 11,000 acres used for hay, 14,000 acres of pasture, 750 acres of pastured woodland, and 2,250 acres in miscellaneous uses.

The acreage of cultivated crops in the county has been gradually decreasing. The acreage of pasture has been increasing because more beef cattle are being raised. Some of the acreage of cropland and pasture has been converted to community development.

Federal and State regulations require that any area designated as wetlands cannot be altered without prior approval. Contact the local office of the Natural Resources Conservation Service for identification of hydric soils and potential wetlands.

Soil erosion is the major concern on most of the cropland in Nelson County. Most of the soils in the county, except for those on flood plains and some low stream terraces, have slopes of more than 2 percent and thus have a moderate or severe hazard of erosion.

Erosion of the surface layer reduces the organic matter content, water-holding capacity, and fertility of the soil. As a result, the potential productivity of the soil is reduced and preparing a seedbed is difficult. Erosion also can result in the sedimentation of streams and lakes, which lowers the quality of water for fish and wildlife.

Erosion is especially damaging on soils that have a clayey subsoil and on soils that have bedrock near the surface. For example, in areas of Elioak, Hayesville, and Wintergreen soils, erosion of the surface layer exposes a clayey subsoil that is less productive than the original surface layer and more difficult to till. In areas of Catoctin, Hazel, and Peaks soils, erosion exposes less productive soil material and also decreases the amount of productive soil material overlying the bedrock.

Erosion-control practices provide a protective surface cover, reduce the hazard of runoff, and increase the rate of water infiltration. A cropping system that keeps a vegetative cover on the soil for extended periods helps to minimize soil loss and maintain the productive capacity of the soil. A conservation cropping system that consists of a rotation of hay or pasture crops and row crops minimizes erosion, increases the organic matter content of the surface layer, increases fertility and the available water capacity, and improves soil tilth.

Figure 8.—Hay bales of tall fescue in an area of Hayesville loam, 2 to 7 percent slopes.

Using sod in waterways and contour tillage are common erosion-control practices in the survey area and are suited to most areas of Buffstat, Elioak, Hayesville, Littlejoe, Minnieville, Unison, and Wintergreen soils.

Using conservation tillage, planting winter cover crops, and leaving crop residue on the surface are suitable practices on most of the soils in the county. These practices, however, are more difficult to use in severely eroded areas than in areas that have little or no erosion.

Fertility is low in most of the soils in Nelson County, and most unlimed areas are strongly acid or very strongly acid. Applications of lime and fertilizer are needed for crop production on most of the soils.

Field crops suited to the soils and climate of the survey area are corn, soybeans, wheat, rye, barley, and oats. Conservation cropping systems that use rotations of grasses and legumes in conjunction with these crops help to maintain good tilth and fertility.

Pastures consist of tall fescue (fig. 8), orchardgrass, and clover. The major pasture management concerns are preventing overgrazing and maintaining a mixture of grasses and legumes. The common pasture management practices are weed control, the use of proper stocking rates, rotational grazing, restriction of grazing when the soils are wet, and applications of lime and fertilizer. The major plants grown for hay are Kentucky-31 fescue, orchardgrass, ryegrass, red clover, and alfalfa.

The main specialty crops grown in the county are apples, peaches, nectarines, grapes, vegetables, strawberries, and nursery plants. Most of the deep, well drained, upland soils are suited to these specialty crops. Good air drainage is essential for fruits and early season vegetables.

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 is shown in the table.

The yields are based VALUES—the Virginia Agronomic Land Use Evaluation System *(18)*. 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 of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit *(16)*. Capability class and subclass are assigned to soils in this survey area; capabilty units are not assigned.

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

Class 1 soils have slight limitations that restrict their use.

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

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

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

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

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

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

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

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 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, rangeland, forestland, wildlife habitat, or recreation.

The capability classification of the soils in this survey area is given in the section “Detailed Soil Map Units” and in table 5.

Virginia Soil Management Groups

The Virginia Agronomic Land Use Evaluation System (VALUES) is a system that ranks soils for management and productivity *(18)*. 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 Nelson County.

Group A. The soils of this group formed from alluvium on gently sloping landscapes of flood plains or streams terraces. They are deep, are medium textured throughout, have a high water-supplying capacity, and are well drained.

Group B. The soils of this group formed from alluvium and are associated with stream terraces. They are deep, are loamy textured throughout, have a high water-supplying capacity, and are well drained or moderately well drained.

Group D. The soils of this group formed from a variety of residual parent materials. They are on upland landscapes in the Piedmont region. They are moderately deep, have fine-loamy textures, have a moderately high water-supplying capacity, and are well drained or moderately well drained.

Group I. The soils of this group formed from alluvium along flood plains in the Piedmont. As a result, they are somewhat prone to hazards of flooding. They are deep, have predominantly clay loam subsurface horizons, have a moderately high water-supplying capacity, and are somewhat poorly drained.

Group L. The soils of this group formed from old transported deposits of alluvium or colluvium. They are common on stream terraces, footslopes, and older, elevated, upland landscapes that were once stream terraces. They are deep, have medium textured surface layers, have more clayey subsurface layers, and commonly have gravel and rounded stones. They have a moderate to high water-supplying capacity and typically are well drained.

Group N. The soils of this group formed from residuum ranging from weathered mafic rocks to Triassic sediments and are located on dissected uplands in the Piedmont region. They are moderately deep or deep, have medium textured surface layers and reddish brown clayey subsurface layers, have a moderate water-supplying capacity, and are well drained.

Group O. The soils of this group formed from transported materials from old alluvium on dissected uplands. They range from deep to shallow, have very dark red clayey subsurface horizons, may have significant coarse fragments in some areas, have a moderate water-supplying 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 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 V. The soils of this group formed from saprolites derived from a variety of parent materials ranging from slates to granites, gneisses, schists, and more basic granitic rocks. They occur on upland landscapes in the Piedmont. They are moderately deep, have clayey subsurface horizons, have a moderate water-supplying capacity, and are well drained.

Group X. The soils of this group are derived from a variety of residual materials including slates, granites, gneisses, and schists. They are located on upland landscapes in the Piedmont region. They are moderately deep, have clayey subsurface horizons, have coarse fragments or gravel in some areas, have a moderate water-supplying capacity, and are moderately well drained or well drained.

Group BB. The soils of this group formed from a variety of parent materials including colluvium, alluvium, and residuum. They are on uplands, terraces, or footslopes. The soils have fragipans that underlie silty to loamy subsurface horizons and have coarse fragments in some areas. Because the fragipans limit the rooting zone, these soils have a low or moderately low water-supplying capacity. They are generally somewhat poorly drained.

Group CC. The soils of this group formed 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 (with as much as 70 percent coarse fragments in some areas), and have a moderately low available water capacity. They are well drained.

Group DD. The soils of this group formed from loamy sediments and local alluvium. They formed on gently sloping uplands and stream terraces. They are moderately deep, have predominantly coarse-loamy subsurface horizons, and have arenic or very thick sandy surface layers in some areas. They have a moderately low water-supplying capacity and are excessively drained.

Group FF. The soils of this group formed in residual parent materials ranging from sandstone, shales, and slates to loamy granitic saprolites. They extend across the Piedmont and are on steeply dissected uplands. They are moderately shallow and, in most areas, have loamy-skeletal subsurface horizons that may contain 80 percent or more coarse fragments. As a result, the water-supplying capacity is very low or low. The soils are moderately well drained or well drained.

Group HH. The soils of this group formed from loamy sediments on flood plains. They are moderately deep, have fine-loamy or clayey subsurface textures, have a moderate water-supplying capacity, and are somewhat poorly drained or moderately well drained.

Group II. The soils of this group formed from sandy parent materials within the Coastal Plain or from local alluvium or colluvium of sandy origin. They are sandy textured throughout, have little horizonation, have a low or very low water-supplying capacity, and 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 sandstones and shales to Triassic materials and granite or schist saprolites. They are in the Piedmont region. They are shallow, predominantly have loamy-skeletal textures throughout, and have 30 to 70 percent coarse fragments. They have a very low water-supplying capacity and are well drained.

Group KK. The soils of this group formed from a variety of residual materials including Triassic sediments, residuum from basic rocks, and other clayey sediments and are predominantly in the Piedmont region. They are moderately deep, have clayey textured subsurface horizons, and commonly have large components of high shrink-swell clays. They have a moderate water-supplying capacity and range from moderately well drained to somewhat poorly drained.

Group MM. The soils of this group formed from loamy sediments, flood frequently, have a moderate to high water-supplying capacity, and are poorly drained.

Group NN. The soils of this group formed in alluvium along streams or on terraces. They are moderately deep, have silty to clay loam subsurface textures, have a moderately high water-supplying capacity, and are somewhat poorly drained or poorly drained.

Group OO. The soils of this group formed from alluvium or other sediments. They are on terraces, levees, and broad nearly level landscapes. They have loamy to silty textures throughout, have a high water-supplying capacity, and are poorly drained.

The management groups for the map units in the survey area are given in the section “Detailed Soil Map Units” and in 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 prime farmland, 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 35,554 acres in the survey area, or about 12 percent of the total acreage, meets the soil requirements for prime farmland. This land is mainly east of the Blue Ridge Mountains.

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” *(13)* and in the “Soil Survey Manual” *(17)*.

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)*.

7B	Chatuge loam, 1 to 4 percent slopes
21A	Hatboro loam, 0 to 2 percent slopes, frequently flooded
37A	Pineywoods silt loam, 0 to 2 percent slopes
55A	Yogaville loam, 0 to 2 percent slopes, occasionally flooded

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

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

2A	Batteau loam, 0 to 2 percent slopes, occasionally flooded
3B	Belvoir sandy loam, 2 to 7 percent slopes
8A	Codorus silt loam, 0 to 2 percent slopes, occasionally flooded
9B	Colleen gravelly loam, 2 to 7 percent slopes
11A	Craigsville very cobbly loam, 0 to 2 percent slopes, frequently flooded
12C	Delanco loam, 7 to 15 percent slopes
19A	Galtsmill fine sandy loam, 0 to 2 percent slopes, occasionally flooded
41B	Sketerville silt loam, 2 to 7 percent slopes
43A	Suches loam, 0 to 2 percent slopes, frequently flooded
51A	Wingina loam, 0 to 2 percent slopes, occasionally flooded

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

Nelson County was originally covered with virgin forest, but most of the land suitable for cultivation has since been cleared. The remaining woodland is generally too steep, too stony, or too wet for farming. It is composed of second-growth hardwoods, shortleaf pine, and Virginia pine.

About 80 percent of the county is currently woodland. About 5 percent of the woodland is in the George Washington National Forest, which primarily occupies the mountainous regions of the county. Most of the other forested areas are privately owned.

The most common tree species in the Blue Ridge are red oak, chestnut oak, black oak, maple, hickory, poplar, black birch, hemlock, and eastern white pine.

The major tree species in the Piedmont are red oak, chestnut oak, maple, hickory, poplar, Virginia pine, shortleaf pine, and loblolly pine (fig. 9).

Most of the eastern third of the county is planted in loblolly pine and is managed by timber companies. Eastern white pine is the major tree species planted in the western part of the county.

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

Figure 9.—A loblolly pine plantation in an area of Littlejoe silt loam, 2 to 7 percent slopes.

index is available in the “National Forestry Manual” *(11)*, which is available in local offices of the Natural Resources Conservation Service or on the Internet.

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

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

Forestland Management

In table 9, parts I through V, interpretive ratings are given for various aspects of forestland management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified aspect of forestland management. *Well suited* indicates that the soil has features that are favorable for the specified management aspect and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified management aspect. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified management aspect. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified management aspect or that extreme measures are needed to overcome the undesirable soil properties.

Proper planning for timber harvesting is essential to minimize the potential impact to soil and water quality. A harvest plan should include logging roads, log decks, streamside management zones, stream crossings, skid trails, schedule of activities, and Best Management Practices (BMP's) for each activity. Forests should be managed to increase economic and environmental benefits. A forest stewardship plan should be developed to guide management and utilization of the woodlands.

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

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

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual" *(11)*, which is available in local offices 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

The James, Tye, Piney, and Rockfish Rivers provide many recreational opportunities, including boating, fishing, swimming, and hunting. Several public boat landings are located along the James River.

Upland and mountain areas provide opportunities for hunting, fishing, camping, hiking, and skiing (fig. 10). The George Washington National Forest, the Blue Ridge Parkway, the James River Wildlife Management Area, Lake Nelson, and the Lesesne State Forest are also available for public recreation. Several private camping facilities are located throughout the county.

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

Figure 10.—Recreational skiing in an area of Myersville-Catoctin complex, 15 to 35 percent slopes, extremely stony.

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 reclamation material, roadfill, and topsoil 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 these materials. 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.

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

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

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

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

Physical Soil Properties

Table 16 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

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

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.

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 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” *(12)*, which is available in local offices 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 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. 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 cations plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

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

Water Features

Table 18 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

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

The four hydrologic soil groups are:

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

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

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

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

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

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 *(13, 14)*. Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 20 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

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

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

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

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

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

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

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” *(17)* 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” *(13)*. 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.

Arcola Series

Physiographic province: Piedmont
Landform: Hillslopes
Parent material: Residuum weathered from Triassic- and Jurrassic-age interbedded sandstone, siltstone, and conglomerate
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 15 to 50 percent

Associated Soils

- The clayey Buffstat, Littlejoe, and Warminster soils on uplands

Taxonomic Classification

Fine-loamy, mixed, active, mesic Typic Hapludults

Typical Pedon

Arcola gravelly silt loam, 25 to 50 percent slopes; located 1.7 miles southwest (226 degrees) from the intersection of Highways VA-644 and VA-626, about 1.9 miles northeast (45 degrees) of the intersection of Highways VA-604 and VA-626, in woodland:

Ap—0 to 6 inches; reddish brown (5YR 4/3) gravelly silt loam; weak fine and medium granular structure; friable, slightly sticky, slightly plastic; many fine and medium and many coarse roots; 25 percent gravel; strongly acid; clear smooth boundary.
Bt1—6 to 16 inches; reddish brown (5YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; many fine and medium and many coarse roots; many distinct clay films on all faces of peds; 10 percent gravel; strongly acid; clear smooth boundary.
Bt2—16 to 27 inches; reddish brown (2.5YR 4/4) gravelly silty clay loam; moderate fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; common distinct clay films on all faces of peds; 20 percent gravel; strongly acid; clear wavy boundary.
Bt3—27 to 34 inches; reddish brown (2.5YR 4/4) gravelly silty clay loam; weak fine and medium subangular blocky structure; firm, slightly sticky, slightly plastic; 30 percent gravel; strongly acid; abrupt smooth boundary.
Cr—34 to 58 inches; dusky red (10R 3/3) and dark reddish brown (2.5YR 3/3) conglomerate bedrock; slightly weathered soft bedrock that crushes to extremely gravelly silt loam; clear smooth boundary.
R—58 inches; hard conglomerate bedrock.

Range in Characteristics

Thickness of the solum: 18 to 36 inches
Depth to soft bedrock: 20 to 40 inches
Depth to hard bedrock: 40 to 60 inches

Rock fragments: 15 to 30 percent in the A, Ap, and E horizons; 10 to 30 percent in the Bt horizon; 35 to 75 percent in the C horizon
Reaction: Very strongly acid or strongly acid throughout the profile in unlimed areas

Ap horizon:
Hue—10R to 7.5YR
Value—4
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam

A horizon (where present):
Hue—10R to 7.5YR
Value—4
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam

E horizon (where present):
Hue—10R to 5YR
Value—3 to 5
Chroma—3 or 4
Texture (fine-earth fraction)—loam or silt loam

Bt horizon:
Hue—10R to 5YR
Value—3 or 4
Chroma—3 or 4
Texture (fine-earth fraction)—silt loam or silty clay loam

C horizon (where present):
Hue—10R or 2.5YR
Value—3 or 4
Chroma—3 or 4
Texture (fine-earth fraction)—loam or silt loam

Cr horizon:
Hue—10R or 2.5YR
Value—3 or 4
Chroma—3 or 4
Texture (fine-earth fraction)—bedrock that crushes to loam or silt loam

Batteau Series

Physiographic province: Piedmont
Landform: Flood plains
Parent material: Recent alluvium
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 2 percent

Associated Soils

- The well drained Galtsmill and Wingina soils
- The poorly drained Hatboro and Yogaville soils

Taxonomic Classification

Fine-loamy, mixed, active, thermic Fluvaquentic Hapludolls

Typical Pedon

Batteau loam, 0 to 2 percent slopes, occasionally flooded; located 1.5 miles east of the intersection of Highways VA-626 and VA-647 and 1.8 miles west of the intersection of Highways VA-56 and VA-647, in pasture:

Ap—0 to 13 inches; dark brown (10YR 3/3) loam, dark yellowish brown (10YR 4/4) dry; weak fine granular structure; friable, slightly sticky, slightly plastic; common fine and common medium roots; few fine low-continuity pores; few fine mica flakes; neutral; clear smooth boundary.

Bw1—13 to 18 inches; dark yellowish brown (10YR 4/4) loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine roots; common fine low-continuity pores; common fine faint irregular yellowish brown (10YR 5/4) iron-manganese masses; few fine mica flakes; neutral; clear smooth boundary.

Bw2—18 to 32 inches; dark yellowish brown (10YR 4/4) loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine low-continuity pores; common medium faint irregular yellowish brown (10YR 5/6) iron-manganese masses and common medium distinct grayish brown (10YR 5/2) iron depletions; few fine mica flakes; slightly acid; clear smooth boundary.

Bw3—32 to 48 inches; brown (10YR 4/3) loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine low-continuity and common medium low-continuity pores; few fine faint dark grayish brown (10YR 4/2) iron depletions and common medium distinct irregular dark yellowish brown (10YR 4/6) iron-manganese masses; few fine mica flakes; slightly acid; clear smooth boundary.

Bw4—48 to 62 inches; dark yellowish brown (10YR 4/4) loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine low-continuity and common medium low-continuity pores; many medium distinct grayish brown (10YR 5/2) iron depletions; few fine mica flakes; slightly acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches or more
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent in the A, Ap, and Bw horizons
Reaction: Moderately acid to neutral

Ap horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Texture—loam

A horizon (where present):
Hue—7.5YR or 2.5Y
Value—3 to 5
Chroma—2 to 4
Texture—loam

Bw horizon:
Hue—7.5YR to 2.5Y
Value—3 to 7
Chroma—3 to 6
Texture—sandy loam, fine sandy loam, loam, silt loam, sandy clay loam, clay loam, or silty clay loam

C horizon (where present):
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—3 to 8
Texture—sand, loamy sand, sandy loam, fine sandy loam, loam, or clay loam; stratified in some pedons

Belvoir Series

Physiographic province: Blue Ridge and Piedmont
Landform: Swales, drainageways, and fans
Parent material: Colluvium
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Low
Depth class: Very deep
Slope range: 2 to 7 percent

Associated Soils

- The poorly drained Chatuge soils on adjacent stream terraces
- The moderately well drained Delanco soils
- The well drained Thurmont soils

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Aquic Fragiudults

Typical Pedon

Belvoir sandy loam, 2 to 7 percent slopes; located 0.8 mile east of the intersection of Highways US-29 and VA-651, about 1.2 miles east-northeast of the intersection of Highways US-29 and VA-811, in woodland:

Ap—0 to 4 inches; dark yellowish brown (10YR 4/4) sandy loam; weak fine granular structure; friable; common fine and common very fine roots; 2 percent gravel; very strongly acid; clear smooth boundary.

Bt1—4 to 12 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky and weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; few fine and very fine roots; few distinct clay films on all faces of peds; few fine distinct light brownish gray (10YR 6/2) iron depletions; strongly acid; clear smooth boundary.

Bt2—12 to 25 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky and weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine roots; few distinct clay films on all faces of peds; common medium distinct grayish brown (10YR 5/2) iron depletions; strongly acid; clear wavy boundary.

Btx—25 to 40 inches; yellowish brown (10YR 5/6) sandy clay loam; weak coarse platy structure parting to weak medium subangular blocky; firm; brittle; few distinct clay films on all faces of peds; many medium distinct light gray (10YR 7/2) iron depletions and many medium distinct irregular strong brown (7.5YR 5/8) iron-manganese masses; strongly acid; clear smooth boundary.

C—40 to 63 inches; brownish yellow (10YR 6/6) clay; massive; firm, moderately sticky, moderately plastic; many medium distinct irregular strong brown (7.5YR 5/8) iron-manganese masses and many medium distinct gray (10YR 6/1) iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches
Depth to bedrock: 80 inches or more
Depth to fragipan: 16 to 30 inches
Rock fragments: 0 to 15 percent in the A, Ap, E, Bt, and Btx horizons; 0 to 30 percent in the C horizon
Reaction: Very strongly acid or strongly acid throughout the profile in unlimed areas

Ap horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 6
Texture—sandy loam

A horizon (where present):
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—sandy loam

E horizon (where present):
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2 to 6
Texture—sandy loam, loam, or silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Texture—loam, sandy clay loam, or clay loam

Btx horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Texture—fine sandy loam, loam, or sandy clay loam

C horizon:
Hue—7.5YR or 10YR
Value—4 to 7
Chroma—1 to 8
Texture (fine-earth fraction)—loam, sandy clay loam, clay loam, or clay

Buffstat Series

Physiographic province: Piedmont
Landform: Hillslopes
Parent material: Residuum weathered from mica schist (sericite schist)
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Deep
Slope range: 2 to 25 percent

Associated Soils

- Arcola soils, which have a loamy subsoil

- Bugley soils, which are shallow to bedrock
- Littlejoe soils, which have a red subsoil
- Warminster soils, which formed in sericite schist

Taxonomic Classification

Fine, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Buffstat silt loam, 2 to 7 percent slopes; located 0.8 mile northwest of the intersection of Highways VA-626 and VA-56, about 1.4 miles south of the intersection of Highways VA-56 and VA-646, in woodland:

Ap—0 to 4 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine granular structure; friable, slightly sticky; many fine, medium, and coarse roots; few fine mica flakes; 10 percent gravel; strongly acid; clear smooth boundary.

Bt1—4 to 8 inches; reddish yellow (7.5YR 6/6) silty clay loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; many fine, medium, and coarse roots; many distinct clay films; common fine mica flakes; 10 percent gravel; strongly acid; clear smooth boundary.

Bt2—8 to 28 inches; strong brown (7.5YR 5/8) silty clay loam; moderate medium subangular blocky and moderate fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine, medium, and coarse roots; many distinct clay films; common fine mica flakes; 10 percent channers; strongly acid; clear wavy boundary.

Bt3—28 to 42 inches; reddish yellow (7.5YR 6/8) channery clay; weak medium subangular blocky structure; firm, moderately sticky, moderately plastic; clay films on rock fragments; many fine mica flakes; 30 percent channers; strongly acid; abrupt smooth boundary.

Cr—42 to 58 inches; reddish brown (5YR 4/4) and brownish yellow (10YR 6/8) bedrock; slightly weathered soft sericite schist that crushes to silt loam.

R—58 inches; hard sericite schist bedrock.

Range in Characteristics

Thickness of the solum: 25 to 50 inches
Depth to soft bedrock: 40 to 60 inches
Depth to hard bedrock: 40 to 60 inches or more
Rock fragments: 0 to 15 percent in the A, Ap, and E horizons; 0 to 35 percent in the Bt horizons; 0 to 50 percent in the C horizon
Reaction: Very strongly acid or strongly acid throughout the profile in unlimed areas

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 6
Texture (fine-earth fraction)—silt loam

A horizon (where present):
Hue—10YR
Value—2 to 4
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam

E horizon (where present):
Hue—7.5YR or 10YR
Value—4 or 5

Chroma—4 to 6
Texture (fine-earth fraction)—fine sandy loam, loam, or silt loam

Bt horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—silty clay loam, clay loam, silty clay, or clay; average of more than 30 percent silt in the particle-size control section

C horizon (where present):
Hue—10R to 10YR
Value—3 or 4
Chroma—4 to 6
Texture (fine-earth fraction)—loam, silt loam, clay loam, or silty clay loam

Cr horizon:
Hue—2.5YR to 10YR
Value—3 to 6
Chroma—2 to 8
Texture (fine-earth fraction)—weathered schist that crushes to silt loam or silty clay loam

Bugley Series

Physiographic province: Piedmont
Landform: Hillslopes
Parent material: Residuum weathered from mica schist (sericite schist)
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Shallow
Slope range: 7 to 50 percent

Associated Soils

- The clayey, deep Buffstat and Littlejoe soils

Taxonomic Classification

Loamy-skeletal, mixed, semiactive, mesic Lithic Dystrudepts

Typical Pedon

Bugley channery silt loam, 7 to 15 percent slopes; located 0.4 mile east of the intersection of Highways VA-56 and VA-646, about 1.5 miles southeast of the intersection of Highways VA-56 and VA-722, in woodland:

Ap—0 to 3 inches; yellowish brown (10YR 5/4) channery silt loam; weak fine granular structure; friable, slightly sticky, slightly plastic; many fine, medium, and coarse roots; common fine mica flakes; 25 percent channers; extremely acid; clear smooth boundary.
Bw—3 to 13 inches; yellowish brown (10YR 5/6) very channery silt loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; many fine, medium, and coarse roots; common fine mica flakes; 40 percent channers; extremely acid; clear smooth boundary.
Cr—13 to 18 inches; yellowish brown (10YR 5/8) bedrock; slightly weathered sericite schist that crushes to extremely channery silt loam.
R—18 inches; hard sericite schist bedrock.

Range in Characteristics

Thickness of the solum: 10 to 20 inches
Depth to bedrock: 10 to 20 inches
Rock fragments: 15 to 35 percent in the A, Ap, and E horizons; 35 to 80 percent in the Bw and C horizons
Reaction: Extremely acid to strongly acid throughout the profile in unlimed areas

Ap horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture (fine-earth fraction)—silt loam

A horizon (where present):
Hue—10YR or 2.5Y
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam

E horizon (where present):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—loam or silt loam

Bw horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—silt loam, clay loam, or silty clay loam

C horizon (where present):
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam, silt loam, clay loam, or silty clay loam

Cr horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—slightly weathered sericite schist that crushes to loam, silt loam, clay loam, or silty clay loam

Catoctin Series

Physiographic province: Blue Ridge
Landform: Mountain slopes
Parent material: Residuum weathered from greenstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 7 to 55 percent

Associated Soils

- The very deep Lew soils
- The deep Myersville soils

Taxonomic Classification

Loamy-skeletal, mixed, superactive, mesic Ruptic-Alfic Eutrudepts

Typical Pedon

Catoctin channery silt loam in an area of Myersville-Catoctin complex, 35 to 55 percent slopes, extremely stony; located 1.0 mile north (352 degrees) of the intersection of Highways VA-151 and VA-631, about 0.7 mile east (90 degrees) of the intersection of Highways US-250 and VA-151, in woodland:

A—0 to 5 inches; dark brown (10YR 3/3) channery silt loam; weak fine granular structure; very friable, slightly sticky, slightly plastic; many very fine and fine roots; 30 percent channers; moderately acid; clear wavy boundary.

Bw—5 to 28 inches; strong brown (7.5YR 5/6) channery silt loam that has thin lenses and irregularly shaped areas of yellowish brown (10YR 5/6) channery silty clay loam; weak very fine subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; few distinct clay films in the silty clay loam material; 30 percent channers; moderately acid; abrupt wavy boundary.

C—28 to 36 inches; yellowish brown (10YR 5/6) extremely channery silt loam; massive; friable, slightly sticky, slightly plastic; very fine roots; horizon is saprolite; 70 percent channers; slightly acid; clear wavy boundary.

R—36 inches; hard greenstone bedrock.

Range in Characteristics

Thickness of the solum: 15 to 30 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 15 to 35 percent in the A and E horizons; 15 to 55 percent in the Bw horizon; 35 to 80 percent in the C horizon
Surface stoniness: 3 to 15 percent
Reaction: Strongly acid to slightly acid in the A, E, and Bw horizons in unlimed areas; moderately acid to neutral in the C horizon

A horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam

E horizon (where present):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 8
Texture (fine-earth fraction)—loam or silt loam

Bw horizon:
Hue—5YR to 2.5Y
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam or silt loam that has pockets of clay loam or silty clay loam

C horizon:
Hue—5YR to 2.5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam or silt loam

Chatuge Series

Physiographic province: Blue Ridge and Piedmont
Landform: Stream terraces and fans
Parent material: Alluvium
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 1 to 4 percent

Associated Soils

- The somewhat poorly drained Belvoir soils
- The well drained Delanco soils

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Typic Endoaquults

Typical Pedon

Chatuge loam, 1 to 4 percent slopes; located 0.3 mile south-southwest (212 degrees) of the intersection of Highways VA-653 and VA-668, about 0.5 mile southeast (150 degrees) of the intersection of Highways US-29 and VA-653, in woodland:

A—0 to 9 inches; dark brown (10YR 3/3) loam; weak fine granular structure; friable; many very fine, fine, and medium roots; few fine mica flakes; 4 percent gravel; very strongly acid; abrupt smooth boundary.

Btg1—9 to 19 inches; gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; friable; common very fine and fine roots; few distinct clay films on all faces of peds; common fine and medium prominent irregular reddish yellow (7.5YR 6/8) iron-manganese masses; few fine mica flakes; 4 percent gravel; very strongly acid; clear smooth boundary.

Btg2—19 to 41 inches; gray (10YR 6/1) clay loam; moderate fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; few distinct clay films on all faces of peds; common fine and medium prominent irregular strong brown (7.5YR 5/8) iron-manganese masses; few fine mica flakes; 5 percent gravel; strongly acid; clear wavy boundary.

Cg—41 to 62 inches; gray (N 6/0) sandy loam; massive; friable; few very fine and fine roots; common fine mica flakes; 10 percent gravel; strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 5 percent in the A and Ap horizons; 0 to 15 percent in the Btg horizon; 10 to 50 percent in the C horizon
Reaction: Very strongly acid to moderately acid throughout the profile in unlimed areas

Ap horizon (where present):
Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—loam

A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—loam

Btg horizon:
Hue—10YR or 2.5Y or neutral
Value—4 to 6
Chroma—1 or 2
Texture—loam, sandy clay loam, silty clay loam, or clay loam

Cg horizon:
Hue—10YR or 2.5Y or neutral
Value—4 to 6
Chroma—0 to 2
Texture (fine-earth fraction)—coarse sand, loamy sand, sandy loam, loam, or sandy clay loam

Codorus Series

Physiographic province: Blue Ridge and Piedmont
Landform: Flood plains
Parent material: Recent alluvium
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 2 percent

Associated Soils

- The well drained Colvard and Craigsville soils
- The poorly drained Hatboro soils
- The moderately well drained Suches soils

Taxonomic Classification

Fine-loamy, mixed, active, mesic Fluvaquentic Dystrudepts

Typical Pedon

Codorus silt loam, 0 to 2 percent slopes, occasionally flooded; located at Arrington, about 6,650 feet northeast (34 degrees) of the intersection of Highways VA-665 and VA-655, about 6,750 feet southeast (152 degrees) of the intersection of Highways VA-668 and VA-653, in woodland:

A—0 to 3 inches; brown (10YR 4/3) silt loam; weak fine granular structure; friable; common fine, medium, and coarse roots; common fine mica flakes; moderately acid; abrupt smooth boundary.

Bw1—3 to 18 inches; brown (7.5YR 4/4) silt loam; weak medium subangular blocky structure; friable; common fine and medium roots; few fine and medium prominent yellowish red (5YR 5/8) iron-manganese masses; common fine mica flakes; strongly acid; clear smooth boundary.

Bw2—18 to 30 inches; brown (10YR 5/3) silty clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; common medium prominent irregular strong brown (7.5YR 4/6) iron-manganese masses and common medium faint grayish brown (10YR 5/2) iron depletions; common fine mica flakes; moderately acid; clear smooth boundary.

Bw3—30 to 50 inches; brown (10YR 4/3) silty clay loam; weak coarse subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; common medium and coarse distinct dark gray (10YR 4/1) iron depletions and common medium and coarse prominent irregular strong brown (7.5YR 4/6) iron-manganese masses; common fine mica flakes; moderately acid; clear wavy boundary.

C—50 to 72 inches; dark grayish brown (10YR 4/2) stratified loamy sand and gravel; single grain; very friable; few fine roots; few fine mica flakes; moderately acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent in the A, Ap, and Bw horizons; 0 to 25 percent in the C horizon above a depth of 40 inches; 0 to 70 percent in the C horizon below a depth of 40 inches
Reaction: In unlimed areas, very strongly acid to moderately acid in the Ap and A horizons and the upper part of the Bw horizon; strongly acid to slightly acid in the lower part of the Bw horizon and in the C horizon

Ap horizon (where present):
Hue—10YR
Value—4 to 6
Chroma—2 or 3
Texture—silt loam

A horizon:
Hue—10YR
Value—3 to 6
Chroma—2 or 3
Texture—silt loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—loam, silt loam, or silty clay loam

C horizon:
Hue—7.5YR to 2.5Y
Value—3 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—loam, silt loam, or silty clay loam; stratified loamy sand, sand, and gravel below a depth of 40 inches

Colleen Series

Physiographic province: Blue Ridge
Landform: Mountain slopes
Parent material: Residuum weathered from anorthosite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately low
Depth class: Very deep
Slope range: 2 to 25 percent

Associated Soils

- The moderately well drained Sketerville soils
- The poorly drained Pineywoods soils

Taxonomic Classification

Fine, kaolinitic, mesic Typic Hapludults

Typical Pedon

Colleen gravelly loam, 2 to 7 percent slopes; located 0.6 mile southwest (231 degrees) of the intersection of Highways VA-672 and VA-655, about 1.1 miles east (100 degrees) of Highways VA-151 and VA-674, in pasture:

Ap—0 to 9 inches; dark yellowish brown (10YR 4/4) gravelly loam; many medium prominent yellowish red (5YR 4/6) mottles; moderate fine granular structure; friable, slightly sticky, slightly plastic; many fine roots; 30 percent quartz gravel; moderately acid; clear smooth boundary.

Bt1—9 to 29 inches; red (2.5YR 4/8) gravelly clay; moderate fine subangular blocky structure; firm, moderately sticky, moderately plastic; common fine roots; many distinct clay films on all faces of peds; 25 percent quartz gravel; strongly acid; gradual smooth boundary.

Bt2—29 to 50 inches; red (2.5YR 4/8) gravelly clay; many medium prominent reddish yellow (7.5YR 7/8) and many medium prominent white (N 8/0) mottles; moderate fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; many distinct clay films on all faces of peds; few fine mica flakes; 25 percent quartz gravel; strongly acid; clear smooth boundary.

C—50 to 72 inches; reddish yellow (5YR 6/8), red (2.5YR 5/8), and white (N 8/0) gravelly silty clay loam; massive; friable, slightly sticky, slightly plastic; horizon is saprolite; common clay films on surfaces along pores; few fine mica flakes; 25 percent quartz gravel; strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches or more
Depth to bedrock: 60 inches or more
Rock fragments: 15 to 35 percent throughout the profile
Reaction: Very strongly acid to slightly acid in the A and Ap horizons in unlimed areas; extremely acid to strongly acid in the Bt horizon; very strongly acid to moderately acid in the C horizon

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture (fine-earth fraction)—loam

A horizon (where present):
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—2 to 4
Texture (fine-earth fraction)—loam

E horizon (where present):
Hue—7.5YR or 10YR
Value—5 to 8
Chroma—4 to 8
Texture (fine-earth fraction)—fine sandy loam, loam, or silt loam

Bt horizon:
Hue—2.5YR to 7.5YR
Value—4 to 6
Chroma—6 to 8
Texture (fine-earth fraction)—clay loam, silty clay loam, or clay

C horizon:
Hue—2.5YR to 5Y or neutral with value of 4 to 6

Value—4 to 6
Chroma—0 to 8
Texture (fine-earth fraction)—sandy loam, loam, silt loam, clay loam, or silty clay loam

Colvard Series

Physiographic province: Blue Ridge and Piedmont
Landform: Flood plains
Parent material: Recent alluvium
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 0 to 2 percent

Associated Soils

- The somewhat poorly drained Codorus soils
- The poorly drained Hatboro soils
- The moderately well drained Suches soils

Taxonomic Classification

Coarse-loamy, mixed, active, nonacid, mesic Typic Udifluvents

Typical Pedon

Colvard fine sandy loam, 0 to 2 percent slopes, occasionally flooded; located 1,600 feet southeast (145 degrees) of the intersection of Highways VA-633 and VA-635, about 6,700 feet east (73 degrees) of the intersection of Highways VA-1516 and VA-635, in hayland:

Ap—0 to 5 inches; dark brown (7.5YR 3/4) fine sandy loam; weak fine granular structure; very friable; many fine and medium roots; few fine mica flakes; strongly acid; abrupt smooth boundary.
C1—5 to 12 inches; dark yellowish brown (10YR 4/6) fine sandy loam; single grain; very friable; many fine and medium roots; common fine mica flakes; strongly acid; abrupt smooth boundary.
C2—12 to 32 inches; strong brown (7.5YR 5/6) fine sandy loam; single grain; very friable; common fine and medium roots; few fine distinct brown (7.5YR 4/4) manganese masses; common fine mica flakes; strongly acid; clear smooth boundary.
C3—32 to 50 inches; strong brown (7.5YR 5/6) fine sandy loam; single grain; very friable; common fine and medium roots; few fine faint strong brown (7.5YR 4/6) manganese masses; common fine mica flakes; strongly acid; abrupt smooth boundary.
Ab—50 to 56 inches; dark grayish brown (10YR 4/2) loam; massive; friable, slightly sticky; common fine and medium roots; common fine mica flakes; strongly acid; abrupt smooth boundary.
C´—56 to 62 inches; strong brown (7.5YR 4/6) loamy sand; single grain; very friable; few fine and medium roots; common fine mica flakes; strongly acid.

Range in Characteristics

Thickness of loamy sediments: 40 to 60 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent throughout the profile

Reaction: Strongly acid to mildly alkaline throughout the profile in unlimed areas

Ap or A horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Texture—fine sandy loam

C and C´ horizons:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—sandy loam, fine sandy loam, or loam or thin strata of loamy sand or sand; stratified sand, loamy sand, sandy loam, fine sandy loam, and loam below a depth of 40 inches in some pedons

Ab horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Texture—loam, fine sandy loam, or loam

Craigsville Series

Physiographic province: Blue Ridge and Piedmont
Landform: Flood plains
Parent material: Recent alluvium
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 0 to 2 percent

Associated Soils

- The somewhat poorly drained Codorus soils
- The poorly drained Hatboro soils
- The moderately well drained Suches soils
- Colvard soils, which have fewer rock fragments throughout the soil
- Lew soils, which are not subject to flooding

Taxonomic Classification

Loamy-skeletal, mixed, superactive, mesic Fluventic Dystrudepts

Typical Pedon

Craigsville very cobbly loam, 0 to 2 percent slopes, frequently flooded; located 0.2 mile southeast (158 degrees) of the intersection of Highways VA-664 and VA-680, about 1.3 miles west (278 degrees) of the intersection of Highways VA-664 and VA-151, in pasture:

Ap—0 to 6 inches; dark brown (10YR 3/3) very cobbly loam; weak fine granular structure; friable; many fine and medium and many coarse roots; 15 percent gravel and 30 percent cobbles; very strongly acid; abrupt smooth boundary.
Bw—6 to 21 inches; strong brown (7.5YR 5/6) extremely cobbly sandy loam; weak fine granular structure; friable; common fine and medium roots; 30 percent gravel and 35 percent cobbles; very strongly acid; clear smooth boundary.
C1—21 to 50 inches; yellowish brown (10YR 5/6) extremely cobbly loamy sand; single

grain; loose; few fine roots; 30 percent gravel and 40 percent cobbles; strongly acid; clear smooth boundary.

C2—50 to 64 inches; dark yellowish brown (10YR 4/6) extremely gravelly loamy sand; single grain; loose; 20 percent cobbles and 50 percent gravel; strongly acid.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 60 inches or more
Rock fragments: 35 to 60 percent in the A and Ap horizons; 35 to 70 percent in the Bw, C, and 2C horizons
Reaction: Very strongly acid or strongly acid throughout the profile in unlimed areas

Ap horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—loam

A horizon (where present):
Hue—7.5YR or 10YR
Value—3
Chroma—2 or 3
Texture (fine-earth fraction)—loam

Bw horizon:
Hue—5YR to 10YR
Value—4 or 5
Chroma—4 to 6
Texture (fine-earth fraction)—sandy loam or loam

C horizon:
Hue—5YR to 10YR
Value—4 or 5
Chroma—3 to 6
Texture (fine-earth fraction)—loamy sand or sandy loam

2C horizon (where present):
Hue—5YR to 10YR
Value—4 or 5
Chroma—3 to 6
Texture (fine-earth fraction)—loamy sand or sandy loam

Delanco Series

Physiographic province: Blue Ridge and Piedmont
Landform: Stream terraces, drainageways, and fans
Parent material: Alluvium
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 2 to 15 percent

Associated Soils

- The somewhat poorly drained Belvoir soils
- The poorly drained Chatuge soils
- The well drained Elsinboro soils

- The moderately well drained Suches soils on flood plains subject to frequent flooding

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Aquic Hapludults

Typical Pedon

Delanco loam, 2 to 7 percent slopes; located 0.5 mile southeast (140 degrees) of the intersection of Highways VA-626 and VA-647, about 1.3 miles east (80 degrees) of the intersection of Highways VA-626 and VA-655, in cropland:

Ap—0 to 5 inches; brown (10YR 5/3) loam; weak fine granular structure; friable, slightly sticky, slightly plastic; common fine and medium roots; few fine mica flakes; 2 percent gravel; strongly acid; abrupt smooth boundary.

Bt1—5 to 18 inches; strong brown (7.5YR 5/6) clay loam; moderate fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; common distinct clay films on all faces of peds; many fine and medium distinct light yellowish brown (10YR 6/4) and many fine and medium prominent yellowish red (5YR 5/6) iron-manganese masses; many fine and medium prominent brown (10YR 5/3) iron depletions; few fine mica flakes; 2 percent gravel; strongly acid; clear smooth boundary.

Bt2—18 to 31 inches; yellowish brown (10YR 5/6) clay loam; moderate fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine and medium roots; common distinct clay films on all faces of peds; common medium distinct strong brown (7.5YR 5/8) iron-manganese masses and common medium prominent light brownish gray (10YR 6/2) iron depletions; few fine mica flakes; 2 percent gravel; strongly acid; clear smooth boundary.

Bt3—31 to 45 inches; yellowish brown (10YR 5/8) clay loam; moderate fine subangular blocky structure; friable, slightly sticky, slightly plastic; few fine and medium roots; few distinct clay films on all faces of peds; common medium prominent light brownish gray (10YR 6/2) iron depletions and common medium faint strong brown (7.5YR 5/8) iron-manganese masses; common fine mica flakes; 5 percent gravel; very strongly acid; clear smooth boundary.

C—45 to 65 inches; strong brown (7.5YR 5/6) loam; massive; friable, slightly sticky, slightly plastic; common medium prominent light brownish gray (10YR 6/2) iron depletions; common medium prominent yellowish red (5YR 5/8) and common medium distinct light yellowish brown (10YR 6/4) iron-manganese masses; many fine mica flakes; 5 percent gravel; very strongly acid.

Range in Characteristics

Thickness of the solum: 26 to 46 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 5 percent in the A, Ap, E, and Bt horizons; 5 to 25 percent in the C horizon
Reaction: Extremely acid to strongly acid throughout the profile in unlimed areas

Ap horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—2 to 4
Texture—loam

A horizon (where present):
Hue—10YR or 2.5Y
Value—3 to 5

Chroma—1 to 4
Texture—loam

E horizon (where present):
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—2 to 4
Texture—fine sandy loam or silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 7
Chroma—6 to 8
Texture—loam, silt loam, sandy clay loam, clay loam, or silty clay loam

C horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—1 to 6
Texture (fine-earth fraction)—sandy loam, loam, or silt loam

Edneytown Series

Physiographic province: Blue Ridge and Piedmont
Landform: Hillslopes and mountain slopes
Parent material: Residuum weathered from granite and gneiss and/or granodiorite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 7 to 75 percent

Associated Soils

- The moderately deep Peaks and Occoquan soils
- Saunook soils, which have a dark surface layer

Taxonomic Classification

Fine-loamy, mixed, active, mesic Typic Hapludults

Typical Pedon

Edneytown loam, 7 to 15 percent slopes; located 2.4 miles northeast (56 degrees) from the intersection of Highways VA-699 and VA-680, about 2.2 miles north (340 degrees) from the intersection of Highways VA-151 and VA-623, in woodland:

Oi—2 inches to 0; moderately decomposed plant material.
A—0 to 7 inches; very dark grayish brown (10YR 3/2) loam; weak fine granular structure; very friable, slightly sticky; many fine, medium, and coarse roots; 5 percent gravel; very strongly acid; abrupt smooth boundary.
Bt1—7 to 17 inches; strong brown (7.5YR 5/6) loam; moderate fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; many fine, medium, and coarse roots; few distinct clay films; common fine mica flakes; 12 percent gravel; strongly acid; clear smooth boundary.
Bt2—17 to 34 inches; strong brown (7.5YR 5/6) loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine roots; few distinct clay films; common fine mica flakes; 10 percent gravel; strongly acid; clear smooth boundary.

C1—34 to 48 inches; strong brown (7.5YR 5/6) sandy loam; many reddish yellow (7.5YR 6/6) mottles; massive; friable; common fine roots; horizon is saprolite; many fine mica flakes; 12 percent gravel; strongly acid; clear wavy boundary.
C2—48 to 67 inches; yellowish brown (10YR 5/4) sandy loam; massive; common fine roots; horizon is saprolite; many fine mica flakes; 10 percent gravel; strongly acid.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent throughout the profile
Reaction: Very strongly acid to moderately acid in the A and E horizons in unlimed areas; very strongly acid or strongly acid in the Bt and C horizons

A horizon:
Hue—10YR
Value—3 to 6
Chroma—1 to 4
Texture—loam

Ap horizon (where present):
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—loam

E horizon (where present):
Hue—10YR
Value—4 to 7
Chroma—3 to 6
Texture—loamy fine sand, sandy loam, fine sandy loam, or loam

Bt horizon:
Hue—7.5YR or 10YR
Value—5 to 7
Chroma—4 to 8
Texture—fine sandy loam, loam, sandy clay loam, or clay loam

C horizon:
Hue—7.5YR or 10YR
Value—5 to 8
Chroma—3 to 8
Texture—loamy sand, sandy loam, or fine sandy loam

Cr horizon (where present):
Hue—7.5YR or 10YR
Value—5 to 8
Chroma—3 to 8
Texture—weathered gneiss, granite, or granodiorite that crushes to loamy sand or sandy loam

Elioak Series

Physiographic province: Blue Ridge and Piedmont
Landform: Hillslopes
Parent material: Residuum weathered from phyllite and/or schist
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high

Depth class: Very deep
Slope range: 2 to 25 percent

Associated Soils

- Glenelg soils which have less clay in the subsoil than the Elioak soils
- The moderately deep Hazel soils

Taxonomic Classification

Fine, kaolinitic, mesic Typic Hapludults

Typical Pedon

Elioak loam, 2 to 7 percent slopes; located 0.5 mile southwest (210 degrees) of the intersection of Highways VA-655 and VA-732, about 0.9 mile west (264 degrees) of the intersection of Highways VA-655 and VA-722, in woodland:

A—0 to 3 inches; dark yellowish brown (10YR 4/4) loam; weak fine granular structure; friable, slightly sticky, slightly plastic; many fine, medium, and coarse roots; common fine mica flakes; very strongly acid; abrupt smooth boundary.
E—3 to 8 inches; brown (7.5YR 5/4) loam; weak fine granular structure; friable, slightly sticky, slightly plastic; many fine, medium, and coarse roots; common fine mica flakes; 2 percent gravel; very strongly acid; clear smooth boundary.
Bt1—8 to 26 inches; red (2.5YR 4/8) clay; moderate fine and medium subangular blocky structure; friable, moderately sticky, moderately plastic; common fine and medium roots; many distinct clay films on all faces of peds; many fine mica flakes; very strongly acid; gradual wavy boundary.
Bt2—26 to 40 inches; red (2.5YR 4/8) clay loam; few medium prominent yellowish brown (10YR 5/8) mottles; weak fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine, medium, and coarse roots; common distinct clay films on all faces of peds; many fine mica flakes; strongly acid; gradual wavy boundary.
C—40 to 60 inches; strong brown (7.5YR 5/6) and red (2.5YR 4/6) loam; massive; friable; few fine and medium roots; horizon is saprolite; many fine mica flakes; strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 50 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent
Reaction: Very strongly acid to moderately acid throughout the profile in unlimed areas

Ap horizon (where present):
Hue—5YR to 10YR
Value—4 or 5
Chroma—2 to 4
Texture (fine-earth fraction)—loam; clay loam in eroded areas

A horizon:
Hue—5YR to 10YR
Value—3 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—loam

E horizon:
Hue—5YR to 10YR
Value—4 or 5

Chroma—3 or 4
Texture (fine-earth fraction)—fine sandy loam, loam, or silt loam

Bt horizon:
Hue—10R to 5YR
Value—3 to 5
Chroma—4 to 8
Texture—clay loam, silty clay loam, silty clay, or clay

C horizon:
Hue—2.5YR to 7.5YR
Value—4 to 6
Chroma—4 to 6
Texture—fine sandy loam, loam, or silt loam

Elsinboro Series

Physiographic province: Blue Ridge and Piedmont
Landform: Stream terraces
Parent material: Alluvium
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 2 to 7 percent

Associated Soils

- The moderately well drained Delanco soils in areas at the head of drainageways

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Elsinboro loam, 2 to 7 percent slopes, rarely flooded; located 3.0 miles east (86 degrees) of the intersection of Highways VA-626 and VA-604, about 2.1 miles south (174 degrees) of the intersection of Highways VA-626 and VA-644, in cropland:

Ap—0 to 11 inches; dark yellowish brown (10YR 4/4) loam; weak fine granular structure; friable; common fine roots; common fine mica flakes; strongly acid; abrupt smooth boundary.
Bt—11 to 38 inches; strong brown (7.5YR 5/6) clay loam; moderate fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine roots; few distinct clay films on all faces of peds; few fine mica flakes; strongly acid; gradual smooth boundary.
C1—38 to 55 inches; strong brown (7.5YR 5/6) sandy clay loam; massive; friable, slightly plastic; few fine roots; common fine mica flakes; very strongly acid; gradual smooth boundary.
C2—55 to 72 inches; strong brown (7.5YR 5/6) sandy clay loam; massive; friable, slightly plastic; few fine roots; few fine prominent brown (10YR 5/3) iron depletions; common fine mica flakes; very strongly acid.

Range in Characteristics

Thickness of the solum: 28 to 50 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent throughout the profile
Reaction: Very strongly acid or strongly acid throughout the profile in unlimed areas

Ap horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—3 or 4
Texture—loam in the fine-earth fraction

A horizon (where present):
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 or 3
Texture (fine-earth fraction)—loam

E horizon (where present):
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, or silt loam

Bt horizon (upper part):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture (fine-earth fraction)—loam, silt loam, silty clay loam, or clay loam

Bt horizon (lower part):
Hue—2.5YR to 7.5YR
Value—4 or 5
Chroma—4 to 8
Texture (fine-earth fraction)—loam, silt loam, silty clay loam, or clay loam

C horizon:
Hue—2.5YR to 7.5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—stratified sandy loam, fine sandy loam, loam, silt loam, or sandy clay loam

Fauquier Series

Physiographic province: Blue Ridge and Piedmont
Landform: Hillslopes and mountain slopes
Parent material: Residuum weathered from greenstone and/or gabbro and/or diorite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Deep
Slope range: 7 to 50 percent

Associated Soils

- The moderately deep Spriggs soils
- The very deep Minnieville soils

Taxonomic Classification

Fine, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Fauquier loam, 7 to 15 percent slopes, very stony; located 1.0 mile west (260 degrees) from the intersection of Highways VA-640 and VA-641, about 1.1 miles northwest (316 degrees) of the intersection of Highways VA-639 and VA-719, in woodland:

Oi—1 inch to 0; moderately decomposed plant material.

A—0 to 6 inches; brown (7.5YR 4/4) loam; moderate fine granular structure; friable, slightly sticky; many fine and medium roots; 10 percent gravel; moderately acid; clear smooth boundary.

Bt—6 to 40 inches; red (2.5YR 4/8) clay; many medium prominent reddish yellow (7.5YR 6/8) mottles; moderate fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; common fine roots; many distinct clay films on all faces of peds; 10 percent gravel; moderately acid; clear smooth boundary.

Cr—40 to 50 inches; reddish yellow (7.5YR 6/8) bedrock; soft gabbro that crushes to loam; common clay films on bedrock fragments; gradual smooth boundary.

R—50 inches; hard gabbro bedrock.

Range in Characteristics

Thickness of the solum: 20 to 40 inches

Depth to soft bedrock: 40 inches or more

Depth to hard bedrock: 40 inches or more

Rock fragments: 0 to 15 percent in the A and E horizons and the upper part of the Bt horizon; 0 to 35 percent in the lower part of the Bt horizon; 0 to 60 percent in the C horizon

Surface stoniness: 0 to 3 percent

Reaction: Very strongly acid to moderately acid in the A, E and Bt horizons in unlimed areas; strongly acid or moderately acid in the C horizon

Ap horizon (where present):

Hue—2.5YR to 7.5YR
Value—4
Chroma—4 to 6
Texture (fine-earth fraction)—loam

A horizon:

Hue—2.5YR to 7.5YR
Value—3 or 4
Chroma—4 to 6
Texture (fine-earth fraction)—loam

Bt horizon:

Hue—10R to 2.5YR; 5YR in individual subhorizons in some pedons
Value—3 or 4
Chroma—4 to 8
Texture (fine-earth fraction)—silty clay loam, silty clay, or clay

C horizon (where present):

Hue—10R to 10YR
Value—3 to 8
Chroma—4 to 8
Texture (fine-earth fraction)—silt loam

Cr horizon:

Hue—10R to 10YR
Value—3 to 8
Chroma—4 to 8
Texture (fine-earth fraction)—slightly weathered greenstone that crushes to silt loam

Galtsmill Series

Physiographic province: Piedmont
Landform: Flood plains
Parent material: Recent alluvium
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 0 to 2 percent

Associated Soils

- The moderately well drained Batteau soils
- The poorly drained Hatboro and Yogaville soils

Taxonomic Classification

Coarse-loamy, mixed, active, thermic Fluventic Hapludolls

Typical Pedon

Galtsmill fine sandy loam, 0 to 2 percent slopes, occasionally flooded; located 1.3 miles south (170 degrees) of the junction of Highways VA-606 and VA-626, about 2.4 miles east (106 degrees) of the junction of Highways VA-626 and VA-721, in pasture:

Ap—0 to 15 inches; very dark grayish brown (10YR 3/2) broken face and dark brown (10YR 3/3) crushed fine sandy loam, brown (10YR 5/3) dry; moderate medium granular structure; friable; common fine and medium roots; common fine mica flakes; slightly acid; abrupt smooth boundary.

Bw1—15 to 35 inches; brown (10YR 4/3) fine sandy loam; weak coarse subangular blocky structure; friable; few fine roots; common fine mica flakes; slightly acid; clear smooth boundary.

Bw2—35 to 48 inches; brown (10YR 4/3) loam; weak coarse subangular blocky structure; friable; few fine roots; common fine mica flakes; slightly acid; clear smooth boundary.

Bw3—48 to 72 inches; brown (10YR 4/3) fine sandy loam; weak coarse subangular blocky structure; friable; few fine roots; common fine mica flakes; slightly acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches or more
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent throughout the profile
Reaction: Strongly acid to neutral throughout the profile

Ap horizon:
Hue—7.5YR or 10YR
Value—3 moist, 3 to 5 dry
Chroma—2 or 3
Texture—fine sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 or 4
Texture—sandy loam, fine sandy loam, loam, or silt loam

C horizon (where present):
Hue—7.5YR or 10YR
Value—4 or 5

Chroma—3 to 8
Texture—sand, loamy sand, fine sandy loam, or sandy loam; stratified in some pedons

Glenelg Series

Physiographic province: Piedmont
Landform: Hillslopes
Parent material: Residuum weathered from phyllite and/or schist and/or sandstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 15 to 25 percent

Associated Soils

- Elioak soils, which have a clay subsoil
- The moderately deep Hazel soils

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Glenelg silt loam, 15 to 25 percent slopes; located 0.3 mile southwest (219 degrees) of the intersection of Highways VA-655 and VA-722, about 1.2 miles west (282 degrees) of the intersection of Highways VA-654 and VA-655, in woodland:

A—0 to 4 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine granular structure; friable; many fine and medium roots; common fine mica flakes; very strongly acid; abrupt smooth boundary.
E—4 to 9 inches; yellowish brown (10YR 5/4) loam; weak fine granular structure; friable; common fine and medium roots; many fine mica flakes; very strongly acid; abrupt smooth boundary.
Bt—9 to 27 inches; yellowish red (5YR 5/6) clay loam; few medium prominent brownish yellow (10YR 6/8) and few medium prominent yellowish brown (10YR 5/4) mottles; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine and medium roots; common distinct clay films on all faces of peds; many fine mica flakes; very strongly acid; clear smooth boundary.
C1—27 to 52 inches; red (2.5YR 5/8 and 4/8) and reddish yellow (7.5YR 6/8) loam; massive; friable; few fine roots; horizon is saprolite; many fine mica flakes; 5 percent gravel; strongly acid; gradual wavy boundary.
C2—52 to 65 inches; yellowish brown (10YR 5/6), pale brown (10YR 6/3), and yellowish red (5YR 5/8) loam; massive; friable; horizon is saprolite; many fine mica flakes; 5 percent gravel; strongly acid.

Range in Characteristics

Thickness of the solum: 18 to 30 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent in the A, E, and Bt horizons; 5 to 35 percent in the C horizon
Reaction: Very strongly acid or strongly acid throughout the profile in unlimed areas

Ap horizon (where present):
Hue—7.5YR or 10YR
Value—4 or 5

Chroma—3 or 4
Texture (fine-earth fraction)—silt loam

A horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—1 to 4
Texture (fine-earth fraction)—silt loam

E horizon:
Hue—7.5YR to 10YR
Value—3 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—loam or silt loam

Bt horizon:
Hue—5YR to 10YR
Value—4 or 5
Chroma—4 to 8
Texture (fine-earth fraction)—loam, silt loam, silty clay loam, or clay loam

C horizon:
Hue—2.5YR to 10YR
Value—4 to 6
Chroma—2 to 8
Texture (fine-earth fraction)—sandy loam or loam

Hatboro Series

Physiographic province: Blue Ridge and Piedmont
Landform: Flood plains
Parent material: Recent alluvium
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 2 percent

Associated Soils

- The well drained Colvard and Craigsville soils
- The moderately well drained Suches soils
- The somewhat poorly drained Codorus soils

Taxonomic Classification

Fine-loamy, mixed, active, nonacid, mesic Fluvaquentic Endoaquepts

Typical Pedon

Hatboro loam, 0 to 2 percent slopes, frequently flooded; located 7,000 feet northeast (48 degrees) of the intersection of Highways VA-665 and VA-653, about 8,000 feet southeast (147 degrees) of the intersection of Highways VA-668 and VA-653, in an area of nutsedge and alder:

A—0 to 12 inches; dark grayish brown (10YR 4/2) loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; few medium prominent irregular strong brown (7.5YR 5/8) and common medium prominent irregular yellowish red (5YR 5/6) iron-manganese masses; common fine mica flakes; moderately acid; clear smooth boundary.

Bg1—12 to 30 inches; dark gray (10YR 4/1) clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; common medium prominent irregular yellowish brown (10YR 5/8) iron-manganese masses; common fine mica flakes; strongly acid; abrupt smooth boundary.

Bg2—30 to 50 inches; gray (10YR 6/1) clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine roots; many fine and medium prominent irregular yellowish brown (10YR 5/6) and many fine and medium prominent irregular strong brown (7.5YR 5/8) iron-manganese masses; few fine mica flakes; moderately acid; clear smooth boundary.

Cg1—50 to 65 inches; light brownish gray (10YR 6/2) sandy clay loam; massive; very friable; common fine and medium prominent irregular yellowish brown (10YR 5/8) and common fine and medium prominent irregular strong brown (7.5YR 5/8) iron-manganese masses; many fine mica flakes; moderately acid; abrupt smooth boundary.

Cg2—65 to 70 inches; light brownish gray (10YR 6/2) stratified fine sandy loam and gravel; massive; very friable; few fine and medium prominent irregular yellowish brown (10YR 5/6) iron-manganese masses; many fine mica flakes; moderately acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 10 percent in the A, Ap, E, and Bg horizons; 0 to 80 percent in the C horizon
Reaction: Very strongly acid to neutral within a depth of 30 inches in unlimed areas; moderately acid to slightly acid below a depth of 30 inches

Ap horizon (where present):
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—loam

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—loam

Bg horizon:
Hue—10YR to 5Y or neutral
Value—4 to 7
Chroma—0 to 2
Texture—silt loam, sandy clay loam, silty clay loam, or clay loam

Cg horizon:
Hue—10YR to 5Y or neutral
Value—4 to 7
Chroma—0 to 2
Texture—silt loam, clay loam, sandy clay loam, or silty clay loam in the upper part of the horizon and stratified sand, silt, and clay sediments and gravel in the lower part

Hayesville Series

Physiographic province: Blue Ridge and Piedmont
Landform: Hillslopes and mountain slopes
Parent material: Residuum weathered from granite and gneiss
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 2 to 50 percent

Associated Soils

- Occoquan soils, which have less clay in the subsoil than the Hayesville soils
- Udorthents that formed from soils altered by human activity
- Wintergreen soils that formed from colluvial or alluvial materials

Taxonomic Classification

Fine, kaolinitic, mesic Typic Hapludults

Typical Pedon

Hayesville loam, 2 to 7 percent slopes; located 0.3 mile southeast (136 degrees) from the intersection of Highways US-29 and VA-653, about 0.2 mile northeast (52 degrees) of the intersection of Highways VA-653 and VA-688, in pasture:

Ap—0 to 6 inches; brown (7.5YR 4/4) loam; weak fine granular structure; friable, slightly sticky, slightly plastic; common fine and medium roots; few fine mica flakes; 10 percent gravel; moderately acid; clear smooth boundary.

Bt1—6 to 26 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; common fine and medium roots; many distinct clay films on all faces of peds; common fine mica flakes; 5 percent gravel; moderately acid; gradual smooth boundary.

Bt2—26 to 40 inches; red (2.5YR 4/6) clay; moderate fine and medium subangular blocky structure; friable, moderately sticky, moderately plastic; few fine roots; many distinct clay films on all faces of peds; common fine and medium mica flakes; strongly acid; clear wavy boundary.

BC—40 to 57 inches; red (2.5YR 4/8) clay loam; weak fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; common distinct clay films on all faces of peds; common fine and medium mica flakes; strongly acid; clear wavy boundary.

C—57 to 62 inches; red (2.5YR 4/8) loam; common medium distinct reddish yellow (5YR 6/8) mottles; massive; friable; horizon is saprolite; many fine and medium mica flakes; moderately acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent throughout the profile
Reaction: Very strongly acid to moderately acid throughout the profile in unlimed areas

Ap horizon:
Hue—5YR to 10YR
Value—3 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—loam; clay loam in eroded areas

A horizon (where present):
Hue—5YR to 10YR

Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—loam

E horizon (where present):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Texture (fine-earth fraction)—fine sandy loam or loam

Bt horizon:
Hue—10R to 5YR
Value—4 or 5
Chroma—6 to 8
Texture—clay loam or clay

BC horizon:
Hue—10R to 5YR
Value—4 or 5
Chroma—6 to 8
Texture—loam, sandy clay loam, or clay loam

C horizon:
Hue—10R to 5YR
Value—4 to 6
Chroma—4 to 8
Texture—sandy loam, fine sandy loam, loam, or sandy clay loam

The Hayesville soils in Nelson County are considered taxadjuncts to the series because they do not meet the criteria for low-activity clays. This difference, however, does not significantly affect the use and management of the soils.

Hazel Series

Physiographic province: Piedmont
Landform: Hillslopes
Parent material: Residuum weathered from phyllite and/or schist and/or sandstone
Drainage class: Excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 7 to 50 percent

Associated Soils

- Elioak soils, which have a clay subsoil
- The very deep Glenelg soils

Taxonomic Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Hazel channery loam, 15 to 25 percent slopes; located 1.4 miles south (190 degrees) of the intersection of Highways VA-56 and VA-647, about 2.3 miles southwest (226 degrees) of the intersection of Highways VA-655 and VA-653, in woodland:

Ap—0 to 5 inches; yellowish brown (10YR 5/4) channery loam; weak fine granular structure; very friable; common fine and medium roots; 20 percent channers; very strongly acid; clear smooth boundary.

Bw—5 to 19 inches; strong brown (7.5YR 5/6) channery sandy loam; weak fine subangular blocky structure; friable; few fine and medium roots; common fine mica flakes; 25 percent channers; strongly acid; clear wavy boundary.
C—19 to 31 inches; yellowish brown (10YR 5/4) very channery sandy loam; massive; friable; few fine roots; horizon is saprolite; yellowish red (5YR 5/6) lenses of clay; common fine mica flakes; 40 percent channers; strongly acid; clear smooth boundary.
R—31 inches; hard graywacke sandstone bedrock.

Range in Characteristics

Thickness of the solum: 14 to 28 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 0 to 35 percent in the A and Ap horizons; 5 to 40 percent in the Bw horizon; 20 to 50 percent in the C horizon
Reaction: Very strongly acid or strongly acid throughout the profile in unlimed areas

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture (fine-earth fraction)—loam

A horizon (where present):
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—loam

E horizon (where present):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture (fine-earth fraction)—loam or silt loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 8
Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, or silt loam

C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 8
Texture (fine-earth fraction)—fine sandy loam, sandy loam, loam, or silt loam

Jackland Series

Physiographic province: Piedmont
Landform: Hillslopes
Parent material: Residuum weathered from gabbro and/or diorite and/or greenstone
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Low
Depth class: Very deep
Slope range: 2 to 15 percent

Associated Soils

- The moderately deep Spriggs soils, which have less clay in the subsoil than the Jackland soils

Taxonomic Classification

Fine, smectitic, mesic Aquic Hapludalfs

Typical Pedon

Jackland gravelly silt loam, 2 to 7 percent slopes; located 0.7 mile southeast (145 degrees) of the intersection of Highways VA-722 and VA-647, about 2.2 miles southwest (227 degrees) of the intersection of Highways VA-722 and VA-56, in woodland:

Ap—0 to 9 inches; brown (10YR 4/3) gravelly silt loam; weak fine granular structure; friable, slightly sticky, slightly plastic; many fine and medium roots; common iron-manganese nodules; 20 percent gravel; very strongly acid; abrupt smooth boundary.

Bt—9 to 30 inches; dark yellowish brown (10YR 4/4) clay; weak coarse prismatic structure parting to moderate medium angular blocky; very firm, very sticky, very plastic; few fine and medium roots; common pressure faces and common slickensides (pedogenic) and many distinct clay films on all faces of peds; common iron-manganese nodules, common medium distinct grayish brown (2.5Y 5/2) iron depletions, and common medium distinct irregular black (10YR 2/1) manganese masses; 5 percent gravel; strongly acid; abrupt smooth boundary.

C—30 to 61 inches; light olive brown (2.5Y 5/4), pale yellow (2.5Y 7/4), and black (10YR 2/1) sandy clay loam; very firm, moderately sticky, moderately plastic; few fine roots; horizon is saprolite that has lenses of clay; common iron-manganese nodules; common fine mica flakes; 5 percent gravel; strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 48 inches

Depth to bedrock: 60 inches or more

Rock fragments: 15 to 35 percent in the A, Ap, and Bt horizons; 0 to 35 percent in the C horizon

Reaction: In unlimed areas, very strongly acid to moderately acid in the A, Ap, and E horizons and the upper part of the Bt horizon; very strongly acid to mildly alkaline in the lower part of the Bt horizon and in the C horizon

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture (fine-earth fraction)—silt loam

A horizon (where present):
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—0 to 2
Texture (fine-earth fraction)—silt loam

E horizon (where present):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—silt loam

Bt horizon:
Hue—7.5YR to 2.5Y
Value—4 or 5
Chroma—3 to 6; individual subhorizons may have chroma of 1 or 2
Texture (fine-earth fraction)—clay

C horizon:
Hue—7.5YR to 2.5Y
Value—4 to 8
Chroma—1 to 8
Texture (fine-earth fraction)—sandy loam, sandy clay loam, or clay loam

Lew Series

Physiographic province: Blue Ridge
Landform: Fans and drainageways on mountains
Parent material: Colluvium and/or local alluvium
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 2 to 75 percent

Associated Soils

- The moderately deep Catoctin soils
- Craigsville soils on adjacent flood plains
- Myersville soils, which have fewer rock fragments throughout than the Lew soils

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Lew channery silt loam, 7 to 15 percent slopes, extremely bouldery; located 0.6 mile southwest (230 degrees) of the intersection of Highways VA-151 and VA-750, about 800 feet northeast (44 degrees) of the intersection of Highways VA-151 and VA-631, in woodland:

Oi—2 inches to 0; moderately decomposed plant material.
A—0 to 8 inches; dark yellowish brown (10YR 3/4) channery silt loam; moderate fine and medium granular structure; friable, slightly sticky, slightly plastic; many very fine and fine and many medium and coarse roots; 30 percent channers; strongly acid; clear smooth boundary.
Bt1—8 to 36 inches; dark yellowish brown (10YR 4/6) very channery silty clay loam; moderate fine subangular blocky structure; friable, slightly sticky, slightly plastic; many very fine, fine, medium, and coarse roots; many distinct clay films on rock fragments and on all faces of peds; 40 percent channers; strongly acid; clear smooth boundary.
Bt2—36 to 62 inches; strong brown (7.5YR 5/6) extremely channery silty clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine, fine, and medium roots; many distinct clay films on all faces of peds and many distinct clay films on rock fragments; 65 percent channers; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches or more
Depth to bedrock: 60 inches or more

Rock fragments: 5 to 35 percent in the A horizon; 35 to 70 percent in the Bt and C horizons
Reaction: Very strongly acid to moderately acid throughout the profile in unlimed areas

A horizon:
Hue—5YR to 10YR
Value—2 to 4
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam

Bt horizon:
Hue—5YR to 10YR
Value—4 or 5
Chroma—4 to 8
Texture (fine-earth fraction)—clay loam or silty clay loam

C horizon (where present):
Hue—5YR to 10YR
Value—4 or 5
Chroma—4 to 8
Texture (fine-earth fraction)—sandy loam, loam, or silt loam

Littlejoe Series

Physiographic province: Piedmont
Landform: Hillslopes
Parent material: Residuum weathered from mica schist (sericite schist)
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Deep
Slope range: 2 to 15 percent

Associated Soils

- Buffstat soils which have a yellowish brown subsoil
- The shallow Bugley soils
- Arcola soils, which have less clay in the subsoil than the Littlejoe soils
- Warminster soils, which formed from Triassic shale, sandstone, and conglomerate
- Wintergreen soils, which have a subsoil of red clay and which formed from colluvium and alluvium

Taxonomic Classification

Fine, mixed, subactive, mesic Typic Hapludults

Typical Pedon

Littlejoe silt loam, 2 to 7 percent slopes; located 2.0 miles northeast (38 degrees) of the intersection of Highways VA-657 and VA-60, about 1.2 miles southwest (220 degrees) of the intersection of Highways VA-626 and VA-721, in woodland:

A—0 to 2 inches; yellowish brown (10YR 5/4) silt loam; weak fine granular structure; friable, slightly sticky, slightly plastic; many fine, medium, and coarse roots; few mica flakes; 2 percent gravel; very strongly acid; abrupt smooth boundary.
E—2 to 8 inches; brownish yellow (10YR 6/6) loam; weak fine granular structure; friable, slightly sticky, slightly plastic; common fine and medium roots; few mica flakes; 2 percent gravel; very strongly acid; clear smooth boundary.
Bt1—8 to 28 inches; red (2.5YR 5/8) silty clay; moderate fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine and medium

roots; many distinct clay films on all faces of peds; common mica flakes; very strongly acid; clear smooth boundary.

Bt2—28 to 41 inches; red (2.5YR 5/8) silty clay loam; common medium distinct yellowish red (5YR 5/6) mottles; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine and medium roots; few distinct clay films on all faces of peds; many mica flakes; very strongly acid; abrupt irregular boundary.

Cr—41 inches; reddish brown (5YR 5/3) soft sericite schist bedrock that crushes to silt loam.

Range in Characteristics

Thickness of the solum: 25 to 50 inches
Depth to soft bedrock: 40 to 60 inches
Depth to hard bedrock: 40 to 60 inches or more
Rock fragments: 0 to 15 percent in the A, Ap, E, and Bt horizons; 0 to 50 percent in the C horizon
Reaction: Very strongly acid or strongly acid throughout the profile in unlimed areas

Ap horizon (where present):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 8
Texture—silt loam

A horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Texture—silt loam

E horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—3 to 6
Texture—fine sandy loam, loam, or silt loam

Bt horizon:
Hue—10R to 5YR; 5YR only occurring in subhorizons
Value—4 or 5
Chroma—6 to 8
Texture—silty clay loam, silty clay, or clay; average of more than 30 percent silt in the particle-size control section

C horizon (where present):
Hue—2.5YR to 10YR
Value—4 to 8
Chroma—4 to 8
Texture (fine-earth fraction)—silt loam or silty clay loam

Cr horizon:
Hue—2.5YR to 10YR
Value—4 to 8
Chroma—4 to 8
Texture (fine-earth fraction)—slightly weathered schist that crushes to silt loam or silty clay loam

Minnieville Series

Physiographic province: Blue Ridge and Piedmont
Landform: Hillslopes and mountain slopes
Parent material: Residuum weathered from greenstone and/or gabbro and/or gneiss
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 2 to 50 percent

Associated Soils

- Spriggs soils, which have less clay in the subsoil than the Minnieville soils
- The deep Fauquier soils

Taxonomic Classification

Fine, kaolinitic, mesic Typic Hapludults

Typical Pedon

Minnieville loam, 2 to 7 percent slopes; located 1.7 miles east (98 degrees) of the intersection of Highways VA-626 and VA-721, about 1.8 miles south (185 degrees) of the intersection of Highways VA-661 and VA-654, in woodland:

Ap—0 to 12 inches; brown (7.5YR 4/4) loam; moderate fine granular structure; friable, slightly sticky; many fine and medium roots; 2 percent gravel; moderately acid; abrupt smooth boundary.

Bt1—12 to 32 inches; red (2.5YR 4/8) clay; moderate fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; common fine and medium roots; many distinct clay films on all faces of peds; 2 percent gravel; moderately acid; clear smooth boundary.

Bt2—32 to 49 inches; red (2.5YR 4/8) clay; few brownish yellow (10YR 6/8) mottles; moderate fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine and medium roots; many distinct clay films on all faces of peds; strongly acid; clear smooth boundary.

C—49 to 72 inches; red (2.5YR 4/8) clay; common brownish yellow (10YR 6/8) mottles; massive; firm, moderately sticky, moderately plastic; few fine and medium roots; horizon is saprolite; few clay films on rock fragments; 10 percent gravel; moderately acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 10 percent angular vein quartz gravel throughout the profile; 0 to 10 percent partially weathered hornblende gneiss or hornblende schist in the A and Ap horizons and the upper part of the Bt horizon; 0 to 25 percent partially weathered hornblende gneiss or hornblende schist in the lower part of the Bt horizon and in the C horizon
Reaction: Strongly acid or moderately acid throughout the profile in unlimed areas

Ap horizon:
Hue—5YR or 7.5YR
Value—3 to 5
Chroma—3 to 6
Texture—loam

A horizon (where present):
Hue—5YR or 7.5YR
Value—3 to 5
Chroma—3 or 4
Texture—loam

E horizon (where present):
Hue—5YR or 7.5YR
Value—5 or 6
Chroma—3 to 6
Texture—loam or silt loam

Bt horizon:
Hue—10R or 2.5YR
Value—3 or 4
Chroma—4 to 8
Texture (fine-earth fraction)—clay loam, silty clay, or clay

C horizon:
Hue—10R to 10YR
Value—4 to 8
Chroma—1 to 8
Texture (fine-earth fraction)—loam, silt loam, clay loam, silty clay loam, or clay

Myersville Series

Physiographic province: Blue Ridge and Piedmont
Landform: Mainly on mountain slopes; small areas are on hillslopes
Parent material: Residuum weathered from greenstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Deep
Slope range: 7 to 55 percent

Associated Soils

- The moderately deep Catoctin soils and Lew soils, which contain more rock fragments than the Myersville soils and occur in drainageways

Taxonomic Classification

Fine-loamy, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Myersville channery silt loam in an area of Myersville-Catoctin complex, 7 to 15 percent slopes, extremely stony; located 1.4 miles west (280 degrees) of the intersection of Highways VA-151 and VA-631, about 2.0 miles north (340 degrees) of the intersection of Highways VA-631 and VA-840, in woodland:

Ap—0 to 11 inches; brown (10YR 4/3) channery silt loam; moderate very fine and fine granular structure; very friable, slightly sticky, slightly plastic; many fine, medium, and coarse roots; 15 percent channers; strongly acid; clear smooth boundary.

Bt1—11 to 25 inches; yellowish brown (10YR 5/8) channery clay loam; moderate very fine and fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; common distinct clay films on all faces of peds; 20 percent channers; strongly acid; gradual wavy boundary.

Bt2—25 to 40 inches; yellowish brown (10YR 5/6) channery clay loam; common medium distinct brownish yellow (10YR 6/8) and common medium prominent black (10YR 2/1) mottles; moderate fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; common distinct clay films on all faces of peds; 25 percent channers; moderately acid; clear smooth boundary.

C—40 to 47 inches; very pale brown (10YR 7/4) very channery silt loam; common medium prominent black (10YR 2/1) and common medium prominent yellowish brown (10YR 5/8) mottles; massive; friable, slightly sticky, slightly plastic; few fine and medium roots; horizon is saprolite; common clay films on rock fragments; 40 percent channers; strongly acid; abrupt smooth boundary.

Cr—47 inches; yellow (10YR 7/6) soft greenstone bedrock that crushes to silt loam; common medium prominent black (10YR 2/1) mottles.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to soft bedrock: 40 inches or more
Depth to hard bedrock: 60 inches or more
Rock fragments: 15 to 35 percent in the A, Ap, and E horizons and the upper part of the Bt horizon; 3 to 50 percent in the lower part of the Bt horizon; 5 to 75 percent in the C horizon (the Cr horizon is highly weathered and crushes easily)
Reaction: Very strongly acid to moderately acid throughout the profile in unlimed areas

Ap horizon:
Hue—5YR to 10YR
Value—2 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam

A horizon (where present):
Hue—5YR to 10YR
Value—2 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam

E horizon (where present):
Hue—5YR to 10YR
Value—4 or 5
Chroma—3 or 4
Texture (fine-earth fraction)—loam or silt loam

Bt horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam, silt loam, clay loam, or silty clay loam or subhorizons of clay

C horizon:
Hue—2.5YR to 10YR
Value—4 to 8
Chroma—1 to 8
Texture (fine-earth fraction)—loam, silt loam, clay loam, or silty clay loam

Cr horizon:
Hue—2.5YR to 10YR
Value—4 to 8
Chroma—1 to 8

Texture (fine-earth fraction)—slightly weathered greenstone that crushes to loam, silt loam, clay loam, or silty clay loam

Occoquan Series

Physiographic province: Blue Ridge and Piedmont
Landform: Hillslopes and mountain slopes
Parent material: Residuum weathered from granite and gneiss and/or granodiorite
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Deep
Slope range: 7 to 50 percent

Associated Soils

- The very deep Hayesville soils, which have a clay subsoil
- The very deep Edneytown soils, which have a thicker subsoil than the Occoquan soils
- The moderately deep Peaks soils, which have more rock fragments throughout than the Occoquan soils

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Inceptic Hapludults

Typical Pedon

Occoquan loam, 25 to 50 percent slopes; located 0.2 mile west (270 degrees) of the intersection of Highways US-29 and VA-651, about 1.3 miles south (180 degrees) of the intersection of Highways VA-651 and VA-718, in woodland:

A—0 to 4 inches; brown (10YR 4/3) loam; weak fine granular structure; friable; common fine and medium and common coarse roots; 12 percent gravel; strongly acid; clear smooth boundary.
Bt—4 to 13 inches; yellowish red (5YR 5/6) sandy clay loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; few distinct clay films on all faces of peds; common fine mica flakes; 12 percent gravel; strongly acid; clear smooth boundary.
C—13 to 41 inches; yellowish red (5YR 5/6) sandy loam; massive; friable; few fine and medium roots; horizon is saprolite; common fine mica flakes; 2 percent gravel; strongly acid; clear smooth boundary.
Cr—41 inches; strong brown (7.5YR 5/8) soft gneiss bedrock that crushes to sandy loam.

Range in Characteristics

Thickness of the solum: 12 to 24 inches
Depth to soft bedrock: 40 to 60 inches
Depth to hard bedrock: 60 inches or more
Rock fragments: 0 to 15 percent throughout the profile
Reaction: Extremely acid to strongly acid throughout the profile in unlimed areas

A horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—2 to 4
Texture—loam

Ap horizon (where present):
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—2 to 4
Texture—loam

E horizon (where present):
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—3 or 4
Texture—coarse sandy loam, sandy loam, or loam

Bt horizon:
Hue—5YR to 10YR
Value—5 or 6
Chroma—4 to 8
Texture—sandy loam, loam, sandy clay loam, or clay loam

C horizon:
Hue—2.5YR to 10YR
Value—4 to 8
Chroma—1 to 8
Texture—loamy sand, sandy loam, or loam

Cr horizon:
Hue—2.5YR to 10YR
Value—4 to 8
Chroma—1 to 8
Texture—slightly weathered gneiss that crushes to loamy sand, sandy loam, or loam

Peaks Series

Physiographic province: Blue Ridge and Piedmont
Landform: Hillslopes and mountain slopes
Parent material: Residuum weathered from granite and/or granodiorite and/or gneiss
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 7 to 75 percent

Associated Soils

- Occoquan, Edneytown, and Saunook soils, which have fewer rock fragments throughout than the Peaks soils

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Peaks very gravelly loam in an area of Edneytown-Peaks complex, 35 to 55 percent slopes, extremely stony; located 2.2 miles northeast (50 degrees) of the intersection of Highways VA-699 and VA-680, about 3.0 miles north (359 degrees) of the intersection of Highways VA-151 and VA-672, in woodland:

Oi—1 inch to 0; moderately decomposed plant material.

A—0 to 2 inches; very dark grayish brown (10YR 3/2) very gravelly loam; weak fine granular structure; friable; many fine, medium, and coarse roots; few fine mica flakes; 40 percent gravel; very strongly acid; abrupt smooth boundary.
E—2 to 7 inches; dark yellowish brown (10YR 4/4) very gravelly loam; weak fine granular structure; friable; many fine and medium and many coarse roots; few fine mica flakes; 40 percent gravel; very strongly acid; clear smooth boundary.
Bw—7 to 25 inches; strong brown (7.5YR 5/6) very gravelly loam; weak medium subangular blocky structure; friable; common fine and medium roots; few fine mica flakes; 50 percent gravel; strongly acid; clear wavy boundary.
Cr—25 to 36 inches; yellowish brown (10YR 5/6) soft granodiorite bedrock that crushes to extremely channery loam; abrupt wavy boundary.
R—36 inches; hard granodiorite bedrock.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 35 to 70 percent in the A, E, and Bw horizons; 60 to 90 percent in the C horizon
Reaction: Very strongly acid or strongly acid throughout the profile in unlimed areas

A horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—1 to 4
Texture (fine-earth fraction)—loam

E horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—sandy loam or loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—sandy loam or loam

C horizon (where present):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—sandy loam or loam

Cr horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—slightly weathered granite, gneiss, or granodiorite that crushes to sandy loam or loam

Pineywoods Series

Physiographic province: Blue Ridge
Landform: Mountain slopes
Parent material: Residuum weathered from anorthosite

Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately low
Depth class: Deep
Slope range: 0 to 2 percent

Associated Soils

- The moderately well drained Sketerville soils
- The well drained Colleen soils

Taxonomic Classification

Clayey over loamy, kaolinitic, mesic Kandic Albaquults

Typical Pedon

Pineywoods silt loam, 0 to 2 percent slopes; located 2,300 feet southeast (146 degrees) of the intersection of Highways VA-151 and VA-676, about 7,000 feet north (14 degrees) of the intersection of Highways VA-674 and VA-56, in woodland:

A—0 to 1 inch; dark gray (10YR 4/1) silt loam; weak fine granular structure; friable, slightly sticky, slightly plastic; many fine, medium, and coarse roots; 5 percent quartz gravel; extremely acid; abrupt smooth boundary.

Eg—1 to 6 inches; light brownish gray (2.5Y 6/2) silt loam; weak fine granular structure; friable, slightly sticky, slightly plastic; common fine and medium roots; common medium prominent brownish yellow (10YR 6/8) iron-manganese masses; 5 percent quartz gravel; extremely acid; clear smooth boundary.

Btg1—6 to 15 inches; light brownish gray (2.5Y 6/2) silty clay; moderate fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; common fine and medium roots; many distinct clay films on all faces of peds; common medium prominent brownish yellow (10YR 6/8) iron-manganese masses; 2 percent quartz gravel; extremely acid; clear smooth boundary.

Btg2—15 to 22 inches; light brownish gray (2.5Y 6/2) clay; weak medium prismatic structure parting to moderate fine and medium angular blocky; firm, moderately sticky, moderately plastic; few fine and medium roots; many distinct clay films on all faces of peds; many coarse faint pale brown (10YR 6/3) iron-manganese masses; strongly acid; abrupt irregular boundary.

Cg—22 to 41 inches; white (10YR 8/1) loam; massive; friable, slightly sticky, slightly plastic; few fine roots; horizon is saprolite; common clay films; many medium prominent irregular reddish yellow (7.5YR 6/8) iron-manganese masses and many medium faint irregular gray (10YR 6/1) manganese coatings; 5 percent quartz gravel; strongly acid; clear smooth boundary.

Cr—41 inches; light gray (N 7/0) soft anorthosite bedrock that crushes to clay loam.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to soft bedrock: 40 to 60 inches
Depth to hard bedrock: 60 inches or more
Rock fragments: 0 to 15 percent in the A, Ap, and Eg horizons; 0 to 35 percent in the Btg and Cg horizons
Reaction: Extremely acid to slightly acid in the A, Ap, and Eg horizons in unlimed areas; very strongly acid or strongly acid in the Btg horizon; strongly acid to slightly acid in the Cg horizon

Ap horizon (where present):
Hue—10YR or 2.5Y
Value—2 to 4

Chroma—1 to 4
Texture—silt loam

A horizon:
Hue—10YR or 2.5Y
Value—2 to 4
Chroma—1 to 4
Texture—silt loam

Eg horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—1 or 2
Texture (fine-earth fraction)—fine sandy loam, loam, or silt loam

Btg horizon:
Hue—10YR to 5Y or neutral
Value—5 to 8
Chroma—0 to 2; individual subhorizons may have higher chroma
Texture (fine-earth fraction)—silty clay loam, clay loam, silty clay, or clay

Cg horizon:
Hue—10YR to 5Y or neutral
Value—5 to 8
Chroma—0 to 2
Texture (fine-earth fraction)—sandy loam, loam, silt loam, silty clay loam, or clay loam

Cr horizon:
Hue—2.5Y or 5Y or neutral
Value—7 or 8
Chroma—0 or 1
Texture (fine-earth fraction)—slightly weathered anorthosite that crushes to sandy loam, loam, silt loam, silty clay loam, or clay loam

Saunook Series

Physiographic province: Blue Ridge and Piedmont
Landform: Drainageways and fans
Parent material: Colluvium
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 7 to 50 percent

Associated Soils

- The moderately deep Peaks soils, which have more rock fragments throughout than the Saunook soils
- Edneytown and Thurmont soils, which do not have a dark surface layer

Taxonomic Classification

Fine-loamy, mixed, superactive, mesic Humic Hapludults

Typical Pedon

Saunook loam, 7 to 15 percent slopes; located 1.4 miles west (262 degrees) of the intersection of Highways VA-56 and VA-699, about 2.2 miles south (180 degrees) of the intersection of Highways VA-56 and VA-814, in woodland:

A—0 to 9 inches; very dark grayish brown (10YR 3/2) loam; weak fine granular structure; friable, slightly sticky, slightly plastic; many fine, medium, and coarse roots; few fine mica flakes; 5 percent gravel; strongly acid; abrupt smooth boundary.

Bt1—9 to 29 inches; brown (7.5YR 4/4) clay loam; moderate fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; common distinct clay films on all faces of peds; few fine mica flakes; 5 percent gravel; very strongly acid; clear smooth boundary.

Bt2—29 to 52 inches; strong brown (7.5YR 4/6) clay loam; weak fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; few distinct clay films on all faces of peds; few fine mica flakes; 10 percent gravel; very strongly acid; clear smooth boundary.

C—52 to 61 inches; yellowish brown (10YR 5/4) very cobbly sandy loam; massive; friable; few fine mica flakes; 50 percent cobbles; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches or more
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent in the A and Ap horizons; 0 to 35 percent in the Bt horizon; 0 to 50 percent in the C horizon
Reaction: Extremely acid to moderately acid in the A and Ap horizons in unlimed areas; very strongly acid to slightly acid in the Bt and C horizons

Ap horizon (where present):
Hue—7.5YR or 10YR
Value—2 or 3 moist, 4 or 5 dry
Chroma—2 to 4
Texture—loam

A horizon:
Hue—7.5YR or 10YR
Value—2 or 3 moist, 4 or 5 dry
Chroma—2 to 4
Texture—loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam, sandy clay loam, or clay loam

C horizon:
Hue—7.5YR to 2.5Y
Value—4 to 8
Chroma—4 to 8
Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam

Sketerville Series

Physiographic province: Blue Ridge
Landform: Mountain slopes
Parent material: Residuum weathered from anorthosite

Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately low
Depth class: Very deep
Slope range: 2 to 7 percent

Associated Soils

- The poorly drained Pineywoods soils
- The well drained Colleen soils

Taxonomic Classification

Fine, kaolinitic, mesic Aquultic Hapludalfs

Typical Pedon

Sketerville silt loam, 2 to 7 percent slopes; located 3,000 feet northeast (45 degrees) of the intersection of Highways VA-778 and VA-6764, about 3,750 feet southwest (242 degrees) of the intersection of Highways VA-676 and VA-677, in a hay field:

Ap—0 to 4 inches; 80 percent dark grayish brown (10YR 4/2), 10 percent very pale brown (10YR 7/3), and 10 percent dark brown (10YR 3/3) silt loam; weak fine granular structure; friable, slightly sticky, slightly plastic; common fine and medium roots; extremely acid; abrupt smooth boundary.
Bt1—4 to 12 inches; light yellowish brown (10YR 6/4) clay; moderate fine and medium subangular blocky structure; friable, slightly sticky, moderately plastic; few fine roots; many distinct clay films on all faces of peds; few medium faint very pale brown (10YR 7/3) iron depletions and few medium faint irregular brownish yellow (10YR 6/6) iron-manganese masses; few fine mica flakes; 2 percent quartz gravel; extremely acid; clear smooth boundary.
Bt2—12 to 42 inches; yellowish brown (10YR 5/4) clay; moderate fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; many distinct clay films on all faces of peds; few medium distinct brownish yellow (10YR 6/6) iron-manganese masses and common medium distinct light brownish gray (2.5Y 6/2) iron depletions; few fine mica flakes; very strongly acid; clear smooth boundary.
Cg1—42 to 52 inches; 20 percent light brownish gray (2.5Y 6/2) and 80 percent gray (10YR 5/1) clay; massive; firm, slightly sticky, slightly plastic; horizon is saprolite; few medium prominent brownish yellow (10YR 6/8) iron-manganese masses; very strongly acid; clear smooth boundary.
Cg2—52 to 70 inches; 50 percent white (N 8/0), 25 percent light brownish gray (2.5Y 6/2), and 25 percent light gray (N 7/0) silty clay loam; massive; friable, slightly sticky, slightly plastic; horizon is saprolite; few medium prominent brownish yellow (10YR 6/8) iron-manganese masses; 10 percent quartz gravel; strongly acid; abrupt smooth boundary.
R—70 inches; white (N 8/0) hard anorthosite bedrock.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent in the Ap, A, and E horizons; 0 to 35 percent in the Bt and Cg horizons
Reaction: Extremely acid to slightly acid in the A, Ap, and E horizons in unlimed areas; extremely acid to strongly acid in the Bt horizon; very strongly acid to moderately acid in the Cg horizon

Ap horizon:
Hue—10YR or 2.5Y

Value—2 to 4
Chroma—2 to 4
Texture—silt loam

A horizon (where present):
Hue—10YR or 2.5Y
Value—2 to 4
Chroma—2 to 4
Texture—silt loam

E horizon (where present):
Hue—10YR or 2.5Y
Value—6 or 7
Chroma—3 to 6
Texture (fine-earth fraction)—fine sandy loam, loam, or silt loam

Bt horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—4 to 8
Texture (fine-earth fraction)—clay loam, silty clay loam, silty clay, or clay

Cg horizon:
Hue—10YR to 5Y or neutral
Value—5 to 8
Chroma—0 to 2
Texture (fine-earth fraction)—sandy loam, loam, silt loam, clay loam, clay, or silty clay loam

Cr horizon (where present):
Hue—2.5Y or 5Y or neutral
Value—7 or 8
Chroma—0 or 1
Texture (fine-earth fraction)—slightly weathered anorthosite that crushes to sandy loam, loam, silt loam, clay loam, or silty clay loam

Spriggs Series

Physiographic province: Blue Ridge and Piedmont
Landform: Hillslopes and mountain slopes
Parent material: Residuum weathered from gabbro and/or diorite and/or greenstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 7 to 50 percent

Associated Soils

- Fauquier, Jackland, and Minnieville soils that contain more clay in the subsoil than the Spriggs soils

Taxonomic Classification

Fine-loamy, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Spriggs loam, 7 to 15 percent slopes, very stony; located 0.7 mile northeast (57 degrees) of the intersection of Highways VA-657 and VA-721, about 0.8 mile east (80 degrees) of the intersection of Highways VA-657 and VA-658, in woodland:

A—0 to 4 inches; brown (10YR 4/3) loam; weak fine granular structure; friable, slightly sticky, slightly plastic; many fine and medium roots; few medium black (10YR 2/1) iron-manganese nodules; few fine mica flakes; 5 percent gravel; strongly acid; clear smooth boundary.

Bt—4 to 14 inches; yellowish brown (10YR 5/6) gravelly loam; weak fine subangular blocky structure; friable, moderately sticky, moderately plastic; few fine and medium roots; few distinct clay films on all faces of peds; few medium black (10YR 2/1) iron-manganese nodules; few fine mica flakes; 20 percent gravel; strongly acid; clear smooth boundary.

C—14 to 20 inches; yellowish brown (10YR 5/6) gravelly loam; massive; friable, slightly sticky, slightly plastic; few fine and medium roots; horizon is saprolite; few medium black (10YR 2/1) iron-manganese nodules; few fine mica flakes; 25 percent gravel; moderately acid; abrupt smooth boundary.

Cr—20 to 41 inches; light brownish gray (10YR 6/2), strong brown (7.5YR 5/8), and yellowish brown (10YR 5/4) soft gabbro bedrock that crushes to gravelly sandy loam; few fine roots in cracks; 25 percent moderately hard rock fragments remain after crushing; few fine mica flakes; abrupt wavy boundary.

R—41 inches; hard gabbro bedrock.

Range in Characteristics

Thickness of the solum: 12 to 24 inches
Depth to soft bedrock: 20 to 40 inches
Depth to hard bedrock: 40 to 60 inches
Rock fragments: 1 to 5 percent in the A, Ap, and E horizons and the upper part of the Bt horizon; 1 to 35 percent in the lower part of the Bt horizon and in the C horizon
Reaction: Very strongly acid to moderately acid throughout the profile in unlimed areas

Ap horizon (where present):
Hue—7.5YR to 2.5Y
Value—3 or 4
Chroma—2 to 4
Texture—loam

A horizon:
Hue—7.5YR to 2.5Y
Value—3 or 4
Chroma—2 to 4
Texture—loam

E horizon (where present):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—loam or silt loam

Bt horizon:
Hue—5YR to 10YR
Value—5 or 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam, silt loam, clay loam, or silty clay loam

C horizon:
Hue—2.5YR to 10YR
Value—4 to 8

Chroma—1 to 8
Texture (fine-earth fraction)—sandy loam, loam, or silt loam

Cr horizon:
Hue—2.5YR to 10YR
Value—4 to 8
Chroma—1 to 8
Texture (fine-earth fraction)—slightly weathered gabbro that crushes to sandy loam, loam, or silt loam

Suches Series

Physiographic province: Blue Ridge and Piedmont
Landform: Flood plains
Parent material: Recent alluvium
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 2 percent

Associated Soils

- The somewhat poorly drained Codorus soils
- The well drained Colvard, Craigsville, and Delanco soils
- The poorly drained Hatboro soils
- Udorthents

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Fluventic Dystrudepts

Typical Pedon

Suches loam, 0 to 2 percent slopes, frequently flooded; located 0.6 mile north (342 degrees) of the intersection of Highways VA-688 and VA-665, about 1.2 miles east (82 degrees) of the intersection of Highways US-29 and VA-665, in woodland:

Ap—0 to 11 inches; brown (7.5YR 4/4) loam; weak fine granular structure; very friable, slightly sticky; many fine and medium roots; many fine mica flakes; strongly acid; abrupt smooth boundary.

Bw1—11 to 23 inches; strong brown (7.5YR 4/6) loam; weak fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine roots; many fine mica flakes; 2 percent gravel; strongly acid; gradual smooth boundary.

Bw2—23 to 30 inches; brown (10YR 4/3) clay loam; weak coarse platy structure parting to weak fine angular blocky; friable, slightly sticky, slightly plastic; few fine roots; common fine mica flakes; strongly acid; abrupt wavy boundary.

Bw3—30 to 43 inches; dark yellowish brown (10YR 4/6) sandy clay loam; weak fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine roots; common fine mica flakes; strongly acid; diffuse smooth boundary.

C—43 to 61 inches; light brownish gray (10YR 6/2) and yellowish brown (10YR 5/6) sandy loam; single grain; common fine mica flakes; strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent throughout the profile
Reaction: Very strongly acid to moderately acid throughout the profile in unlimed areas

Ap horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 4
Texture—loam

A horizon (where present):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 4
Texture—loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 7
Chroma—3 to 8
Texture—fine sandy loam, loam, sandy clay loam, clay loam, or silty clay loam

C horizon:
Hue—7.5YR or 10YR
Value—3 to 7
Chroma—3 to 8
Texture—loamy sand, sandy loam, fine sandy loam, sandy clay loam, silt loam, or clay loam

Sylco Series

Physiographic province: Blue Ridge
Landform: Mountain slopes
Parent material: Residuum weathered from phyllite and/or siltstone and/or slate
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 7 to 55 percent

Associated Soils

- The shallow Sylvatus soils

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Sylco channery silt loam in an area of Sylco-Sylvatus complex, 15 to 35 percent slopes, extremely stony; located 0.4 mile southeast (146 degrees) of the intersection of Highways VA-56 and VA-686, about 0.9 mile east (110 degrees) of the intersection of Highway VA-603 and the Blue Ridge Parkway, in woodland:

Oi—1 inch to 0; moderately decomposed plant material.
A—0 to 3 inches; dark yellowish brown (10YR 4/4) channery silt loam; weak fine granular structure; friable, slightly sticky; many fine, medium, and coarse roots; 30 percent channers; very strongly acid; abrupt smooth boundary.
Bw1—3 to 25 inches; yellowish brown (10YR 5/6) very channery silty clay loam; common fine distinct pale yellow (2.5Y 7/4) and common fine distinct strong brown (7.5YR 5/8) mottles; weak medium granular structure; friable, slightly sticky, slightly plastic; common fine and medium roots; 38 percent channers; very strongly acid; clear wavy boundary.

Bw2—25 to 34 inches; yellowish brown (10YR 5/6) very channery clay loam; common fine faint strong brown (7.5YR 5/6) and common fine distinct pale yellow (2.5Y 7/4) mottles; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine and medium roots; 38 percent channers; very strongly acid; clear wavy boundary.

Cr—34 to 38 inches; yellowish brown (10YR 5/6) soft phyllite bedrock that crushes to extremely channery loam.

R—38 inches; hard phyllite bedrock.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 15 to 35 percent in the A and Bw horizons
Reaction: Very strongly acid or strongly acid throughout the profile in unlimed areas

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 8
Texture (fine-earth fraction)—silt loam, clay loam, or silty clay loam

Cr horizon:
Hue—7.5YR to 2.5Y
Value—3 to 5
Chroma—3 to 8
Texture (fine-earth fraction)—slightly weathered phyllite that crushes to loam or silt loam

Sylvatus Series

Physiographic province: Blue Ridge
Landform: Mountain slopes
Parent material: Residuum weathered from phyllite and/or siltstone and/or slate
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Shallow
Slope range: 7 to 70 percent

Associated Soils

- The moderately deep Sylco soils

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Typical Pedon

Sylvatus very channery silt loam in an area of Sylco-Sylvatus complex, 35 to 55 percent slopes, extremely stony; located 1.3 miles east (76 degrees) of the intersection of Highways VA-685 and VA-686, about 1.7 miles northeast (46 degrees) of the intersection of Highways VA-686 and VA-687, in woodland:

Oi—1 inch to 0; moderately decomposed plant material.

A—0 to 1 inch; yellowish brown (10YR 5/4) very channery silt loam; weak fine granular structure; friable, slightly sticky; many fine and medium and many coarse roots; 40 percent channers; very strongly acid; abrupt smooth boundary.

Bw1—1 to 9 inches; yellowish brown (10YR 5/8) very channery silty clay loam; weak fine granular structure; friable, slightly sticky, slightly plastic; many fine and medium and many coarse roots; 45 percent channers; very strongly acid; clear smooth boundary.

Bw2—9 to 15 inches; yellowish brown (10YR 5/6) extremely channery clay loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium and common coarse roots; 65 percent channers; very strongly acid; abrupt smooth boundary.

Cr—15 to 19 inches; yellowish brown (10YR 5/8) soft phyllite bedrock that crushes to extremely channery silt loam; few fine and medium roots in cracks; abrupt wavy boundary.

R—19 inches; hard fractured phyllite bedrock.

Range in Characteristics

Thickness of the solum: 10 to 18 inches
Depth to bedrock: 10 to 20 inches
Rock fragments: 35 to 55 percent in the A horizon; 25 to 80 percent in the Bw horizon; 45 to 90 percent in the C horizon
Reaction: Extremely acid or very strongly acid throughout the profile in unlimed areas

A horizon:
Hue—10YR
Value—2 to 5
Chroma—1 to 4
Texture (fine-earth fraction)—silt loam

Bw horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Texture (fine-earth fraction)—silt loam, loam, clay loam, or silty clay loam

Cr horizon:
Hue—5YR to 10YR
Value—3 to 6
Chroma—1 to 8
Texture (fine-earth fraction)—slightly weathered phyllite that crushes to loam or silt loam

Thurmont Series

Physiographic province: Blue Ridge and Piedmont
Landform: Fans and drainageways
Parent material: Colluvium and/or local alluvium
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 2 to 25 percent

Associated Soils

- The somewhat poorly drained Belvoir soils, which have a fragipan
- Saunook soils, which have a dark surface layer

Taxonomic Classification

Fine-loamy, mixed, active, mesic Oxyaquic Hapludults

Typical Pedon

Thurmont loam, 2 to 7 percent slopes; located 0.1 mile northeast (54 degrees) of the intersection of Highways VA-664 and VA-680, about 1.4 miles west (289 degrees) of the intersection of Highways VA-664 and VA-151, in woodland:

Ap—0 to 5 inches; dark brown (7.5YR 3/4) loam; moderate fine granular structure; very friable, slightly sticky, slightly plastic; many fine and medium and many coarse roots; 2 percent gravel; very strongly acid; clear wavy boundary.

Bt1—5 to 24 inches; strong brown (7.5YR 4/6) clay loam; moderate fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; many medium roots; common distinct clay films on all faces of peds; strongly acid; clear wavy boundary.

Bt2—24 to 31 inches; strong brown (7.5YR 5/8) sandy clay loam; weak fine and medium subangular blocky structure; friable, slightly plastic; common fine and medium roots; few distinct clay films on all faces of peds; strongly acid; clear wavy boundary.

BC—31 to 40 inches; strong brown (7.5YR 5/6) sandy loam; weak fine subangular blocky structure; friable; common fine and medium roots; strongly acid; abrupt smooth boundary.

2C—40 to 62 inches; 80 percent yellowish brown (10YR 5/6), 10 percent strong brown (7.5YR 5/8), and 10 percent brown (10YR 5/3) very cobbly loam; massive; friable; 30 percent cobbles, 10 percent stones, and 10 percent gravel; strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Depth to lithologic discontinuity: 30 to 60 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent in the A, Ap, and E horizons; 0 to 35 percent in the Bt and BC horizons; 0 to 50 percent in the 2C horizon
Surface stoniness: 0 to 3 percent
Reaction: Very strongly acid or strongly acid throughout the profile in unlimed areas

Ap horizon:
Hue—7.5YR to 2.5Y
Value—3 to 5
Chroma—2 to 6
Texture—loam

A horizon (where present):
Hue—7.5YR to 2.5Y
Value—3 to 5
Chroma—2 to 6
Texture—loam

E horizon (where present):
Hue—7.5YR to 2.5Y
Value—3 to 5
Chroma—2 to 6
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Bt horizon:
Hue—5YR or 7.5YR

Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—loam, sandy clay loam, or clay loam

BC horizon:
Hue—5YR or 7.5YR
Value—4 to 6
Chroma—4 to 8
Texture (fine-earth fraction)—sandy loam, loam, or sandy clay loam

2C horizon:
Hue—2.5YR to 10YR
Value—2 to 8
Chroma—1 to 7
Texture—sandy loam, loam, sandy clay loam, clay loam, or clay

Udorthents

Physiographic province: Blue Ridge
Landform: River valleys, valleys, and mountain slopes
Parent material: Fill material from variable sources
Drainage class: Moderately well drained and well drained
Slowest saturated hydraulic conductivity: Unspecified
Depth class: Shallow to very deep

Associated Soils

- The well drained Hayesville soils, which have a clay subsoil
- The moderately well drained Suches soils on flood plains

Taxonomic Classification

Udorthents

Typical Pedon

Because of the variability of these soils, a typical pedon is not given. Excavation or filling has destroyed all discernible diagnostic horizons.

Range in Characteristics

Depth to bedrock: 10 to more than 72 inches
Rock fragments: 0 to 90 percent
Reaction: Extremely acid to slightly acid throughout the profile in unlimed areas

A horizon:
Hue—2.5YR to 2.5Y
Value—4 to 8
Chroma—3 to 8
Texture (fine-earth fraction)—loamy sand to clay

C horizon:
Hue—2.5YR to 5Y or neutral with value of 3 to 8
Value—3 to 8
Chroma—3 to 8
Texture (fine-earth fraction)—loamy sand to clay

Unison Series

Physiographic province: Blue Ridge and Piedmont
Landform: Fans, drainageways, and stream terraces
Parent material: Colluvium and/or local alluvium
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 2 to 25 percent

Associated Soils

- Wintergreen soils, which have a subsoil of red clay

Taxonomic Classification

Fine, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Unison loam, 7 to 15 percent slopes; located 1.3 miles west (274 degrees) of the intersection of Highways VA-151 and VA-613, about 1.2 miles north (350 degrees) of the intersection of Highways VA-151 and VA-634, in woodland:

Ap—0 to 3 inches; dark yellowish brown (10YR 4/4) loam; moderate fine granular structure; friable, slightly sticky, slightly plastic; few fine roots; 2 percent gravel; moderately acid; abrupt smooth boundary.

Bt1—3 to 27 inches; strong brown (7.5YR 4/6) silty clay loam; moderate fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine roots; common distinct clay films on all faces of peds; 5 percent gravel; strongly acid; clear smooth boundary.

Bt2—27 to 44 inches; strong brown (7.5YR 5/8) clay loam; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine roots; common distinct clay films on all faces of peds; few fine mica flakes; 6 percent cobbles and 6 percent gravel; strongly acid; clear wavy boundary.

BC—44 to 48 inches; strong brown (7.5YR 5/8) cobbly loam; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine roots; common distinct clay films on all faces of peds; few fine mica flakes; 15 percent gravel and 15 percent cobbles; strongly acid; abrupt wavy boundary.

2C—48 to 62 inches; light brown (7.5YR 6/4), red (2.5YR 4/6), and strong brown (7.5YR 5/6) silty clay; massive; firm, slightly sticky, slightly plastic; strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent in the A, Ap, and E horizons; 0 to 35 percent in the Bt horizon; 0 to 75 percent in the C horizon
Reaction: Very strongly acid to moderately acid throughout the profile in unlimed areas

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—loam

A horizon (where present):
Hue—7.5YR or 10YR
Value—4 or 5

Chroma—3 or 4
Texture—loam

E horizon (where present):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—fine sandy loam, loam, or silt loam

Bt horizon:
Hue—5YR to 10YR
Value—4 or 5
Chroma—3 to 8
Texture (fine-earth fraction)—clay loam, silty clay loam, silty clay, or clay

BC horizon:
Hue—2.5YR to 7.5YR
Value—3 to 8
Chroma—3 to 8
Texture (fine-earth fraction)—loam, clay loam, silty clay loam, silty clay, or clay

C horizon (where present):
Hue—2.5YR to 7.5YR
Value—4 to 8
Chroma—3 to 6
Texture (fine-earth fraction)—loam, silt loam, clay loam, or silty clay loam

2C horizon:
Hue—2.5YR to 7.5YR
Value—4 to 8
Chroma—3 to 6
Texture (fine-earth fraction)—loam, silt loam, clay loam, silty clay loam, silty clay, or clay

Warminster Series

Physiographic province: Piedmont
Landform: Hillslopes
Parent material: Residuum weathered from Triassic-age red shale
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Deep
Slope range: 2 to 25 percent

Associated Soils

- Arcola soils that have less clay in the subsoil than the Warminster soils
- Buffstat and Littlejoe soils, which formed from sericite schist

Taxonomic Classification

Fine, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Warminster clay loam, 2 to 7 percent slopes; located 2.1 miles east (76 degrees) from the intersection of Highways VA-604 and VA-626, about 1.9 miles south (200 degrees) of the intersection of Highways VA-644 and VA-626, in pasture:

Ap—0 to 8 inches; red (2.5YR 5/6) clay loam; moderate medium granular structure;

friable, slightly sticky, slightly plastic; many fine and medium roots; 2 percent gravel; slightly acid; clear smooth boundary.

Bt1—8 to 38 inches; red (2.5YR 4/6) clay; moderate fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine and medium roots; many distinct clay films on all faces of peds; 2 percent gravel; moderately acid; clear smooth boundary.

Bt2—38 to 45 inches; red (2.5YR 4/8) clay; moderate fine subangular blocky structure; firm, moderately sticky, moderately plastic; few fine roots; few distinct clay films on all faces of peds; 5 percent gravel; strongly acid; clear smooth boundary.

C—45 to 55 inches; red (2.5YR 4/8) clay loam; massive; friable, moderately sticky, moderately plastic; few fine roots; few fine mica flakes; 5 percent gravel; strongly acid; clear smooth boundary.

Cr—55 inches; red (2.5YR 4/6) soft shale bedrock that crushes to loam.

Range in Characteristics

Thickness of the solum: 35 to 60 inches

Depth to soft bedrock: 40 to 60 inches

Depth to hard bedrock: 72 inches or more

Rock fragments: 0 to 15 percent in the A and Ap horizons and the upper part of the Bt horizon; 2 to 35 percent in the lower part of the Bt horizon; 5 to 60 percent in the C horizon

Reaction: Very strongly acid to moderately acid in unlimed areas

Ap horizon:

Hue—2.5YR to 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture—clay loam

A horizon (where present):

Hue—2.5YR to 7.5YR
Value—3 to 5
Chroma—3 to 6
Texture—silt loam or loam

Bt horizon:

Hue—10R to 5YR
Value—3 or 4
Chroma—4 to 8
Texture (fine-earth fraction)—silty clay loam, silty clay, or clay; average of more than 30 percent silt in the particle-size control section

C horizon:

Hue—10R to 2.5YR
Value—3 or 4
Chroma—4 to 8
Texture (fine-earth fraction)—silt loam, silty clay loam, or clay loam

Cr horizon:

Hue—10R to 7.5YR
Value—3 to 6
Chroma—2 to 8
Texture (fine-earth fraction)—slightly weathered red shale that crushes to silt loam, silty clay loam, loam, or clay

Wingina Series

Physiographic province: Piedmont
Landform: Flood plains
Parent material: Recent alluvium
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 2 percent

Associated Soils

- The well drained Galtsmill soils
- The moderately well drained Batteau soils
- The poorly drained Yogaville soils

Taxonomic Classification

Fine-loamy, mixed, active, thermic Fluventic Hapludolls

Typical Pedon

Wingina loam, 0 to 2 percent slopes, occasionally flooded; located 2,200 feet east (80 degrees) of the junction of Highways VA-56 and VA-647, about 12,400 feet southeast (138 degrees) of the junction of Highways VA-56 and VA-626, in corn stubble:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) broken face and dark brown (10YR 3/3) crushed loam, yellowish brown (10YR 5/4) dry; weak fine granular structure; friable, slightly sticky; common fine and medium roots; few fine mica flakes; slightly acid; abrupt smooth boundary.

A—9 to 23 inches; dark brown (10YR 3/3) loam; weak fine granular structure; friable, slightly plastic; few fine roots; common fine mica flakes; slightly acid; abrupt smooth boundary.

Bw1—23 to 40 inches; brown (10YR 4/3) loam; weak fine subangular blocky structure; friable; few fine roots; common fine mica flakes; slightly acid; clear smooth boundary.

Bw2—40 to 65 inches; brown (10YR 4/3) fine sandy loam; weak fine subangular blocky structure; friable; few fine roots; few fine mica flakes; slightly acid; clear smooth boundary.

C—65 to 72 inches; dark yellowish brown (10YR 4/6) loamy sand; single grain; very friable; few fine roots; few fine mica flakes; slightly acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches or more
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent throughout the profile
Reaction: Strongly acid to neutral throughout the profile

Ap or A horizon:
Hue—7.5YR or 10YR
Value—3 moist, 3 to 5 dry
Chroma—2 or 3
Texture—loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 or 4
Texture—sandy loam, fine sandy loam, loam, or silt loam

C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 8
Texture—sand, loamy sand, fine sandy loam, or sandy loam; stratified in some pedons

Wintergreen Series

Physiographic province: Blue Ridge and Piedmont
Landform: Fans, drainageways, and stream terraces
Parent material: Colluvium and/or alluvium
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 2 to 25 percent

Associated Soils

- The well drained Hayesville soils, which formed from biotite gneiss
- The well drained Littlejoe soils, which formed from sericite schist
- The well drained Unison soils, which have a yellowish brown to yellowish red subsoil

Taxonomic Classification

Fine, mixed, subactive, mesic Typic Paleudults

Typical Pedon

Wintergreen loam, 2 to 7 percent slopes; located 0.5 mile east (80 degrees) of the intersection of Highways VA-668 and VA-653, about 0.9 mile northwest (300 degrees) of the intersection of Highways VA-653 and VA-650, in woodland:

A—0 to 3 inches; brown (7.5YR 4/4) loam; weak fine granular structure; friable, slightly sticky; many fine, medium, and coarse roots; very strongly acid; abrupt wavy boundary.
E—3 to 7 inches; strong brown (7.5YR 4/6) loam; weak fine subangular blocky structure; friable; common fine, medium, and coarse roots; very strongly acid; clear smooth boundary.
Bt1—7 to 24 inches; red (2.5YR 4/6) clay; moderate fine subangular blocky structure; friable, moderately sticky, moderately plastic; few fine and medium roots; many distinct clay films on all faces of peds; very strongly acid; clear smooth boundary.
Bt2—24 to 35 inches; red (2.5YR 4/6) clay; weak medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine roots; many distinct clay films on all faces of peds; very strongly acid; clear smooth boundary.
Bt3—35 to 62 inches; red (2.5YR 4/6) clay; few fine prominent strong brown (7.5YR 5/8) mottles throughout and few fine prominent pinkish white (7.5YR 8/2) mottles below a depth of 50 inches; weak coarse platy structure parting to weak medium subangular blocky; firm, moderately sticky, moderately plastic; common distinct clay films on all faces of peds; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches or more
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 35 percent in the A, Ap, E, and BE horizons and the upper part of the Bt horizon; 0 to 60 percent in the lower part of the Bt horizon and in the C horizon

Surface stoniness: 0 to 3 percent
Reaction: Extremely acid to strongly acid throughout the profile in unlimed areas

Ap horizon (where present):
Hue—7.5YR or 10YR
Value—2 to 5
Chroma—1 to 6
Texture (fine-earth fraction)—loam; clay loam in eroded areas

A horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—1 to 6
Texture (fine-earth fraction)—loam

E horizon
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

BE horizon (where present):
Hue—2.5YR to 7.5YR
Value—4 or 5
Chroma—4 to 8
Texture (fine-earth fraction)—sandy clay loam, clay loam, or clay

Bt horizon:
Hue—10R or 2.5YR
Value—3 to 5; 3 only occurring in individual subhorizons
Chroma—6 or 8
Texture (fine-earth fraction)—clay loam, sandy clay, or clay

C horizon (where present):
Hue—10R to 7.5YR
Value—3 to 8
Chroma—1 to 8
Texture (fine-earth fraction)—sandy loam, loam, sandy clay loam, clay loam, silty clay loam, clay, or sandy clay

2C horizon (where present):
Hue—10R to 7.5YR
Value—3 to 8
Chroma—1 to 8
Texture (fine-earth fraction)—sandy loam, loam, sandy clay loam, clay loam, silty clay loam, clay, or sandy clay

Yogaville Series

Physiographic province: Piedmont
Landform: Flood plains
Parent material: Recent alluvium
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 2 percent

Associated Soils

- The well drained Wingina and Galtsmill soils
- The moderately well drained Batteau soils
- The poorly drained Hatboro soils

Taxonomic Classification

Fine-loamy, mixed, active, mesic Fluvaquentic Endoaquolls

Typical Pedon

Yogaville loam, 0 to 2 percent slopes, occasionally flooded; located 1,100 feet east-northeast (70 degrees) of the junction of Highways VA-56 and VA-647, about 11,700 feet southeast (143 degrees) of the junction of Highways VA-56 and VA-626, in a hayfield:

Ap—0 to 7 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; moderate medium granular structure; friable, slightly sticky, slightly plastic; few fine and medium roots; few fine mica flakes; neutral; clear smooth boundary.

A—7 to 20 inches; very dark grayish brown (10YR 3/2) loam; weak medium granular structure; friable, slightly sticky, slightly plastic; few fine roots; few fine prominent dark yellowish brown (10YR 4/6) iron-manganese masses; few fine mica flakes; neutral; abrupt smooth boundary.

Bg1—20 to 42 inches; dark grayish brown (2.5Y 4/2) clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine prominent dark yellowish brown (10YR 4/6) iron-manganese masses; few fine mica flakes; slightly acid; clear smooth boundary.

Bg2—42 to 50 inches; gray (N 5/0) clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine prominent strong brown (7.5YR 4/6) and common fine prominent dark yellowish brown (10YR 4/6) iron-manganese masses; few fine mica flakes; slightly acid; clear smooth boundary.

Cg—50 to 72 inches; 60 percent dark gray (10YR 4/1), 25 percent grayish brown (10YR 5/2), and 15 percent very dark gray (N 3/0) clay loam; massive; friable, slightly sticky, slightly plastic; common fine and medium prominent strong brown (7.5YR 5/8) iron-manganese masses; few fine mica flakes; slightly acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches or more
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent throughout the profile
Reaction: Strongly acid to neutral

Ap horizon:
Hue—10YR to 5Y
Value—3 moist, 3 to 5 dry
Chroma—2 or 3
Texture—loam

A horizon:
Hue—10YR
Value—3 moist, 3 to 5 dry
Chroma—2 or 3
Texture—loam

Bg horizon:
Hue—10YR to 5Y or neutral
Value—4 to 6

Chroma—0 to 2
Texture—sandy loam, fine sandy loam, loam, silt loam, clay loam, or silty clay loam; subhorizons of silt loam and silty clay loam occur in some pedons

Cg horizon:
Hue—10YR to 5Y or neutral
Value—4 to 7
Chroma—0 to 2
Texture—sand, loamy sand, sandy loam, or fine sandy loam

Formation of the Soils

This section describes the factors of soil formation as they relate to the soils of Nelson County and explains the major processes of soil horizon development (fig. 11).

Factors of Soil Formation

The five major factors of soil formation are parent material, topography, climate, living organisms, and time. Topography and parent material are modified over time by the active forces of climate and living organisms *(7)*.

Parent Material

Parent material is the unconsolidated material in which a soil forms. In Nelson County, parent materials are residual or transported material.

Residual parent material has weathered in place from the underlying bedrock. Properties of the residual parent material are directly related to the characteristics of the underlying bedrock. Hayesville and Elioak soils formed in residuum.

Transported parent material consists of alluvial sediments and colluvial sediments. The alluvial sediments were moved by water and were deposited as mixtures or layers of rock fragments, sand, silt, and clay. They are on flood plains and terraces. Craigsville, Galtsmill, Hatboro, and Yogaville soils formed in recent alluvium on flood plains. Delanco and Elsinboro soils formed in alluvial sediments on terraces. The colluvial sediments were moved by gravity, with water acting as the lubricant. They are on fans at the base of mountains, at the head of drainageways, in depressions, and on footslopes. Belvoir, Chatuge, Lew, Saunook, Thurmont, Unison, and Wintergreen soils formed in colluvium.

Igneous and metamorphic rocks are the two primary types of rock in the county. Sedimentary rocks occur in small areas between Wingina and Howardsville. Igneous rocks formed from the cooling of molten rock material. Examples of igneous rocks in the county are granite, gabbro, diorite, and anorthosite. Sedimentary rocks in the survey area are composed predominantly of silicate minerals, such as quartz or clay. Examples of these rocks are sandstone, shale, and conglomerate. These rocks were formed by sediments deposited during the Triassic Period. Metamorphic rocks are igneous or sedimentary rocks that have been altered by heat and pressure. Granite gneiss, mica schist, biotite gneiss, phyllite, and greenstone are examples of metamorphic rock in Nelson County.

Igneous and metamorphic rocks are subdivided into acidic and basic rock types. The subdivision is based on the nature and amount of specific minerals in the rocks. Basic rocks are generally richer in calcium and magnesium than acidic rocks. Soils that formed from acidic rocks, such as granite, granite gneiss, biotite gneiss, mica schist, and phyllite, are Hayesville and Elioak soils. Catoctin and Myersville soils formed from basic rocks, such as greenstone.

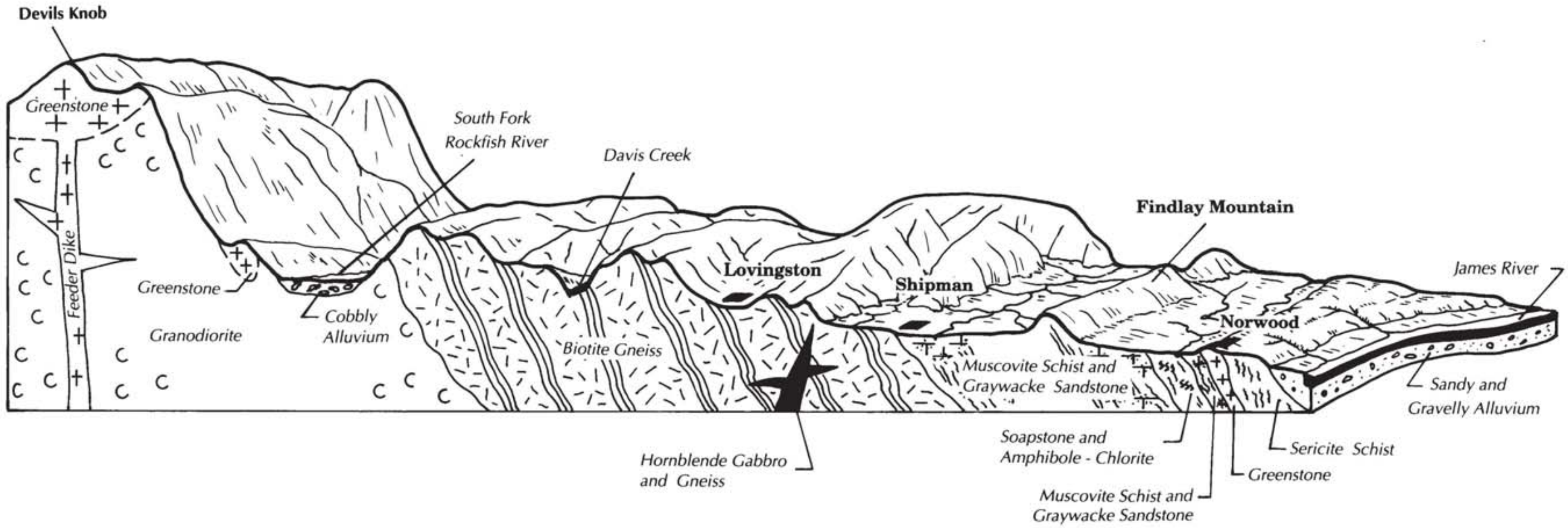

Figure 11.—Cross section of the typical landforms and rock patterns in Nelson County.

Topography

Topography affects the formation of soils by influencing the rate of water infiltration, the rate of surface runoff, soil drainage, geologic erosion, and soil temperature. It can alter the effects of the other soil-forming factors to the extent that several different kinds of soil can form from the same parent material. Differences in topography can cause the same parent material to weather at different rates, thus affecting the impact of plants and animals on soil formation.

Physiographically, approximately 60 percent of Nelson County is within the Piedmont and 40 percent is within the Blue Ridge. The elevation of the county ranges from about 300 to 1,200 feet above sea level in the Piedmont and from about 1,200 to 4,063 feet in the Blue Ridge. The gradient of the Piedmont upland is about 40 to 50 feet per mile, and the gradient of the Blue Ridge is about 400 to 2,000 feet per mile. Stream gradients in the survey area are generally about 10 to 20 feet per mile.

The Piedmont generally consists of gently sloping and strongly sloping, intermediate to broad ridge summits and steep and very steep side slopes. The Blue Ridge has strongly sloping and moderately steep, broad, dome-shaped to narrow ridge summits and steep and very steep side slopes. The soils in both areas are mostly well drained and have a loamy or clayey subsoil. The gently sloping and strongly sloping areas have medium or rapid rates of runoff and a good rate of water infiltration. The steep and very steep areas commonly have a very rapid rate of runoff and a poor rate of water infiltration. The steeper soils have less development in the subsoil than the less sloping soils.

Climate

Climate determines, to a large extent, the rate and degree of weathering of the parent material. It also determines the kind and amount of biological activity and influences the type of weathering, chemical or physical, that parent material undergoes.

Chemical weathering of parent material occurs more rapidly under a warm, humid climate, such as that of Nelson County, than under a cold, dry climate. Physical weathering is more pronounced under the colder, dryer climates. Although landscape position and slope modify the influence of climate, their effects do not account for major differences among the soils of the survey area. The amount of precipitation and the movement of the water through the soil greatly affect the translocation of clays and the movement of minerals out of the zone of biological activity. The climate of the Piedmont causes rapid weathering of parent material and thus promotes the movement of clays and minerals. The climate of the Blue Ridge is less conducive to the translocation of clays and leaching of minerals because of lower temperatures but is more conducive to continued physical weathering. Weathering, translocation of clays, and leaching of minerals take place most of the year. The relative influence of each on the soil determines the main characteristics of the soil.

Living Organisms

Plants are the main source of organic matter in the soils. Organic matter decomposes and is incorporated into the soil by the action of micro-organisms and earthworms and, to a lesser degree, by windthrown trees and burrowing animals.

The soils of the Blue Ridge have a higher content of organic matter than the soils of the Piedmont. In the Piedmont, the warm, humid climate, the adequate supply of moisture, and the abundance of micro-organisms prevent the accumulation of large amounts of organic matter. Earthworms, burrowing animals, and plant roots help to keep the soil aerated. Plant roots also help in soil formation by penetrating cracks and breaking up the underlying bedrock.

Cultivation, drainage, irrigation, use of new types of vegetation, applications of lime and fertilizer, and use of herbicides and pesticides are some of the ways that humans have influenced the rate of soil development in the survey area. In most of Nelson County, human influence has caused an increase in erosion.

Time

Time is needed for changes to take place in the parent material. Because of the other soil-forming factors, however, soils that formed in the same type of parent material and for the same amount of time may not be equally developed. Runoff and erosion, which hinder the development of well expressed soil horizons, are greater on the steeper slopes. Thus, soils on the steeper slopes generally are less developed than soils on the less steep slopes although they formed in the same parent material.

Soils that form in weather-resistant parent material do not develop as rapidly as soils that form in parent material that is less resistant to weathering. Soils on flood plains, such as Codorus and Colvard soils, commonly have weakly defined layers because they are subject to the constant deposition of sediment.

Processes of Soil Horizon Differentiation

Several processes are involved in the formation of soil horizons. Among these are the accumulation of organic matter, the leaching of soluble salts, the formation and translocation of clay minerals, the formation of soil structure, and the reduction and transfer of iron. These processes occur continually and simultaneously. They have been taking place for thousands of years.

Organic matter accumulates as plant and animal material decomposes. It darkens the surface layer and helps to form the A horizon. Once organic matter is lost, it normally takes a long time to replace. In Nelson County, the content of organic matter in the surface layer of the soils averages about 2 percent.

Soils that have distinct subsoil horizons were leached of some of the lime and soluble salts before the clay minerals moved downward. Some of the factors that affect this leaching are the kinds of salts originally present, the depth to which the soil solution percolates, and the texture of the soil profile. In Nelson County, well drained and moderately well drained soils have a yellowish brown to red subsoil. These colors are caused mainly by thin coatings of iron oxide on sand and silt grains, but in some soils the colors are inherited from the materials in which the soils formed.

The weathering of primary minerals to silicate clay minerals, largely through hydrolysis, results in the formation of kaolinitic clay. Kaolinite is the most common clay mineral in the soils of Nelson County. Other kinds of clay, such as montmorillonite and illite, are in the soils in smaller amounts.

It is thought that some lime and other soluble salts are leached prior to the translocation of iron and clay. Leaching is affected by factors such as the kinds of salts originally present, the percolation depth of the soil solution, and the soil texture. Once leaching has occurred, clay is more easily dispersed and allowed to enter the soil solution. Many of the soils in the county have a Bt horizon in which clay has accumulated. This accumulation is believed to occur as the soil solution carries dispersed clay down through the profile and then deposits it as the solution dries. The E horizon loses much of its clay to the translocation process and contains mostly inert materials such as silt- and sand-sized quartz. Many soils in the county contain more clay in the subsoil than in the surface horizon.

The structure in the soils of Nelson County is weak to strong subangular blocky, and the subsoil contains more clay than the surface layer. A fragipan has developed in the subsoil of the somewhat poorly drained and moderately well drained Belvoir soils. The fragipan is very firm and brittle when moist and very hard when dry. The soil particles are packed so tightly that the bulk density is high and the pore space is low. The fragipan may be the result of the shrinking and swelling of soil that occurs in alternating wet and dry periods. This process may explain the packing of the soil particles and the gross polygonal pattern of cracks in the cementing agents, which cause the brittleness and hardness.

The reduction and transfer of iron, called gleying, are associated mainly with wet, poorly drained soils, such as Chatuge and Hatboro soils. In these soils, the subsoil and underlying material are gray, indicating redoximorphic depletions and the transfer of iron in solution. Moderately well drained and somewhat poorly drained soils have redoximorphic depletions and redoximorphic accumulations in red, yellowish red, and yellowish brown. Redoximorphic accumulations, in the form of soft masses or hard concretions or nodules, indicate the segregation of iron due to a fluctuating water table.

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Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the “National Soil Survey Handbook” (available in local offices of the Natural Resources Conservation Service or on the Internet).

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.

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.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp. A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding plane. A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

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.

Deep soil. A soil that is 40 to 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

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, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, 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.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) emplaced on the earth's surface.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan (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.

Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms. A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain splay. A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.

Flood-plain step. An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.

Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.

Foothills. A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).

Footslope. The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope. A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

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.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

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 deep soil. A soil that is 20 to 40 inches deep over bedrock or to other material that restricts the penetration of plant roots.

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 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.

Quartzite, metamorphic. Rock consisting mainly of quartz that formed through recrystallization of quartz-rich sandstone or chert.

Quartzite, sedimentary. Very hard but unmetamorphosed sandstone consisting chiefly of quartz grains.

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 that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:

   A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*

   B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*

   C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.

2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:

   A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*

   B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or 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.

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.

Rock outcrop. Exposures of bare bedrock other than lava flows and rock-lined pits.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Saturated hydraulic conductivity (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. 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.

Shallow soil. A soil that is 10 to 20 inches deep over bedrock or to other material that restricts the penetration of plant roots.

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 predominates over clay.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides (pedogenic). Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for slopes are as follows:

Nearly level	0 to 2 percent
Gently sloping	2 to 7 percent
Strongly sloping	7 to 15 percent
Moderately steep	15 to 25 percent
Steep	25 to 35 percent
Very steep	35 percent and higher

Slope alluvium. Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines.

Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Slow refill (in tables). The slow filling of ponds, resulting from restricted 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 crusts. 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.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stone line. In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

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.

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.

Very deep soil. A soil that is more than 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Very shallow soil. A soil that is less than 10 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded. Refers to soil material consisting of coarse-grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.—Temperature and Precipitation

(Recorded in the period 1971-2000 at Tye River, Virginia)

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average daily	Maximum temp. higher than--	Minimum temp. lower than--	Average number of growing degree days*	Average	Less than--	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--	46.1	25.0	35.5	71	0	62	3.75	1.91	5.62	7	1.5
February-	50.1	26.9	38.5	75	6	91	3.26	1.72	4.81	6	0.8
March----	58.7	33.7	46.2	84	14	239	4.05	2.25	5.68	7	0.8
April----	69.3	42.2	55.7	91	24	474	3.46	2.09	4.51	6	0.1
May------	76.1	51.2	63.6	92	34	732	4.81	2.70	6.81	8	0.0
June-----	83.3	60.1	71.7	96	43	951	3.56	1.61	5.01	6	0.0
July-----	87.2	65.1	76.1	99	52	1,121	4.30	2.01	6.17	7	0.0
August---	85.9	63.5	74.7	98	50	1,076	3.57	1.33	5.61	6	0.0
September	79.6	56.8	68.2	95	38	846	4.35	1.32	7.14	5	0.0
October--	70.4	44.0	57.2	87	26	533	3.85	1.21	6.24	5	0.1
November-	60.4	35.3	47.9	82	17	262	3.49	2.01	4.87	6	0.3
December-	50.0	28.1	39.1	75	6	104	3.39	1.82	4.87	6	0.3
Yearly:											
Average	68.1	44.3	56.2	---	---	---	---	---	---	---	---
Extreme	105	-10	---	100	-2	---	---	---	---	---	---
Total--	---	---	---	---	---	6,491	45.85	38.37	52.80	75	3.9

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

Table 2.—Freeze Dates in Spring and Fall

(Recorded in the period 1971-2000 at Tye River, 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. 10	Apr. 16	Apr. 27
2 years in 10 later than--	Apr. 4	Apr. 11	Apr. 23
5 years in 10 later than--	Mar. 22	Apr. 1	Apr. 15
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 29	Oct. 16	Oct. 1
2 years in 10 earlier than--	Nov. 4	Oct. 22	Oct. 7
5 years in 10 earlier than-	Nov. 14	Nov. 2	Oct. 17

Table 3.—Growing Season

(Recorded in the period 1971-2000 at Tye River, 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	212	192	164
8 years in 10	221	200	171
5 years in 10	237	215	185
2 years in 10	253	230	198
1 year in 10	261	238	205

Table 4.—Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
1D	Arcola gravelly silt loam, 15 to 25 percent slopes	469	0.2
1E	Arcola gravelly silt loam, 25 to 50 percent slopes	365	0.1
2A	Batteau loam, 0 to 2 percent slopes, occasionally flooded	567	0.2
3B	Belvoir sandy loam, 2 to 7 percent slopes	229	*
4B	Buffstat silt loam, 2 to 7 percent slopes	327	0.1
4C	Buffstat silt loam, 7 to 15 percent slopes	1,606	0.5
4D	Buffstat silt loam, 15 to 25 percent slopes	990	0.3
5C	Bugley channery silt loam, 7 to 15 percent slopes	2,026	0.7
5D	Bugley channery silt loam, 15 to 25 percent slopes	4,384	1.4
5E	Bugley channery silt loam, 25 to 50 percent slopes	10,783	3.6
6E	Catoctin-Rock outcrop complex, 25 to 75 percent slopes, extremely stony	1,829	0.6
7B	Chatuge loam, 1 to 4 percent slopes	570	0.2
8A	Codorus silt loam, 0 to 2 percent slopes, occasionally flooded	2,626	0.9
9B	Colleen gravelly loam, 2 to 7 percent slopes	814	0.3
9C	Colleen gravelly loam, 7 to 15 percent slopes	1,143	0.4
9D	Colleen gravelly loam, 15 to 25 percent slopes	407	0.1
10A	Colvard fine sandy loam, 0 to 2 percent slopes, occasionally flooded	3,330	1.1
11A	Craigsville very cobbly loam, 0 to 2 percent slopes, frequently flooded	3,979	1.3
12B	Delanco loam, 2 to 7 percent slopes	6,247	2.1
12C	Delanco loam, 7 to 15 percent slopes	930	0.3
13C	Edneytown loam, 7 to 15 percent slopes	1,110	0.4
13D	Edneytown loam, 15 to 25 percent slopes	1,309	0.4
13E	Edneytown loam, 25 to 50 percent slopes	2,602	0.9
14C	Edneytown-Peaks complex, 7 to 15 percent slopes, extremely stony	2,273	0.7
14D	Edneytown-Peaks complex, 15 to 35 percent slopes, extremely stony	6,177	2.0
14E	Edneytown-Peaks complex, 35 to 55 percent slopes, extremely stony	45,489	15.0
14F	Edneytown-Peaks complex, 55 to 75 percent slopes, extremely stony	238	*
15B	Elioak loam, 2 to 7 percent slopes	3,790	1.2
15C	Elioak loam, 7 to 15 percent slopes	8,802	2.9
15D	Elioak loam, 15 to 25 percent slopes	5,884	1.9
16C	Elioak clay loam, 7 to 15 percent slopes, severely eroded	916	0.3
16D	Elioak clay loam, 15 to 25 percent slopes, severely eroded	667	0.2
17B	Elsinboro loam, 2 to 7 percent slopes, rarely flooded	269	*
18C	Fauquier loam, 7 to 15 percent slopes, very stony	414	0.1
18D	Fauquier loam, 15 to 25 percent slopes, very stony	837	0.3
18E	Fauquier loam, 25 to 50 percent slopes, very stony	2,798	0.9
19A	Galtsmill fine sandy loam, 0 to 2 percent slopes, occasionally flooded	619	0.2
20D	Glenelg silt loam, 15 to 25 percent slopes	699	0.2
21A	Hatboro loam, 0 to 2 percent slopes, frequently flooded	539	0.2
22B	Hayesville loam, 2 to 7 percent slopes	5,221	1.7
22C	Hayesville loam, 7 to 15 percent slopes	12,220	4.0
22D	Hayesville loam, 15 to 25 percent slopes	7,186	2.4
22E	Hayesville loam, 25 to 50 percent slopes	2,599	0.9
23B	Hayesville clay loam, 2 to 7 percent slopes, severely eroded	428	0.1
23C	Hayesville clay loam, 7 to 15 percent slopes, severely eroded	4,900	1.6
23D	Hayesville clay loam, 15 to 25 percent slopes, severely eroded	5,857	1.9
23E	Hayesville clay loam, 25 to 50 percent slopes, severely eroded	1,628	0.5
24C	Hayesville loam, 7 to 15 percent slopes, very stony	636	0.2
24D	Hayesville loam, 15 to 25 percent slopes, very stony	1,193	0.4
24E	Hayesville loam, 25 to 50 percent slopes, very stony	2,420	0.8
25C	Hazel channery loam, 7 to 15 percent slopes	217	*
25D	Hazel channery loam, 15 to 25 percent slopes	1,601	0.5
25E	Hazel channery loam, 25 to 50 percent slopes	9,901	3.3
26D	Hazel loam, 15 to 25 percent slopes, very stony	752	0.2
26E	Hazel loam, 25 to 50 percent slopes, very stony	4,043	1.3
27B	Jackland gravelly silt loam, 2 to 7 percent slopes	1,455	0.5
27C	Jackland gravelly silt loam, 7 to 15 percent slopes	707	0.2
28B	Lew silt loam, 2 to 7 percent slopes	379	0.1
29B	Lew silt loam, 2 to 7 percent slopes, extremely stony	377	0.1
30C	Lew channery silt loam, 7 to 15 percent slopes, extremely bouldery	1,426	0.5
30D	Lew channery silt loam, 15 to 25 percent slopes, extremely bouldery	1,194	0.4

See footnote at end of table.

Table 4.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Acres	Percent
30E	Lew channery silt loam, 25 to 75 percent slopes, extremely bouldery------	971	0.3
31B	Littlejoe silt loam, 2 to 7 percent slopes------------------------------	1,713	0.6
31C	Littlejoe silt loam, 7 to 15 percent slopes-----------------------------	3,966	1.3
32B	Minnieville loam, 2 to 7 percent slopes---------------------------------	1,107	0.4
32C	Minnieville loam, 7 to 15 percent slopes--------------------------------	3,745	1.2
32D	Minnieville loam, 15 to 25 percent slopes-------------------------------	2,835	0.9
32E	Minnieville loam, 25 to 50 percent slopes-------------------------------	470	0.2
33C	Myersville-Catoctin complex, 7 to 15 percent slopes, extremely stony-----	945	0.3
33D	Myersville-Catoctin complex, 15 to 35 percent slopes, extremely stony----	2,659	0.9
33E	Myersville-Catoctin complex, 35 to 55 percent slopes, extremely stony----	5,596	1.8
34C	Occoquan loam, 7 to 15 percent slopes-----------------------------------	794	0.3
34D	Occoquan loam, 15 to 25 percent slopes----------------------------------	2,953	1.0
34E	Occoquan loam, 25 to 50 percent slopes----------------------------------	8,388	2.8
35D	Occoquan loam, 15 to 25 percent slopes, very stony----------------------	687	0.2
35E	Occoquan loam, 25 to 50 percent slopes, very stony----------------------	7,200	2.4
36D	Peaks-Rock outcrop complex, 15 to 35 percent slopes---------------------	726	0.2
36E	Peaks-Rock outcrop complex, 35 to 55 percent slopes---------------------	7,228	2.4
36F	Peaks-Rock outcrop complex, 55 to 75 percent slopes---------------------	7,154	2.4
37A	Pineywoods silt loam, 0 to 2 percent slopes-----------------------------	1,239	0.4
38	Pits, quarry--	311	0.1
39C	Saunook loam, 7 to 15 percent slopes------------------------------------	850	0.3
39D	Saunook loam, 15 to 25 percent slopes-----------------------------------	290	*
40C	Saunook loam, 7 to 15 percent slopes, very stony------------------------	2,656	0.9
40D	Saunook loam, 15 to 25 percent slopes, very stony-----------------------	3,228	1.1
40E	Saunook loam, 25 to 50 percent slopes, very stony-----------------------	821	0.3
41B	Sketerville silt loam, 2 to 7 percent slopes----------------------------	1,450	0.5
42C	Spriggs loam, 7 to 15 percent slopes, very stony------------------------	1,159	0.4
42D	Spriggs loam, 15 to 25 percent slopes, very stony-----------------------	1,013	0.3
42E	Spriggs loam, 25 to 50 percent slopes, very stony-----------------------	3,272	1.1
43A	Suches loam, 0 to 2 percent slopes, frequently flooded------------------	3,353	1.1
44C	Sylco-Sylvatus complex, 7 to 15 percent slopes, extremely stony----------	331	0.1
44D	Sylco-Sylvatus complex, 15 to 35 percent slopes, extremely stony---------	814	0.3
44E	Sylco-Sylvatus complex, 35 to 55 percent slopes, extremely stony---------	2,173	0.7
45E	Sylvatus-Rock outcrop complex, 35 to 55 percent slopes, extremely stony--	182	*
45F	Sylvatus-Rock outcrop complex, 55 to 70 percent slopes, extremely stony--	201	*
46B	Thurmont loam, 2 to 7 percent slopes------------------------------------	625	0.2
46C	Thurmont loam, 7 to 15 percent slopes-----------------------------------	875	0.3
46D	Thurmont loam, 15 to 25 percent slopes----------------------------------	259	*
47B	Thurmont loam, 2 to 7 percent slopes, very stony------------------------	585	0.2
47C	Thurmont loam, 7 to 15 percent slopes, very stony-----------------------	390	0.1
47D	Thurmont loam, 15 to 25 percent slopes, very stony----------------------	502	0.2
48	Udorthents, smoothed--	117	*
49B	Unison loam, 2 to 7 percent slopes--------------------------------------	1,824	0.6
49C	Unison loam, 7 to 15 percent slopes-------------------------------------	1,009	0.3
49D	Unison loam, 15 to 25 percent slopes------------------------------------	398	0.1
50B	Warminster clay loam, 2 to 7 percent slopes-----------------------------	259	*
50C	Warminster clay loam, 7 to 15 percent slopes----------------------------	633	0.2
50D	Warminster clay loam, 15 to 25 percent slopes---------------------------	20	*
51A	Wingina loam, 0 to 2 percent slopes, occasionally flooded---------------	1,066	0.4
52B	Wintergreen loam, 2 to 7 percent slopes---------------------------------	4,208	1.4
52C	Wintergreen loam, 7 to 15 percent slopes--------------------------------	4,476	1.5
52D	Wintergreen loam, 15 to 25 percent slopes-------------------------------	1,108	0.4
53B	Wintergreen clay loam, 2 to 7 percent slopes, severely eroded-----------	1,052	0.3
53C	Wintergreen clay loam, 7 to 15 percent slopes, severely eroded----------	2,613	0.9
53D	Wintergreen clay loam, 15 to 25 percent slopes, severely eroded---------	1,016	0.3
54C	Wintergreen loam, 7 to 15 percent slopes, very stony--------------------	167	*
55A	Yogaville loam, 0 to 2 percent slopes, occasionally flooded-------------	348	0.1
W	Water---	2,277	0.7
	Total---	303,700	100.0

* Less than 0.1 percent.

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability	Virginia soil management group	Alfalfa hay	Corn	Grass-legume hay	Pasture	Soybeans
			Tons	Bu	Tons	AUM	Bu
1D:							
Arcola-----------	4e	U	2.9	80	2.9	5.5	29
1E:							
Arcola-----------	7e	U	---	---	---	---	---
2A:							
Batteau----------	2w	I	3.0	140	4.5	9.7	40
3B:							
Belvoir----------	4w	BB	---	85	3.5	6.0	25
4B:							
Buffstat---------	2e	V	4.0	100	3.5	8.0	35
4C:							
Buffstat---------	3e	V	3.5	88	3.1	6.5	31
4D:							
Buffstat---------	4e	V	3.2	80	2.8	6.3	28
5C:							
Bugley-----------	6s	JJ	---	---	---	2.0	---
5D:							
Bugley-----------	6s	JJ	---	---	---	1.8	---
5E:							
Bugley-----------	7e	JJ	---	---	---	---	---
6E:							
Catoctin---------	7s	JJ	---	---	---	---	---
Rock outcrop------	8s	---	---	---	---	---	---
7B:							
Chatuge----------	4w	OO	---	65	---	4.0	20
8A:							
Codorus----------	4w	A	6.0	160	5.0	8.1	50
9B:							
Colleen----------	2e	KK	2.5	59	2.7	5.0	18
9C:							
Colleen----------	3e	KK	2.2	52	2.4	4.5	16
9D:							
Colleen----------	4e	KK	2.0	47	2.2	4.0	14
10A:							
Colvard----------	2s	II	---	65	---	4.0	20

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia soil management group	Alfalfa hay	Corn	Grass-legume hay	Pasture	Soybeans
			Tons	Bu	Tons	AUM	Bu
11A:							
Craigsville-------	4s	CC	2.0	60	2.4	4.5	18
12B:							
Delanco-----------	2e	B	5.5	160	5.0	9.0	50
12C:							
Delanco-----------	3e	B	4.8	141	4.0	8.5	44
13C:							
Edneytown---------	3e	L	3.5	114	3.5	6.5	35
13D:							
Edneytown---------	4e	L	3.5	104	3.2	6.3	32
13E:							
Edneytown---------	7e	L	---	---	---	---	---
14C:							
Edneytown---------	7s	L	---	---	---	---	---
Peaks-------------	7s	JJ	---	---	---	---	---
14D:							
Edneytown---------	7s	L	---	---	---	---	---
Peaks-------------	7s	JJ	---	---	---	---	---
14E:							
Edneytown---------	7e	L	---	---	---	---	---
Peaks-------------	7e	JJ	---	---	---	---	---
14F:							
Edneytown---------	7e	L	---	---	---	---	---
Peaks-------------	7e	JJ	---	---	---	---	---
15B:							
Elioak------------	2e	X	4.0	100	3.5	10.5	35
15C:							
Elioak------------	3e	X	3.5	88	3.1	9.0	31
15D:							
Elioak------------	4e	X	3.2	80	2.8	8.5	28
16C:							
Elioak------------	4e	X	2.4	62	2.2	6.3	22
16D:							
Elioak------------	6e	X	---	---	---	6.0	---
17B:							
Elsinboro---------	2e	L	4.0	130	4.0	9.5	40
18C:							
Fauquier----------	6s	N	---	---	---	7.0	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia soil management group	Alfalfa hay	Corn	Grass-legume hay	Pasture	Soybeans
			Tons	Bu	Tons	AUM	Bu
18D:							
Fauquier----------	7s	N	---	---	---	---	---
18E:							
Fauquier----------	7s	N	---	---	---	---	---
19A:							
Galtsmill---------	1	II	2.5	65	2.5	4.0	20
20D:							
Glenelg-----------	4e	N	4.5	104	3.2	8.5	32
21A:							
Hatboro-----------	6w	HH	---	---	---	5.0	---
22B:							
Hayesville--------	2e	X	4.0	100	3.5	10.5	35
22C:							
Hayesville--------	3e	X	3.5	88	3.1	9.0	31
22D:							
Hayesville--------	4e	X	3.2	80	2.8	8.5	28
22E:							
Hayesville--------	7e	X	---	---	---	---	---
23B:							
Hayesville--------	3e	X	2.8	70	2.5	7.4	24
23C:							
Hayesville--------	4e	X	2.4	62	2.2	6.3	22
23D:							
Hayesville--------	6e	X	---	---	---	6.0	---
23E:							
Hayesville--------	7e	X	---	---	---	---	---
24C:							
Hayesville--------	6s	X	---	---	---	5.0	---
24D:							
Hayesville--------	7s	X	---	---	---	---	---
24E:							
Hayesville--------	7s	X	---	---	---	---	---
25C:							
Hazel-------------	3e	JJ	---	50	2.2	3.5	15
25D:							
Hazel-------------	4e	JJ	---	44	2.0	3.2	14
25E:							
Hazel-------------	7e	JJ	---	---	---	---	---
26D:							
Hazel-------------	7s	JJ	---	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia soil management group	Alfalfa hay	Corn	Grass-legume hay	Pasture	Soybeans
			Tons	Bu	Tons	AUM	Bu
26E:							
Hazel-------------	7e	JJ	---	---	---	---	---
27B:							
Jackland----------	4w	KK	---	59	2.7	8.0	18
27C:							
Jackland----------	4w	KK	---	52	2.4	7.5	16
28B:							
Lew---------------	2e	FF	2.5	85	3.5	7.8	25
29B:							
Lew---------------	7s	FF	---	---	---	---	---
30C:							
Lew---------------	7s	FF	---	---	---	---	---
30D:							
Lew---------------	7s	FF	---	---	---	---	---
30E:							
Lew---------------	7e	FF	---	---	---	---	---
31B:							
Littlejoe---------	2e	V	4.0	100	3.5	8.0	35
31C:							
Littlejoe---------	3e	V	3.5	88	3.1	6.5	31
32B:							
Minnieville-------	2e	N	5.5	130	4.0	9.1	40
32C:							
Minnieville-------	3e	N	4.8	114	3.5	8.7	35
32D:							
Minnieville-------	4e	N	4.4	104	3.2	8.0	32
32E:							
Minnieville-------	7e	N	---	---	---	---	---
33C:							
Myersville--------	7s	D	---	---	---	---	---
Catoctin----------	7s	JJ	---	---	---	---	---
33D:							
Myersville--------	7s	D	---	---	---	---	---
Catoctin----------	7s	JJ	---	---	---	---	---
33E:							
Myersville--------	7e	D	---	---	---	---	---
Catoctin----------	7e	JJ	---	---	---	---	---
34C:							
Occoquan----------	3e	DD	---	75	3.1	4.5	22

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia soil management group	Alfalfa hay	Corn	Grass-legume hay	Pasture	Soybeans
			Tons	Bu	Tons	AUM	Bu
34D:							
Occoquan----------	4e	DD	---	68	2.8	4.0	20
34E:							
Occoquan----------	7e	DD	---	---	---	---	---
35D:							
Occoquan----------	7s	DD	---	---	---	---	---
35E:							
Occoquan----------	7e	DD	---	---	---	---	---
36D:							
Peaks-------------	7s	JJ	---	---	---	---	---
Rock outcrop------	8s	---	---	---	---	---	---
36E:							
Peaks-------------	7s	JJ	---	---	---	---	---
Rock outcrop------	8s	---	---	---	---	---	---
36F:							
Peaks-------------	7s	JJ	---	---	---	---	---
Rock outcrop------	8s	---	---	---	---	---	---
37A:							
Pineywoods--------	4w	NN	---	65	---	3.0	20
38:							
Pits--------------	8s	---	---	---	---	---	---
39C:							
Saunook-----------	3e	L	3.5	114	3.5	8.0	35
39D:							
Saunook-----------	4e	L	3.2	104	3.2	7.5	32
40C:							
Saunook-----------	6s	L	---	---	---	6.0	---
40D:							
Saunook-----------	7s	L	---	---	---	---	---
40E:							
Saunook-----------	7s	L	---	---	---	---	---
41B:							
Sketerville-------	2e	KK	---	65	---	3.5	20
42C:							
Spriggs-----------	6s	JJ	---	---	---	4.5	---
42D:							
Spriggs-----------	7s	JJ	---	---	---	---	---
42E:							
Spriggs-----------	7e	JJ	---	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia soil management group	Alfalfa hay	Corn	Grass-legume hay	Pasture	Soybeans
			Tons	Bu	Tons	AUM	Bu
43A:							
Suches------------	3w	A	6.0	160	5.0	9.5	50
44C:							
Sylco-------------	7s	JJ	---	---	---	---	---
Sylvatus----------	7s	JJ	---	---	---	---	---
44D:							
Sylco-------------	7s	JJ	---	---	---	---	---
Sylvatus----------	7s	JJ	---	---	---	---	---
44E:							
Sylco-------------	7e	JJ	---	---	---	---	---
Sylvatus----------	7e	JJ	---	---	---	---	---
45E:							
Sylvatus----------	7s	JJ	---	---	---	---	---
Rock outcrop------	8s	---	---	---	---	---	---
45F:							
Sylvatus----------	7s	JJ	---	---	---	---	---
Rock outcrop------	8s	---	---	---	---	---	---
46B:							
Thurmont----------	2e	L	4.0	130	4.5	8.5	40
46C:							
Thurmont----------	3e	L	3.5	114	3.5	8.0	35
46D:							
Thurmont----------	4e	L	3.2	104	3.2	7.6	32
47B:							
Thurmont----------	6s	L	---	---	---	7.0	---
47C:							
Thurmont----------	6s	L	---	---	---	6.7	---
47D:							
Thurmont----------	7s	L	---	---	---	---	---
48. Udorthents							
49B:							
Unison------------	2e	L	4.0	130	4.5	9.2	40
49C:							
Unison------------	3e	L	3.5	114	3.5	8.5	35
49D:							
Unison------------	4e	L	3.2	104	3.2	8.0	32

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia soil management group	Alfalfa hay	Corn	Grass-legume hay	Pasture	Soybeans
			Tons	Bu	Tons	AUM	Bu
50B: Warminster--------	2e	X	4.0	100	3.5	8.0	35
50C: Warminster--------	3e	X	3.5	88	3.1	7.5	31
50D: Warminster--------	4e	X	3.2	80	2.8	7.0	28
51A: Wingina-----------	1	A	6.0	160	5.0	9.7	50
52B: Wintergreen-------	2e	O	5.5	130	4.0	6.0	40
52C: Wintergreen-------	3e	O	4.8	114	3.5	5.7	35
52D: Wintergreen-------	4e	O	4.4	104	3.2	5.3	32
53B: Wintergreen-------	3e	O	3.8	91	2.8	4.2	28
53C: Wintergreen-------	4e	O	3.4	80	2.4	3.5	24
53D: Wintergreen-------	6e	O	---	---	---	3.7	---
54C: Wintergreen-------	6s	O	---	---	---	5.5	---
55A: Yogaville---------	4w	MM	---	65	3.2	5.0	20
W. Water							

Table 6.—Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Map symbol	Map unit name
2A	Batteau loam, 0 to 2 percent slopes, occasionally flooded
4B	Buffstat silt loam, 2 to 7 percent slopes
8A	Codorus silt loam, 0 to 2 percent slopes, occasionally flooded (if drained)
9B	Colleen gravelly loam, 2 to 7 percent slopes
10A	Colvard fine sandy loam, 0 to 2 percent slopes, occasionally flooded
12B	Delanco loam, 2 to 7 percent slopes
15B	Elioak loam, 2 to 7 percent slopes
17B	Elsinboro loam, 2 to 7 percent slopes, rarely flooded
19A	Galtsmill fine sandy loam, 0 to 2 percent slopes, occasionally flooded
22B	Hayesville loam, 2 to 7 percent slopes
31B	Littlejoe silt loam, 2 to 7 percent slopes
32B	Minnieville loam, 2 to 7 percent slopes
46B	Thurmont loam, 2 to 7 percent slopes
49B	Unison loam, 2 to 7 percent slopes
50B	Warminster clay loam, 2 to 7 percent slopes
51A	Wingina loam, 0 to 2 percent slopes, occasionally flooded
52B	Wintergreen loam, 2 to 7 percent slopes

Table 7.—Agricultural Waste Management, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1D:					
Arcola	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.56	Slope	1.00
		Too acid	0.50	Too acid	0.99
1E:					
Arcola	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.56	Slope	1.00
		Too acid	0.50	Too acid	0.99
2A:					
Batteau	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.60	Flooding	1.00
3B:					
Belvoir	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to cemented pan	0.84	Too acid	0.99
		Droughty	0.81	Depth to cemented pan	0.84
4B:					
Buffstat	85	Somewhat limited		Very limited	
		Too acid	0.22	Low adsorption	1.00
				Too acid	0.77
4C:					
Buffstat	85	Somewhat limited		Very limited	
		Slope	0.37	Low adsorption	1.00
		Too acid	0.22	Too acid	0.77
				Slope	0.37
4D:					
Buffstat	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.22	Slope	1.00
				Too acid	0.77
5C:					
Bugley	85	Very limited		Very limited	
		Droughty	1.00	Droughty	1.00
		Depth to bedrock	1.00	Low adsorption	1.00
		Too acid	0.73	Depth to bedrock	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
5D:					
Bugley	85	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
5E:					
Bugley	85	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
6E:					
Catoctin	55	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
				Droughty	0.70
		Droughty	0.70		
Rock outcrop	30	Not rated		Not rated	
7B:					
Chatuge	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Runoff	0.40	Too acid	0.91
8A:					
Codorus	85	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
9B:					
Colleen	85	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Too acid	0.22	Too acid	0.77
9C:					
Colleen	90	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Slope	0.37	Too acid	0.77
		Too acid	0.22	Slope	0.37
9D:					
Colleen	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00	Slow water movement	1.00
		Too acid	0.22	Too acid	0.77

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
10A:					
Colvard	85	Very limited		Very limited	
		Filtering capacity	0.99	Flooding	1.00
		Flooding	0.60	Filtering capacity	0.99
11A:					
Craigsville	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Cobble content	1.00	Cobble content	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
12B:					
Delanco	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.73	Too acid	1.00
		Slow water movement	0.30	Slow water movement	0.22
12C:					
Delanco	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.73	Too acid	1.00
		Slope	0.37	Slope	0.37
13C:					
Edneytown	85	Somewhat limited		Somewhat limited	
		Slope	0.37	Too acid	0.91
		Too acid	0.32	Slope	0.37
13D:					
Edneytown	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.32	Too acid	0.91
13E:					
Edneytown	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.32	Too acid	0.91
14C:					
Edneytown	55	Very limited		Somewhat limited	
		Large stones content	1.00	Too acid	0.91
		Slope	0.37	Slope	0.37
		Too acid	0.32		
Peaks	35	Very limited		Very limited	
		Droughty	1.00	Droughty	1.00
		Large stones content	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Filtering capacity	0.99

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
14D:					
Edneytown-----------	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Too acid	0.91
		Too acid	0.32		
Peaks---------------	35	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
14E:					
Edneytown-----------	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Too acid	0.91
		Too acid	0.32		
Peaks---------------	35	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
14F:					
Edneytown-----------	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Too acid	0.91
		Too acid	0.32		
Peaks---------------	35	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
15B:					
Elioak--------------	85	Somewhat limited		Somewhat limited	
		Low adsorption	0.37	Too acid	0.91
		Too acid	0.32	Low adsorption	0.01
15C:					
Elioak--------------	85	Somewhat limited		Somewhat limited	
		Slope	0.37	Too acid	0.91
		Low adsorption	0.37	Slope	0.37
		Too acid	0.32	Low adsorption	0.01
15D:					
Elioak--------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Low adsorption	0.37	Too acid	0.91
		Too acid	0.32	Low adsorption	0.01

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
16C:					
Elioak--------------	85	Somewhat limited		Very limited	
		Low adsorption	0.57	Too acid	0.99
		Too acid	0.50	Slope	0.37
		Slope	0.37	Low adsorption	0.31
16D:					
Elioak--------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Low adsorption	0.57	Too acid	0.99
		Too acid	0.50	Low adsorption	0.31
17B:					
Elsinboro-----------	90	Somewhat limited		Somewhat limited	
		Too acid	0.50	Too acid	0.99
				Flooding	0.40
18C:					
Fauquier------------	85	Somewhat limited		Very limited	
		Large stones content	0.47	Low adsorption	1.00
				Too acid	0.67
		Slope	0.37	Slope	0.37
		Too acid	0.18		
18D:					
Fauquier------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	0.47	Slope	1.00
				Too acid	0.67
		Too acid	0.18		
18E:					
Fauquier------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	0.47	Slope	1.00
				Too acid	0.67
		Too acid	0.18		
19A:					
Galtsmill-----------	85	Somewhat limited		Very limited	
		Flooding	0.60	Flooding	1.00
20D:					
Glenelg-------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.50	Too acid	0.99
21A:					
Hatboro-------------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00
		Ponding	1.00	Ponding	1.00
22B:					
Hayesville----------	90	Somewhat limited		Somewhat limited	
		Too acid	0.43	Too acid	0.99
		Low adsorption	0.02		

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
22C:					
Hayesville----------	90	Somewhat limited		Somewhat limited	
		Too acid	0.43	Too acid	0.99
		Slope	0.37	Slope	0.37
		Low adsorption	0.02		
22D:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.43	Too acid	0.99
		Low adsorption	0.02		
22E:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.43	Too acid	0.99
		Low adsorption	0.02		
23B:					
Hayesville----------	90	Somewhat limited		Somewhat limited	
		Too acid	0.43	Too acid	0.99
		Low adsorption	0.06	Low adsorption	0.01
23C:					
Hayesville----------	90	Somewhat limited		Somewhat limited	
		Too acid	0.43	Too acid	0.99
		Slope	0.37	Slope	0.37
		Low adsorption	0.06	Low adsorption	0.01
23D:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.43	Too acid	0.99
		Low adsorption	0.06	Low adsorption	0.01
23E:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.43	Too acid	0.99
		Low adsorption	0.06	Low adsorption	0.01
24C:					
Hayesville----------	85	Somewhat limited		Somewhat limited	
		Large stones content	0.47	Too acid	0.99
		Too acid	0.43	Slope	0.37
		Slope	0.37		
24D:					
Hayesville----------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.47	Too acid	0.99
		Too acid	0.43		

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
24E:					
Hayesville----------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.47	Too acid	0.99
		Too acid	0.43		
25C:					
Hazel---------------	85	Somewhat limited		Very limited	
		Droughty	0.82	Low adsorption	1.00
		Too acid	0.50	Too acid	0.99
		Slope	0.37	Droughty	0.82
25D:					
Hazel---------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.82	Slope	1.00
		Too acid	0.50	Too acid	0.99
25E:					
Hazel---------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.82	Slope	1.00
		Too acid	0.50	Too acid	0.99
26D:					
Hazel---------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.82	Slope	1.00
		Too acid	0.50	Too acid	0.99
26E:					
Hazel---------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.82	Slope	1.00
		Too acid	0.50	Too acid	0.99
27B:					
Jackland------------	85	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff	0.40	Too acid	0.91
27C:					
Jackland------------	85	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff	0.40	Too acid	0.91
28B:					
Lew-----------------	85	Somewhat limited		Somewhat limited	
		Too acid	0.32	Too acid	0.91

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
29B:					
Lew-----------------	85	Very limited		Somewhat limited	
		Large stones content	1.00	Too acid	0.91
		Too acid	0.32		
30C:					
Lew-----------------	85	Very limited		Somewhat limited	
		Large stones content	1.00	Too acid	0.91
		Large stones on the surface	0.50	Large stones on the surface	0.50
		Slope	0.37	Slope	0.37
30D:					
Lew-----------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Too acid	0.91
		Large stones on the surface	0.50	Large stones on the surface	0.50
30E:					
Lew-----------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Too acid	0.91
		Large stones on the surface	0.50	Large stones on the surface	0.50
31B:					
Littlejoe-----------	90	Somewhat limited		Very limited	
		Too acid	0.50	Low adsorption	1.00
				Too acid	0.99
31C:					
Littlejoe-----------	90	Somewhat limited		Very limited	
		Too acid	0.50	Low adsorption	1.00
		Slope	0.37	Too acid	0.99
				Slope	0.37
32B:					
Minnieville---------	85	Somewhat limited		Somewhat limited	
		Low adsorption	0.40	Too acid	0.67
		Too acid	0.18		
32C:					
Minnieville---------	85	Somewhat limited		Somewhat limited	
		Low adsorption	0.40	Too acid	0.67
		Slope	0.37	Slope	0.37
		Too acid	0.18		
32D:					
Minnieville---------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Low adsorption	0.40	Too acid	0.67
		Too acid	0.18		

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
32E:					
Minnieville---------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Low adsorption	0.40	Too acid	0.67
		Too acid	0.18		
33C:					
Myersville----------	55	Very limited		Very limited	
		Large stones content	1.00	Low adsorption	1.00
				Too acid	0.91
		Slope	0.37	Slope	0.37
		Too acid	0.32		
Catoctin------------	35	Very limited		Very limited	
		Large stones content	1.00	Low adsorption	1.00
				Droughty	0.70
		Droughty	0.70	Too acid	0.42
		Slope	0.37		
33D:					
Myersville----------	55	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
				Too acid	0.91
		Too acid	0.32		
Catoctin------------	35	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
				Droughty	0.70
		Droughty	0.70		
33E:					
Myersville----------	55	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
				Too acid	0.91
		Too acid	0.32		
Catoctin------------	35	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
				Droughty	0.70
		Droughty	0.70		
34C:					
Occoquan------------	85	Somewhat limited		Very limited	
		Too acid	0.73	Low adsorption	1.00
		Droughty	0.53	Too acid	1.00
		Slope	0.37	Droughty	0.53
34D:					
Occoquan------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.73	Slope	1.00
		Droughty	0.53	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
34E:					
Occoquan------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.73	Slope	1.00
		Droughty	0.53	Too acid	1.00
35D:					
Occoquan------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.73	Slope	1.00
		Droughty	0.53	Too acid	1.00
35E:					
Occoquan------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.73	Slope	1.00
		Droughty	0.53	Too acid	1.00
36D:					
Peaks---------------	60	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated	
36E:					
Peaks---------------	60	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated	
36F:					
Peaks---------------	60	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated	
37A:					
Pineywoods----------	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Low adsorption	1.00
		Too acid	0.43	Slow water movement	1.00
38:					
Pits----------------	100	Not rated		Not rated	
39C:					
Saunook-------------	85	Somewhat limited		Very limited	
		Too acid	0.62	Too acid	1.00
		Slope	0.37	Slope	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
39D:					
Saunook	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.62	Too acid	1.00
40C:					
Saunook	85	Somewhat limited		Very limited	
		Too acid	0.62	Too acid	1.00
		Large stones content	0.47	Slope	0.37
		Slope	0.37		
40D:					
Saunook	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.62	Too acid	1.00
		Large stones content	0.47		
40E:					
Saunook	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.62	Too acid	1.00
		Large stones content	0.47		
41B:					
Sketerville	90	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.99	Low adsorption	1.00
		Low adsorption	0.63	Depth to saturated zone	0.99
42C:					
Spriggs	85	Very limited		Very limited	
		Depth to bedrock	0.99	Low adsorption	1.00
		Droughty	0.98	Depth to bedrock	0.99
		Large stones content	0.47	Droughty	0.98
42D:					
Spriggs	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Depth to bedrock	0.99	Slope	1.00
		Droughty	0.98	Depth to bedrock	0.99
42E:					
Spriggs	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Depth to bedrock	0.99	Slope	1.00
		Droughty	0.98	Depth to bedrock	0.99
43A:					
Suches	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.24	Too acid	0.67
		Too acid	0.18	Depth to saturated zone	0.24

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
44C:					
Sylco	55	Very limited		Very limited	
		Large stones content	1.00	Low adsorption	1.00
		Droughty	1.00	Droughty	1.00
		Too acid	0.73	Too acid	1.00
Sylvatus	35	Very limited		Very limited	
		Droughty	1.00	Droughty	1.00
		Large stones content	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Too acid	1.00
44D:					
Sylco	55	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
Sylvatus	35	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
44E:					
Sylco	55	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
Sylvatus	35	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
45E:					
Sylvatus	60	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
Rock outcrop	30	Not rated		Not rated	
45F:					
Sylvatus	60	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
Rock outcrop	30	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
46B:					
Thurmont------------	85	Somewhat limited		Very limited	
		Too acid	0.50	Too acid	0.99
46C:					
Thurmont------------	85	Somewhat limited		Very limited	
		Too acid	0.50	Too acid	0.99
		Slope	0.37	Slope	0.37
46D:					
Thurmont------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.50	Too acid	0.99
47B:					
Thurmont------------	85	Somewhat limited		Very limited	
		Too acid	0.50	Too acid	0.99
		Large stones content	0.47		
47C:					
Thurmont------------	85	Somewhat limited		Very limited	
		Too acid	0.50	Too acid	0.99
		Large stones content	0.47	Slope	0.37
		Slope	0.37		
47D:					
Thurmont------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.50	Too acid	0.99
		Large stones content	0.47		
48:					
Udorthents----------	85	Not rated		Not rated	
49B:					
Unison--------------	85	Somewhat limited		Somewhat limited	
		Too acid	0.32	Too acid	0.91
49C:					
Unison--------------	85	Somewhat limited		Somewhat limited	
		Slope	0.37	Too acid	0.91
		Too acid	0.32	Slope	0.37
49D:					
Unison--------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.32	Too acid	0.91
50B:					
Warminster----------	90	Somewhat limited		Very limited	
		Too acid	0.32	Low adsorption	1.00
		Slow water movement	0.30	Too acid	0.91
				Slow water movement	0.22

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
50C:					
Warminster----------	90	Somewhat limited		Very limited	
		Slope	0.37	Low adsorption	1.00
		Too acid	0.32	Too acid	0.91
		Slow water movement	0.30	Slope	0.37
50D:					
Warminster----------	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.32	Slope	1.00
		Slow water movement	0.30	Too acid	0.91
51A:					
Wingina-------------	85	Somewhat limited		Very limited	
		Flooding	0.60	Flooding	1.00
		Too acid	0.02	Too acid	0.07
52B:					
Wintergreen---------	85	Somewhat limited		Very limited	
		Too acid	0.73	Too acid	1.00
52C:					
Wintergreen---------	90	Somewhat limited		Very limited	
		Too acid	0.73	Too acid	1.00
		Slope	0.37	Slope	0.37
52D:					
Wintergreen---------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.73	Too acid	1.00
53B:					
Wintergreen---------	90	Somewhat limited		Very limited	
		Too acid	0.73	Too acid	1.00
53C:					
Wintergreen---------	90	Somewhat limited		Very limited	
		Too acid	0.73	Too acid	1.00
		Slope	0.37	Slope	0.37
53D:					
Wintergreen---------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.73	Too acid	1.00
54C:					
Wintergreen---------	85	Somewhat limited		Very limited	
		Too acid	0.73	Too acid	1.00
		Large stones content	0.47	Slope	0.37
		Slope	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		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
55A:					
Yogaville-----------	85	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
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		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1D:					
Arcola	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
				Depth to bedrock	1.00
		Too acid	0.99		
1E:					
Arcola	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
				Depth to bedrock	1.00
		Too acid	0.99		
2A:					
Batteau	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.60	Depth to saturated zone	1.00
				Seepage	1.00
3B:					
Belvoir	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.99	Depth to cemented pan	1.00
		Depth to cemented pan	0.84	Seepage	1.00
4B:					
Buffstat	85	Somewhat limited		Very limited	
		Too acid	0.77	Seepage	1.00
		Too steep for surface application	0.32	Depth to bedrock	0.96
				Too acid	0.77
4C:					
Buffstat	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Depth to bedrock	0.96
		Too acid	0.77	Too steep for surface application	0.94
		Too steep for sprinkler application	0.60		

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
4D:					
Buffstat	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
				Depth to bedrock	0.96
		Too acid	0.77		
5C:					
Bugley	85	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too acid	1.00
5D:					
Bugley	85	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
				Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
5E:					
Bugley	85	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
				Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
6E:					
Catoctin	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Droughty	0.70		
Rock outcrop	30	Not rated		Not rated	
7B:					
Chatuge	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	0.99	Seepage	1.00
				Too acid	0.91
		Too acid	0.91		

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
8A:					
Codorus-------------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Too acid	0.91	Seepage	1.00
9B:					
Colleen-------------	85	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Too acid	0.77	Too acid	0.77
		Too steep for surface application	0.32		
9C:					
Colleen-------------	90	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	0.94
		Too acid	0.77	Too acid	0.77
9D:					
Colleen-------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Slow water movement	1.00	Too acid	0.77
10A:					
Colvard-------------	85	Very limited		Very limited	
		Filtering capacity	0.99	Flooding	1.00
		Flooding	0.60	Seepage	1.00
11A:					
Craigsville---------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Cobble content	1.00	Seepage	1.00
		Filtering capacity	0.99	Cobble content	1.00
12B:					
Delanco-------------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	1.00	Seepage	1.00
		Too steep for surface application	0.32	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
12C:					
Delanco	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
13C:					
Edneytown	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.91	Too steep for surface application	0.94
		Too steep for sprinkler application	0.60	Too acid	0.91
13D:					
Edneytown	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
13E:					
Edneytown	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
14C:					
Edneytown	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.91	Too steep for surface application	0.94
		Too steep for sprinkler application	0.60	Too acid	0.91
Peaks	35	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Filtering capacity	0.99	Too steep for surface application	0.94

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
14D:					
Edneytown-----------	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
Peaks---------------	35	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
14E:					
Edneytown-----------	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
Peaks---------------	35	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
14F:					
Edneytown-----------	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
Peaks---------------	35	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
15B:					
Elioak--------------	85	Somewhat limited		Very limited	
		Too acid	0.91	Seepage	1.00
		Low adsorption	0.37	Too acid	0.91
		Too steep for surface application	0.32	Low adsorption	0.37
15C:					
Elioak--------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.91	Too steep for surface application	0.94
		Too steep for sprinkler application	0.60	Too acid	0.91
15D:					
Elioak--------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.91	Too acid	0.91
16C:					
Elioak--------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
16D:					
Elioak--------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	0.99
17B:					
Elsinboro-----------	90	Somewhat limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.99
				Flooding	0.40

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:					
Fauquier	85	Very limited Too steep for surface application Too acid Too steep for sprinkler application	 1.00 0.67 0.60	Very limited Seepage Depth to bedrock Too steep for surface application	 1.00 0.99 0.94
18D:					
Fauquier	85	Very limited Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00 0.67	Very limited Too steep for surface application Seepage Depth to bedrock	 1.00 1.00 0.99
18E:					
Fauquier	85	Very limited Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00 0.67	Very limited Too steep for surface application Seepage Depth to bedrock	 1.00 1.00 0.99
19A:					
Galtsmill	85	Somewhat limited Flooding	 0.60	Very limited Flooding Seepage	 1.00 1.00
20D:					
Glenelg	85	Very limited Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00 0.99	Very limited Too steep for surface application Seepage Too acid	 1.00 1.00 0.99
21A:					
Hatboro	85	Very limited Depth to saturated zone Flooding Ponding	 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	 1.00 1.00 1.00
22B:					
Hayesville	90	Somewhat limited Too acid Too steep for surface application Low adsorption	 0.99 0.32 0.02	Very limited Seepage Too acid Low adsorption	 1.00 0.99 0.02

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
22C:					
Hayesville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
22D:					
Hayesville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Too acid	0.99
22E:					
Hayesville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Too acid	0.99
23B:					
Hayesville----------	90	Somewhat limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.99
		Low adsorption	0.06	Low adsorption	0.06
23C:					
Hayesville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
23D:					
Hayesville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	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
23E:					
Hayesville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	0.99
24C:					
Hayesville----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
24D:					
Hayesville----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Too acid	0.99
24E:					
Hayesville----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Too acid	0.99
25C:					
Hazel---------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.99	Depth to bedrock	1.00
		Droughty	0.82	Too acid	0.99
25D:					
Hazel---------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
25E:					
Hazel	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Depth to bedrock	1.00
26D:					
Hazel	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Depth to bedrock	1.00
26E:					
Hazel	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Depth to bedrock	1.00
27B:					
Jackland	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Too acid	0.91	Too acid	0.91
27C:					
Jackland	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	0.94
28B:					
Lew	85	Somewhat limited		Very limited	
		Too acid	0.91	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.91
				Stone content	0.32

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
29B:					
Lew	85	Somewhat limited		Very limited	
		Too acid	0.91	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.91
				Stone content	0.32
30C:					
Lew	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too steep for surface application	0.94
		Too acid	0.91		
		Too steep for sprinkler application	0.60	Too acid	0.91
30D:					
Lew	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
				Too acid	0.91
		Too acid	0.91		
30E:					
Lew	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
				Too acid	0.91
		Too acid	0.91		
31B:					
Littlejoe	90	Very limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.99
				Depth to bedrock	0.99
31C:					
Littlejoe	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too acid	0.99
				Depth to bedrock	0.99
		Too acid	0.99		
		Too steep for sprinkler application	0.60		

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
32B:					
Minnieville---------	85	Somewhat limited		Very limited	
		Too acid	0.67	Seepage	1.00
		Low adsorption	0.40	Too acid	0.67
		Too steep for surface application	0.32	Low adsorption	0.40
32C:					
Minnieville---------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.67	Too steep for surface application	0.94
		Too steep for sprinkler application	0.60	Too acid	0.67
32D:					
Minnieville---------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.67	Too acid	0.67
32E:					
Minnieville---------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.67	Too acid	0.67
33C:					
Myersville----------	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.91	Too steep for surface application	0.94
		Too steep for sprinkler application	0.60	Too acid	0.91
Catoctin-----------	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Droughty	0.70	Depth to bedrock	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94

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
33D:					
Myersville----------	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
Catoctin-----------	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	0.70	Depth to bedrock	1.00
33E:					
Myersville----------	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
Catoctin-----------	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	0.70	Depth to bedrock	1.00
34C:					
Occoquan-----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Too steep for sprinkler application	0.60	Depth to bedrock	0.99
34D:					
Occoquan-----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	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
34E:					
Occoquan------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
35D:					
Occoquan------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
35E:					
Occoquan------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
36D:					
Peaks---------------	60	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
Rock outcrop--------	30	Not rated		Not rated	
36E:					
Peaks---------------	60	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
Rock outcrop--------	30	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
36F:					
Peaks	60	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
Rock outcrop	30	Not rated		Not rated	
37A:					
Pineywoods	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	0.99	Too acid	0.99
38:					
Pits	100	Not rated		Not rated	
39C:					
Saunook	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
39D:					
Saunook	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	1.00	Too acid	1.00
40C:					
Saunook	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94

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
40D:					
Saunook	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	1.00	Too acid	
40E:					
Saunook	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	1.00	Too acid	1.00
41B:					
Sketerville	90	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.99	Too acid	0.99
42C:					
Spriggs	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Depth to bedrock	0.99	Depth to bedrock	1.00
		Droughty	0.98	Too steep for surface application	0.94
42D:					
Spriggs	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Depth to bedrock	0.99	Depth to bedrock	1.00
42E:					
Spriggs	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Depth to bedrock	0.99	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
43A:					
Suches	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Too acid	0.67	Seepage	1.00
		Depth to saturated zone	0.24	Too acid	0.67
44C:					
Sylco	55	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
				Too acid	1.00
		Too acid	1.00		
Sylvatus	35	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	1.00	Seepage	1.00
		Depth to bedrock	1.00	Too acid	1.00
44D:					
Sylco	55	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
				Depth to bedrock	1.00
		Droughty	1.00		
Sylvatus	35	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
44E:					
Sylco	55	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
				Depth to bedrock	1.00
		Droughty	1.00		
Sylvatus	35	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00

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
45E:					
Sylvatus	60	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
Rock outcrop	30	Not rated		Not rated	
45F:					
Sylvatus	60	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
Rock outcrop	30	Not rated		Not rated	
46B:					
Thurmont	85	Very limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.99
46C:					
Thurmont	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too acid	0.99
		Too acid	0.99	Too steep for surface application	0.94
		Too steep for sprinkler application	0.60		
46D:					
Thurmont	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Too acid	0.99
47B:					
Thurmont	85	Very limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Too steep for surface application	0.32	Too acid	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
47C:					
Thurmont------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
47D:					
Thurmont------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Too acid	0.99
48:					
Udorthents----------	85	Not rated		Not rated	
49B:					
Unison--------------	85	Somewhat limited		Very limited	
		Too acid	0.91	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.91
49C:					
Unison--------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.91	Too steep for surface application	0.94
		Too steep for sprinkler application	0.60	Too acid	0.91
49D:					
Unison--------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.91	Too acid	0.91
50B:					
Warminster----------	90	Somewhat limited		Very limited	
		Too acid	0.91	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.91
		Slow water movement	0.22	Depth to bedrock	0.08

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:					
Warminster----------	90	Very limited		Very limited	
		Too steep for	1.00	Seepage	1.00
		surface		Too steep for	0.94
		application		surface	
		Too acid	0.91	application	
		Too steep for	0.60	Too acid	0.91
		sprinkler			
		application			
50D:					
Warminster----------	90	Very limited		Very limited	
		Too steep for	1.00	Too steep for	1.00
		surface		surface	
		application		application	
		Too steep for	1.00	Seepage	1.00
		sprinkler		Too acid	0.91
		application			
		Too acid	0.91		
51A:					
Wingina-------------	85	Somewhat limited		Very limited	
		Flooding	0.60	Flooding	1.00
		Too acid	0.07	Seepage	1.00
				Too acid	0.07
52B:					
Wintergreen---------	85	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Too steep for	0.32	Too acid	1.00
		surface			
		application			
52C:					
Wintergreen---------	90	Very limited		Very limited	
		Too steep for	1.00	Seepage	1.00
		surface		Too acid	1.00
		application		Too steep for	0.94
		Too acid	1.00	surface	1.00
		Too steep for	0.60	application	0.94
		sprinkler			
		application			
52D:					
Wintergreen---------	90	Very limited		Very limited	
		Too steep for	1.00	Too steep for	1.00
		surface		surface	
		application		application	
		Too steep for	1.00	Seepage	1.00
		sprinkler		Too acid	1.00
		application			
		Too acid	1.00		
53B:					
Wintergreen---------	90	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Too steep for	0.32	Too acid	1.00
		surface			
		application			

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
53C:					
Wintergreen---------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
53D:					
Wintergreen---------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
54C:					
Wintergreen---------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
55A:					
Yogaville-----------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Flooding	0.60	Seepage	1.00
W:					
Water---------------	100	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part III

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
1D:					
Arcola	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
1E:					
Arcola	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
2A:					
Batteau	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
		Flooding	0.60		
3B:					
Belvoir	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slow water movement	1.00	Too acid	0.99
4B:					
Buffstat	85	Very limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.96
		Slow water movement	1.00	Too acid	0.77
		Slope	0.12	Too steep for surface application	0.32
4C:					
Buffstat	85	Very limited		Very limited	
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Depth to bedrock	0.96
		Slope	1.00	Too steep for sprinkler irrigation	0.94

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
4D:					
Buffstat------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	0.96
5C:					
Bugley--------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too acid	1.00
5D:					
Bugley--------------	85	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
5E:					
Bugley--------------	85	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
6E:					
Catoctin------------	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
Rock outcrop--------	30	Not rated		Not rated	
7B:					
Chatuge-------------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Filtering capacity	0.99
				Too acid	0.91

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
8A:					
Codorus	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Too acid	0.91
9B:					
Colleen	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Slow water movement	0.94
		Too acid	0.14	Too acid	0.77
		Slope	0.12	Too steep for surface application	0.32
9C:					
Colleen	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
		Too acid	0.14	Slow water movement	0.94
9D:					
Colleen	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.14	Slow water movement	0.94
10A:					
Colvard	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Filtering capacity	0.99
		Flooding	0.60	Flooding	0.60
		Slow water movement	0.32		
11A:					
Craigsville	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Cobble content	1.00	Cobble content	1.00
				Filtering capacity	0.99

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
12B:					
Delanco	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too acid	1.00
		Too acid	0.14	Too steep for surface application	0.32
12C:					
Delanco	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	1.00
13C:					
Edneytown	85	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.91
13D:					
Edneytown	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
13E:					
Edneytown	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
14C:					
Edneytown	55	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.91

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
14C:					
Peaks	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
				Filtering capacity	0.99
14D:					
Edneytown	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
Peaks	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Depth to bedrock	1.00
14E:					
Edneytown	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
Peaks	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Depth to bedrock	1.00
14F:					
Edneytown	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.91

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
14F:					
Peaks	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Depth to bedrock	1.00
15B:					
Elioak	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.91
		Slope	0.12	Low adsorption	0.37
				Too steep for surface application	0.32
15C:					
Elioak	85	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.91
15D:					
Elioak	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
16C:					
Elioak	85	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	0.99
				Too steep for sprinkler irrigation	0.94
16D:					
Elioak	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.99

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
17B:					
Elsinboro-----------	90	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Too acid	0.99
		Slow water movement	1.00	Too steep for surface application	0.32
		Slope	0.12		
18C:					
Fauquier------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Depth to bedrock	0.99
		Slope	1.00	Too steep for sprinkler irrigation	0.94
18D:					
Fauquier------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	0.99
18E:					
Fauquier------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	0.99
19A:					
Galtsmill-----------	85	Somewhat limited		Somewhat limited	
		Flooding	0.60	Flooding	0.60
		Slow water movement	0.32		
20D:					
Glenelg-------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.99
21A:					
Hatboro-------------	85	Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	1.00
		Slow water movement	1.00	Ponding	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
22B:					
Hayesville----------	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.99
		Slope	0.12	Too steep for surface application	0.32
		Too acid	0.03	Low adsorption	0.02
22C:					
Hayesville----------	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	0.99
		Too acid	0.03	Too steep for sprinkler irrigation	0.94
22D:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Too acid	0.99
22E:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Too acid	0.99
23B:					
Hayesville----------	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.99
		Slope	0.12	Too steep for surface application	0.32
		Too acid	0.03	Low adsorption	0.06
23C:					
Hayesville----------	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	0.99
		Too acid	0.03	Too steep for sprinkler irrigation	0.94

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:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Too acid	0.99
23E:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Too acid	0.99
24C:					
Hayesville----------	85	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	0.99
		Too acid	0.03	Too steep for sprinkler irrigation	0.94
24D:					
Hayesville----------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Too acid	0.99
24E:					
Hayesville----------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Too acid	0.99
25C:					
Hazel---------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too acid	0.99

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
25D:					
Hazel	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
25E:					
Hazel	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
26D:					
Hazel	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
26E:					
Hazel	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
27B:					
Jackland	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
		Slope	0.12	Too acid	0.91
27C:					
Jackland	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
		Slope	1.00	Too steep for surface application	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
28B:					
Lew	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.91
		Stone content	0.38	Too steep for surface application	0.32
		Slope	0.12		
29B:					
Lew	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.91
		Stone content	0.38	Too steep for surface application	0.32
		Slope	0.12		
30C:					
Lew	85	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00		
		Stone content	0.50	Too steep for sprinkler irrigation	0.94
				Too acid	0.91
30D:					
Lew	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Stone content	0.50	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
30E:					
Lew	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Stone content	0.50	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
31B:					
Littlejoe	90	Very limited		Very limited	
		Depth to bedrock	1.00	Too acid	0.99
		Slow water movement	1.00	Depth to bedrock	0.99
		Slope	0.12	Too steep for surface application	0.32
31C:					
Littlejoe	90	Very limited		Very limited	
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Slope	1.00	Too acid	0.99
				Depth to bedrock	0.99

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
32B:					
Minnieville---------	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.67
		Slope	0.12	Low adsorption	0.40
				Too steep for surface application	0.32
32C:					
Minnieville---------	85	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.67
32D:					
Minnieville---------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.67
32E:					
Minnieville---------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.67
33C:					
Myersville----------	55	Very limited		Very limited	
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	0.94
		Slope	1.00	Too acid	0.91
Catoctin------------	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	0.94

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
33D:					
Myersville----------	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	0.91
Catoctin------------	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
33E:					
Myersville----------	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	0.91
Catoctin------------	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
34C:					
Occoquan------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too acid	1.00
		Slope	1.00	Depth to bedrock	0.99
34D:					
Occoquan------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	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
34E:					
Occoquan------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	1.00
35D:					
Occoquan------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	1.00
35E:					
Occoquan------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	1.00
36D:					
Peaks---------------	60	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Depth to bedrock	1.00
Rock outcrop--------	30	Not rated		Not rated	
36E:					
Peaks---------------	60	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Depth to bedrock	1.00
Rock outcrop--------	30	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: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
36F:					
Peaks	60	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Depth to bedrock	1.00
Rock outcrop	30	Not rated		Not rated	
37A:					
Pineywoods	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too acid	0.99
		Depth to bedrock	1.00	Depth to bedrock	0.99
38:					
Pits	100	Not rated		Not rated	
39C:					
Saunook	85	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	1.00
				Too steep for sprinkler irrigation	0.94
39D:					
Saunook	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	1.00
40C:					
Saunook	85	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	1.00
				Too steep for sprinkler irrigation	0.94

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
40D:					
Saunook-------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	1.00
40E:					
Saunook-------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	1.00
41B:					
Sketerville---------	90	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Too acid	0.14	Too acid	0.99
42C:					
Spriggs-------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
42D:					
Spriggs-------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
42E:					
Spriggs-------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
43A:					
Suches	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Too acid	0.67
		Slow water movement	1.00	Depth to saturated zone	0.24
44C:					
Sylco	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	1.00
Sylvatus	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too acid	1.00
		Slope	1.00	Too steep for surface application	1.00
44D:					
Sylco	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
Sylvatus	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
44E:					
Sylco	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
Sylvatus	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00

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
45E:					
Sylvatus	60	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
Rock outcrop	30	Not rated		Not rated	
45F:					
Sylvatus	60	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
Rock outcrop	30	Not rated		Not rated	
46B:					
Thurmont	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Too acid	0.99
		Slow water movement	1.00	Too steep for surface application	0.32
		Slope	0.12		
46C:					
Thurmont	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too acid	0.99
		Slope	1.00	Too steep for sprinkler irrigation	0.94
46D:					
Thurmont	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to saturated zone	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	0.99
47B:					
Thurmont	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Too acid	0.99
		Slow water movement	1.00	Too steep for surface application	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		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
47C:					
Thurmont------------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too acid	0.99
		Slope	1.00	Too steep for sprinkler irrigation	0.94
47D:					
Thurmont------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to saturated zone	1.00		
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.99
48:					
Udorthents----------	85	Not rated		Not rated	
49B:					
Unison--------------	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.91
				Too steep for surface application	0.32
		Slope	0.12		
49C:					
Unison--------------	85	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00		
				Too steep for sprinkler irrigation	0.94
				Too acid	0.91
49D:					
Unison--------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
				Too steep for sprinkler irrigation	1.00
				Too acid	0.91
50B:					
Warminster----------	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.91
				Too steep for surface application	0.32
		Depth to bedrock	1.00		
		Slope	0.12		
				Slow water movement	0.15

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
50C:					
Warminster----------	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00		
		Slope	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.91
50D:					
Warminster----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
51A:					
Wingina-------------	85	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Flooding	0.60
				Too acid	0.07
		Slow water movement	1.00		
		Flooding	0.60		
52B:					
Wintergreen---------	85	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
				Too steep for surface application	0.32
		Too acid	0.14		
		Slope	0.12		
52C:					
Wintergreen---------	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00		
		Too acid	0.14	Too acid	1.00
				Too steep for sprinkler irrigation	0.94
52D:					
Wintergreen---------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Too acid	0.14	Too steep for sprinkler irrigation	1.00
				Too acid	1.00
53B:					
Wintergreen---------	90	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
				Too steep for surface application	0.32
		Too acid	0.14		
		Slope	0.12		

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
53C:					
Wintergreen	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	1.00
		Too acid	0.14	Too steep for sprinkler irrigation	0.94
53D:					
Wintergreen	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.14	Too acid	1.00
54C:					
Wintergreen	85	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	1.00
		Too acid	0.14	Too steep for sprinkler irrigation	0.94
55A:					
Yogaville	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Flooding	0.60
W:					
Water	100	Not rated		Not rated	

Table 8.—Forestland Productivity

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
1D:				
Arcola	northern red oak	67	43	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	69	112	
	white oak	67	43	
1E:				
Arcola	northern red oak	67	43	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	69	112	
	white oak	67	43	
2A:				
Batteau	American sycamore	---	---	American sycamore, loblolly pine, yellow-poplar
	green ash	---	---	
	loblolly pine	100	157	
	red maple	---	---	
	sweetgum	110	128	
	yellow-poplar	100	143	
3B:				
Belvoir	loblolly pine	80	112	loblolly pine, sweetgum, yellow-poplar
	red maple	65	43	
	sweetgum	80	86	
	yellow-poplar	80	70	
4B:				
Buffstat	loblolly pine	80	112	eastern white pine, loblolly pine
	northern red oak	66	43	
	shortleaf pine	66	100	
	Virginia pine	69	112	
4C:				
Buffstat	loblolly pine	80	112	eastern white pine, loblolly pine
	northern red oak	66	43	
	shortleaf pine	66	100	
	Virginia pine	69	112	
4D:				
Buffstat	loblolly pine	80	112	eastern white pine, loblolly pine
	northern red oak	66	43	
	shortleaf pine	69	112	
	Virginia pine	80	112	
5C:				
Bugley	loblolly pine	70	85	loblolly pine, shortleaf pine
	northern red oak	65	43	
	shortleaf pine	60	85	
	Virginia pine	65	100	
5D:				
Bugley	loblolly pine	70	85	loblolly pine, shortleaf pine
	northern red oak	65	43	
	shortleaf pine	60	85	
	Virginia pine	65	100	
5E:				
Bugley	loblolly pine	70	85	loblolly pine, shortleaf pine
	northern red oak	65	43	
	shortleaf pine	60	85	
	Virginia pine	65	100	

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	
6E:				
Catoctin	chestnut oak	57	43	eastern white pine
	northern red oak	60	43	
	yellow-poplar	70	55	
Rock outcrop.				
7B:				
Chatuge	loblolly pine	100	157	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	80	56	
	sweetgum	91	114	
	yellow-poplar	95	100	
8A:				
Codorus	black walnut	100	---	black walnut, eastern white pine, white ash, yellow-poplar
	eastern white pine	100	140	
	northern red oak	90	70	
	white ash	90	70	
	yellow-poplar	100	112	
9B:				
Colleen	chestnut oak	59	43	eastern white pine, yellow-poplar
	northern red oak	60	43	
	shortleaf pine	52	70	
	Virginia pine	62	100	
9C:				
Colleen	chestnut oak	59	43	eastern white pine, yellow-poplar
	northern red oak	60	43	
	shortleaf pine	52	70	
	Virginia pine	62	100	
9D:				
Colleen	chestnut oak	59	43	eastern white pine, yellow-poplar
	northern red oak	60	43	
	shortleaf pine	52	70	
	Virginia pine	62	100	
10A:				
Colvard	eastern white pine	83	157	eastern white pine, yellow-poplar
	shortleaf pine	75	112	
	Virginia pine	75	112	
	yellow-poplar	102	112	
11A:				
Craigsville	eastern white pine	90	172	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	80	55	
	Virginia pine	80	112	
	yellow-poplar	95	100	
12B:				
Delanco	black oak	80	55	eastern white pine, loblolly pine, yellow-poplar
	red maple	75	34	
	yellow-poplar	90	85	
12C:				
Delanco	black oak	80	55	eastern white pine, loblolly pine, yellow-poplar
	red maple	75	34	
	yellow-poplar	90	85	

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	
13C:				
Edneytown	eastern white pine	100	185	eastern white pine,
	loblolly pine	80	112	loblolly pine,
	northern red oak	80	55	yellow-poplar
	white oak	60	43	
	yellow-poplar	90	85	
13D:				
Edneytown	eastern white pine	100	185	eastern white pine,
	loblolly pine	80	112	loblolly pine,
	northern red oak	80	55	yellow-poplar
	white oak	60	43	
	yellow-poplar	90	85	
13E:				
Edneytown	eastern white pine	100	185	eastern white pine,
	loblolly pine	80	112	loblolly pine,
	northern red oak	80	55	yellow-poplar
	white oak	60	43	
	yellow-poplar	90	85	
14C:				
Edneytown	eastern white pine	100	185	eastern white pine,
	northern red oak	80	55	shortleaf pine,
	white oak	60	43	yellow-poplar
	yellow-poplar	90	85	
Peaks	eastern white pine	80	140	eastern white pine
	northern red oak	62	43	
	Virginia pine	57	85	
14D:				
Edneytown	eastern white pine	100	185	eastern white pine,
	northern red oak	80	55	shortleaf pine,
	white oak	60	43	yellow-poplar
	yellow-poplar	90	85	
Peaks	eastern white pine	80	140	eastern white pine
	northern red oak	67	47	
	Virginia pine	60	85	
14E:				
Edneytown	eastern white pine	100	185	eastern white pine,
	northern red oak	80	55	shortleaf pine,
	white oak	60	43	yellow-poplar
	yellow-poplar	90	85	
Peaks	eastern white pine	80	140	eastern white pine
	northern red oak	67	47	
	Virginia pine	60	85	
14F:				
Edneytown	eastern white pine	100	185	eastern white pine,
	northern red oak	80	55	shortleaf pine,
	white oak	60	43	yellow-poplar
	yellow-poplar	90	85	
Peaks	eastern white pine	80	140	eastern white pine
	northern red oak	67	47	
	Virginia pine	60	85	

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	
15B:				
Elioak	shortleaf pine	70	112	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	75	112	
	white oak	75	55	
	yellow-poplar	90	85	
15C:				
Elioak	shortleaf pine	70	112	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	75	112	
	white oak	75	55	
	yellow-poplar	90	85	
15D:				
Elioak	shortleaf pine	70	112	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	75	112	
	white oak	75	55	
	yellow-poplar	90	85	
16C:				
Elioak	shortleaf pine	70	112	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	75	112	
	white oak	75	55	
	yellow-poplar	90	85	
16D:				
Elioak	shortleaf pine	70	112	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	75	112	
	white oak	75	55	
	yellow-poplar	90	85	
17B:				
Elsinboro	black oak	80	55	eastern white pine, loblolly pine, yellow-poplar
	red maple	75	34	
	Virginia pine	80	112	
	yellow-poplar	90	85	
18C:				
Fauquier	chestnut oak	80	55	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	100	55	
	yellow-poplar	120	140	
18D:				
Fauquier	chestnut oak	80	55	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	100	55	
	yellow-poplar	120	140	
18E:				
Fauquier	chestnut oak	80	55	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	100	55	
	yellow-poplar	120	140	
19A:				
Galtsmill	loblolly pine	96	140	black walnut, eastern white pine, loblolly pine, yellow-poplar
	sweetgum	85	86	
	yellow-poplar	100	107	

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	
20D:				
Glenelg	black oak	78	55	eastern white pine, shortleaf pine, yellow-poplar
	shortleaf pine	70	112	
	Virginia pine	70	112	
	yellow-poplar	87	85	
21A:				
Hatboro	American sycamore	60	43	eastern white pine, loblolly pine, white spruce
	pin oak	60	43	
	red maple	60	43	
22B:				
Hayesville	eastern white pine	85	157	eastern white pine, Fraser fir, loblolly pine, Scotch pine, shortleaf pine
	northern red oak	75	55	
	shortleaf pine	70	112	
	Virginia pine	74	112	
	yellow-poplar	93	100	
22C:				
Hayesville	eastern white pine	85	157	eastern white pine, Fraser fir, loblolly pine, Scotch pine, shortleaf pine
	northern red oak	75	55	
	shortleaf pine	70	112	
	Virginia pine	74	112	
	yellow-poplar	93	100	
22D:				
Hayesville	eastern white pine	85	157	eastern white pine, loblolly pine, Scotch pine
	northern red oak	75	55	
	shortleaf pine	70	112	
	Virginia pine	74	112	
	yellow-poplar	93	100	
22E:				
Hayesville	eastern white pine	85	157	eastern white pine, Fraser fir, Scotch pine, shortleaf pine
	northern red oak	75	55	
	shortleaf pine	70	112	
	Virginia pine	74	112	
	yellow-poplar	93	100	
23B:				
Hayesville	eastern white pine	77	140	eastern white pine, Fraser fir, shortleaf pine
	northern red oak	75	55	
	shortleaf pine	68	100	
	Virginia pine	70	112	
	yellow-poplar	85	85	
23C:				
Hayesville	eastern white pine	77	140	eastern white pine, Fraser fir, shortleaf pine
	northern red oak	75	55	
	shortleaf pine	68	100	
	Virginia pine	70	112	
	yellow-poplar	85	85	
23D:				
Hayesville	eastern white pine	85	157	eastern white pine, Fraser fir, shortleaf pine
	northern red oak	75	55	
	shortleaf pine	68	100	
	Virginia pine	70	112	
	yellow-poplar	85	85	

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	
23E:				
Hayesville	eastern white pine	77	140	eastern white pine, loblolly pine, Scotch pine
	northern red oak	75	55	
	shortleaf pine	68	100	
	Virginia pine	70	112	
	yellow-poplar	85	85	
24C:				
Hayesville	eastern white pine	85	157	eastern white pine, loblolly pine, Scotch pine
	northern red oak	75	55	
	pitch pine	82	114	
	shortleaf pine	70	112	
	Virginia pine	74	112	
	yellow-poplar	90	85	
24D:				
Hayesville	eastern white pine	92	166	eastern white pine, loblolly pine, Scotch pine
	northern red oak	75	55	
	shortleaf pine	70	112	
	Virginia pine	74	112	
	yellow-poplar	90	85	
24E:				
Hayesville	eastern white pine	92	166	eastern white pine, loblolly pine, Scotch pine
	northern red oak	75	55	
	shortleaf pine	70	112	
	Virginia pine	74	112	
	yellow-poplar	90	85	
25C:				
Hazel	chestnut oak	57	43	eastern white pine, loblolly pine
	northern red oak	60	43	
	shortleaf pine	60	85	
	Virginia pine	60	85	
25D:				
Hazel	chestnut oak	57	43	eastern white pine, loblolly pine
	northern red oak	60	43	
	shortleaf pine	60	85	
	Virginia pine	60	85	
25E:				
Hazel	chestnut oak	55	43	eastern white pine, loblolly pine
	northern red oak	50	34	
	shortleaf pine	50	70	
	Virginia pine	50	70	
26D:				
Hazel	chestnut oak	57	43	eastern white pine, loblolly pine
	northern red oak	60	43	
	shortleaf pine	60	85	
	Virginia pine	60	85	
26E:				
Hazel	chestnut oak	57	43	eastern white pine, loblolly pine
	northern red oak	60	43	
	shortleaf pine	60	85	
	Virginia pine	60	85	

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	
27B:				
Jackland	loblolly pine	70	85	loblolly pine
	northern red oak	60	43	
	Virginia pine	60	85	
	yellow-poplar	74	43	
27C:				
Jackland	loblolly pine	70	85	loblolly pine
	northern red oak	60	43	
	Virginia pine	60	85	
	yellow-poplar	74	43	
28B:				
Lew	eastern white pine	90	172	eastern white pine, yellow-poplar
	northern red oak	80	55	
	yellow-poplar	90	85	
29B:				
Lew	eastern white pine	90	172	eastern white pine, yellow-poplar
	northern red oak	80	55	
	yellow-poplar	90	85	
30C:				
Lew	eastern white pine	90	172	eastern white pine, yellow-poplar
	northern red oak	80	55	
	yellow-poplar	90	85	
30D:				
Lew	eastern white pine	90	172	eastern white pine, yellow-poplar
	northern red oak	80	55	
	yellow-poplar	90	85	
30E:				
Lew	eastern white pine	90	172	eastern white pine, yellow-poplar
	northern red oak	80	55	
	yellow-poplar	90	85	
31B:				
Littlejoe	loblolly pine	78	112	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	78	55	
	Virginia pine	68	100	
	yellow-poplar	83	70	
31C:				
Littlejoe	loblolly pine	78	112	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	78	55	
	Virginia pine	68	100	
	yellow-poplar	83	70	
32B:				
Minnieville	northern red oak	70	55	eastern white pine, loblolly pine, yellow-poplar
	shortleaf pine	70	112	
	Virginia pine	80	112	
	white oak	70	55	
	yellow-poplar	70	55	

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	
32C:				
Minnieville	northern red oak	70	55	eastern white pine, loblolly pine, yellow-poplar
	shortleaf pine	70	112	
	Virginia pine	80	112	
	white oak	70	55	
	yellow-poplar	70	55	
32D:				
Minnieville	northern red oak	70	55	eastern white pine, loblolly pine, yellow-poplar
	shortleaf pine	70	112	
	Virginia pine	80	112	
	white oak	70	55	
	yellow-poplar	70	55	
32E:				
Minnieville	northern red oak	70	55	eastern white pine, loblolly pine, yellow-poplar
	shortleaf pine	70	112	
	Virginia pine	80	112	
	white oak	70	55	
	yellow-poplar	70	55	
33C:				
Myersville	northern red oak	85	70	black walnut, eastern white pine, yellow-poplar
	yellow-poplar	95	100	
Catoctin	chestnut oak	57	43	eastern white pine
	northern red oak	60	43	
	yellow-poplar	70	55	
33D:				
Myersville	northern red oak	85	70	black walnut, eastern white pine
	yellow-poplar	95	100	
Catoctin	chestnut oak	57	43	eastern white pine, shortleaf pine
	northern red oak	60	43	
	yellow-poplar	70	55	
33E:				
Myersville	northern red oak	85	70	black walnut, eastern white pine
	yellow-poplar	95	100	
Catoctin	chestnut oak	57	43	eastern white pine, shortleaf pine
	northern red oak	60	43	
	yellow-poplar	70	55	
34C:				
Occoquan	northern red oak	62	43	eastern white pine, hemlock, shortleaf pine, yellow-poplar
	Virginia pine	60	85	
	white oak	60	43	
	yellow-poplar	70	55	
34D:				
Occoquan	northern red oak	62	43	eastern white pine, yellow-poplar
	Virginia pine	60	85	
	white oak	60	43	
	yellow-poplar	70	55	

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:				
Occoquan----------------	northern red oak----	62	43	eastern white pine,
	Virginia pine-------	60	85	yellow-poplar
	white oak-----------	60	43	
	yellow-poplar-------	70	55	
35D:				
Occoquan----------------	northern red oak----	62	43	eastern white pine,
	Virginia pine-------	60	85	loblolly pine
	white oak-----------	60	43	
35E:				
Occoquan----------------	northern red oak----	62	43	eastern white pine,
	Virginia pine-------	60	85	loblolly pine
	white oak-----------	60	43	
36D, 36E, 36F:				
Peaks-------------------	northern red oak----	67	43	eastern white pine,
	Virginia pine-------	60	86	northern red oak
Rock outcrop.				
37A:				
Pineywoods--------------	northern red oak----	60	43	eastern white pine,
	red maple-----------	55	43	loblolly pine
	Virginia pine-------	60	85	
	willow oak----------	60	43	
38.				
Pits				
39C:				
Saunook-----------------	eastern white pine--	103	157	eastern white pine,
	northern red oak----	80	55	northern red oak,
	red maple-----------	80	55	yellow-poplar
	white oak-----------	83	55	
	yellow-poplar-------	107	112	
39D:				
Saunook-----------------	eastern white pine--	103	157	eastern white pine,
	northern red oak----	90	70	northern red oak,
	red maple-----------	80	55	yellow-poplar
	white oak-----------	83	55	
	yellow-poplar-------	107	112	
40C:				
Saunook-----------------	eastern white pine--	103	157	eastern white pine,
	northern red oak----	90	70	northern red oak,
	red maple-----------	80	55	yellow-poplar
	white oak-----------	83	55	
	yellow-poplar-------	107	112	
40D:				
Saunook-----------------	eastern white pine--	103	157	eastern white pine,
	northern red oak----	90	70	northern red oak,
	red maple-----------	80	55	yellow-poplar
	white oak-----------	83	55	
	yellow-poplar-------	107	112	

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	
40E:				
Saunook	eastern white pine	103	157	eastern white pine, northern red oak, yellow-poplar
	northern red oak	90	70	
	red maple	80	55	
	white oak	83	55	
	yellow-poplar	107	112	
41B:				
Sketerville	northern red oak	55	43	eastern white pine, loblolly pine, yellow-poplar
	shortleaf pine	65	100	
	Virginia pine	65	100	
	willow oak	---	---	
42C:				
Spriggs	northern red oak	62	43	eastern white pine, loblolly pine
	Virginia pine	60	85	
	white oak	60	43	
42D:				
Spriggs	northern red oak	62	43	eastern white pine, loblolly pine
	Virginia pine	60	85	
	white oak	60	43	
42E:				
Spriggs	northern red oak	62	43	eastern white pine, loblolly pine
	Virginia pine	60	85	
	white oak	60	43	
43A:				
Suches	eastern white pine	100	185	eastern white pine, loblolly pine, northern red oak, yellow-poplar
	loblolly pine	90	128	
	northern red oak	90	55	
	shortleaf pine	80	128	
	yellow-poplar	105	112	
44C:				
Sylco	chestnut oak	60	43	eastern white pine
	eastern white pine	70	112	
	northern red oak	55	43	
Sylvatus	chestnut oak	60	43	eastern white pine
	northern red oak	55	43	
	yellow-poplar	70	55	
44D:				
Sylco	chestnut oak	60	43	eastern white pine
	eastern white pine	70	112	
	northern red oak	55	43	
Sylvatus	chestnut oak	60	43	eastern white pine
	northern red oak	55	43	
	yellow-poplar	70	55	
44E:				
Sylco	chestnut oak	60	43	eastern white pine
	eastern white pine	70	112	
	northern red oak	55	43	

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	
44E:				
Sylvatus	chestnut oak	60	43	eastern white pine
	northern red oak	55	43	
	yellow-poplar	70	55	
45E:				
Sylvatus	chestnut oak	60	43	eastern white pine
	northern red oak	55	43	
	yellow-poplar	70	55	
Rock outcrop.				
45F:				
Sylvatus	chestnut oak	60	43	eastern white pine
	northern red oak	55	43	
	yellow-poplar	70	55	
Rock outcrop.				
46B:				
Thurmont	eastern white pine	88	157	eastern white pine,
	northern red oak	76	55	loblolly pine,
	shortleaf pine	77	128	yellow-poplar
	yellow-poplar	88	85	
46C:				
Thurmont	eastern white pine	88	157	eastern white pine,
	northern red oak	76	55	loblolly pine,
	shortleaf pine	77	128	yellow-poplar
	yellow-poplar	88	85	
46D:				
Thurmont	eastern white pine	88	157	eastern white pine,
	northern red oak	76	55	loblolly pine,
	shortleaf pine	77	128	yellow-poplar
	yellow-poplar	88	85	
47B:				
Thurmont	eastern white pine	88	157	eastern white pine,
	northern red oak	76	55	loblolly pine,
	shortleaf pine	77	128	yellow-poplar
	yellow-poplar	88	85	
47C:				
Thurmont	eastern white pine	88	157	eastern white pine,
	northern red oak	76	55	loblolly pine,
	shortleaf pine	77	128	yellow-poplar
	yellow-poplar	88	85	
47D:				
Thurmont	eastern white pine	88	157	eastern white pine,
	northern red oak	76	55	loblolly pine,
	shortleaf pine	77	128	shortleaf pine
	yellow-poplar	88	85	

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	
48. Udorthents				
49B: Unison	northern red oak	85	70	eastern white pine, loblolly pine, yellow-poplar
	red maple	75	55	
	Virginia pine	80	112	
	yellow-poplar	95	100	
49C: Unison	northern red oak	85	70	eastern white pine, loblolly pine, yellow-poplar
	red maple	75	55	
	Virginia pine	80	112	
	yellow-poplar	95	100	
49D: Unison	northern red oak	85	70	eastern white pine, loblolly pine, yellow-poplar
	red maple	75	55	
	Virginia pine	80	112	
	yellow-poplar	95	100	
50B: Warminster	northern red oak	76	55	loblolly pine, yellow-poplar
	shortleaf pine	80	128	
	Virginia pine	75	112	
	yellow-poplar	90	85	
50C: Warminster	northern red oak	76	55	loblolly pine, yellow-poplar
	shortleaf pine	80	128	
	Virginia pine	75	112	
	yellow-poplar	90	85	
50D: Warminster	northern red oak	76	55	loblolly pine, yellow-poplar
	shortleaf pine	80	128	
	Virginia pine	75	112	
	yellow-poplar	90	85	
51A: Wingina	American sycamore	---	---	American sycamore, black walnut, green ash, loblolly pine, yellow-poplar
	green ash	---	---	
	loblolly pine	100	157	
	river birch	---	---	
	sweetgum	100	140	
	yellow-poplar	110	128	
52B: Wintergreen	eastern white pine	95	172	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	80	55	
	yellow-poplar	90	85	
52C: Wintergreen	eastern white pine	95	172	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	80	55	
	yellow-poplar	90	85	

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	
52D:				
Wintergreen	eastern white pine	95	172	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	80	55	
	yellow-poplar	90	85	
53B:				
Wintergreen	eastern white pine	95	172	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	80	55	
	yellow-poplar	90	85	
53C:				
Wintergreen	eastern white pine	95	172	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	80	55	
	yellow-poplar	90	85	
53D:				
Wintergreen	eastern white pine	95	172	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	80	55	
	yellow-poplar	90	85	
54C:				
Wintergreen	eastern white pine	95	172	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	80	55	
	yellow-poplar	90	85	
55A:				
Yogaville	American sycamore	---	---	American sycamore, loblolly pine, sweetgum, yellow-poplar
	red maple	---	---	
	river birch	---	---	
	sweetgum	94	112	
	yellow-poplar	100	112	
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: 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
1D:							
Arcola	90	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Restrictive layer	0.50				
1E:							
Arcola	90	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Low strength	0.50				
2A:							
Batteau	85	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Wetness	0.50		
3B:							
Belvoir	85	Slight		Moderately suited		Moderate	
				Wetness	0.50	Low strength	0.50
4B:							
Buffstat	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
4C:							
Buffstat	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
4D:							
Buffstat	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50	Low strength	0.50		
5C:							
Bugley	85	Severe		Moderately suited		Severe	
		Restrictive layer	1.00	Slope	0.50	Low strength	1.00
				Low strength	0.50		
5D:							
Bugley	85	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
5E:							
Bugley	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6E:							
Catoctin------------	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
		Low strength	0.50	Low strength	0.50		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
7B:							
Chatuge-------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Wetness	0.50		
8A:							
Codorus-------------	85	Moderate		Moderately suited		Severe	
		Flooding	0.50	Ponding	0.50	Low strength	1.00
		Low strength	0.50	Flooding	0.50		
				Low strength	0.50		
9B:							
Colleen-------------	85	Slight		Well suited		Moderate	
						Low strength	0.50
9C:							
Colleen-------------	90	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
9D:							
Colleen-------------	90	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
10A:							
Colvard-------------	85	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Low strength	0.50
11A:							
Craigsville---------	85	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Low strength	0.50
		Low strength	0.50	Low strength	0.50		
12B:							
Delanco-------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Wetness	0.50		
12C:							
Delanco-------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
				Wetness	0.50		
13C:							
Edneytown-----------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
13D:							
Edneytown-----------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: 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
13E:							
Edneytown-----------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
14C:							
Edneytown-----------	55	Moderate		Moderately suited		Severe	
		Stoniness	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Rock fragments	0.50		
				Low strength	0.50		
Peaks---------------	35	Moderate		Moderately suited		Slight	
		Restrictive layer	0.50	Slope	0.50	Strength	0.10
		Stoniness	0.50	Rock fragments	0.50		
14D:							
Edneytown-----------	55	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
				Low strength	0.50		
Peaks---------------	35	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
		Restrictive layer	0.50	Rock fragments	0.50		
		Stoniness	0.50				
14E:							
Edneytown-----------	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
		Low strength	0.50	Low strength	0.50		
Peaks---------------	35	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Stoniness	0.50	Rock fragments	0.50		
14F:							
Edneytown-----------	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
		Low strength	0.50	Low strength	0.50		
Peaks---------------	35	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Stoniness	0.50	Rock fragments	0.50		
15B:							
Elioak--------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
15C:							
Elioak--------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
15D:							
Elioak--------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: 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
16C:							
Elioak--------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
16D:							
Elioak--------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
17B:							
Elsinboro-----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
18C:							
Fauquier------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
18D:							
Fauquier------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50	Low strength	0.50		
18E:							
Fauquier------------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
19A:							
Galtsmill-----------	85	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
20D:							
Glenelg-------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
21A:							
Hatboro-------------	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Ponding	1.00	Low strength	1.00
		Low strength	0.50	Flooding	1.00		
				Wetness	1.00		
22B:							
Hayesville----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
22C:							
Hayesville----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
22D:							
Hayesville----------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: 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
22E:							
Hayesville----------	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
23B:							
Hayesville----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
23C:							
Hayesville----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
23D:							
Hayesville----------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
23E:							
Hayesville----------	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
24C:							
Hayesville----------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
24D:							
Hayesville----------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
24E:							
Hayesville----------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
25C:							
Hazel---------------	85	Moderate		Moderately suited		Moderate	
		Restrictive layer	0.50	Slope	0.50	Low strength	0.50
25D:							
Hazel---------------	85	Moderate		Poorly suited		Moderate	
		Restrictive layer	0.50	Slope	1.00	Low strength	0.50
		Slope	0.50				
25E:							
Hazel---------------	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
26D:							
Hazel---------------	85	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
26E:							
Hazel----------------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
27B:							
Jackland------------	85	Slight		Moderately suited		Moderate	
				Wetness	0.50	Low strength	0.50
27C:							
Jackland------------	85	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
				Wetness	0.50		
28B:							
Lew------------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
29B:							
Lew------------------	85	Moderate		Moderately suited		Severe	
		Stoniness	0.50	Rock fragments	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
30C:							
Lew------------------	85	Moderate		Poorly suited		Slight	
		Stoniness	0.50	Rock fragments	1.00	Strength	0.10
				Slope	0.50		
30D:							
Lew------------------	85	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
		Stoniness	0.50	Rock fragments	1.00		
30E:							
Lew------------------	85	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Stoniness	0.50	Rock fragments	1.00		
31B:							
Littlejoe-----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
31C:							
Littlejoe-----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
32B:							
Minnieville---------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
32C:							
Minnieville---------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
32D:							
Minnieville---------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: 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
32E:							
Minnieville----------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
33C:							
Myersville----------	55	Moderate		Moderately suited		Severe	
		Stoniness	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Rock fragments	0.50		
				Low strength	0.50		
Catoctin------------	35	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
		Low strength	0.50	Low strength	0.50		
33D:							
Myersville----------	55	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
				Low strength	0.50		
Catoctin------------	35	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	Low strength	0.50		
33E:							
Myersville----------	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
				Low strength	0.50		
Catoctin------------	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
		Low strength	0.50	Low strength	0.50		
34C:							
Occoquan------------	85	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
34D:							
Occoquan------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
34E:							
Occoquan------------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
35D:							
Occoquan------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
35E:							
Occoquan------------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
36D:							
Peaks---------------	60	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
		Restrictive layer	0.50				
Rock outcrop--------	30	Not rated		Not rated		Not rated	
36E:							
Peaks---------------	60	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
Rock outcrop--------	30	Not rated		Not rated		Not rated	
36F:							
Peaks---------------	60	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
Rock outcrop--------	30	Not rated		Not rated		Not rated	
37A:							
Pineywoods----------	85	Moderate		Poorly suited		Severe	
		Low strength	0.50	Wetness	1.00	Low strength	1.00
				Low strength	0.50		
38:							
Pits----------------	100	Not rated		Not rated		Not rated	
39C:							
Saunook-------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
39D:							
Saunook-------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
40C:							
Saunook-------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
40D:							
Saunook-------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
40E:							
Saunook-------------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
41B:							
Sketerville---------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
42C:							
Spriggs-------------	85	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
42D:							
Spriggs-------------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50	Low strength	0.50		
42E:							
Spriggs-------------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
43A:							
Suches--------------	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
44C:							
Sylco---------------	55	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
				Low strength	0.50		
Sylvatus------------	35	Severe		Moderately suited		Moderate	
		Restrictive layer	1.00	Slope	0.50	Low strength	0.50
		Stoniness	0.50	Rock fragments	0.50		
44D:							
Sylco---------------	55	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	Low strength	0.50		
Sylvatus------------	35	Severe		Poorly suited		Moderate	
		Restrictive layer	1.00	Slope	1.00	Low strength	0.50
		Slope	0.50	Rock fragments	0.50		
		Stoniness	0.50				
44E:							
Sylco---------------	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Stoniness	0.50	Rock fragments	0.50		
				Low strength	0.50		
Sylvatus------------	35	Severe		Poorly suited		Moderate	
		Slope	1.00	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
45E:							
Sylvatus	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Stoniness	0.50	Rock fragments	0.50		
Rock outcrop	30	Not rated		Not rated		Not rated	
45F:							
Sylvatus	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Stoniness	0.50	Rock fragments	0.50		
Rock outcrop	30	Not rated		Not rated		Not rated	
46B:							
Thurmont	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
46C:							
Thurmont	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
46D:							
Thurmont	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
47B:							
Thurmont	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
47C:							
Thurmont	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
47D:							
Thurmont	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
48:							
Udorthents	85	Not rated		Not rated		Not rated	
49B:							
Unison	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
49C:							
Unison	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
49D:							
Unison	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: 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
50B:							
Warminster----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
50C:							
Warminster----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
50D:							
Warminster----------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
51A:							
Wingina-------------	85	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
52B:							
Wintergreen---------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
52C:							
Wintergreen---------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
52D:							
Wintergreen---------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
53B:							
Wintergreen---------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
53C:							
Wintergreen---------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
53D:							
Wintergreen---------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
54C:							
Wintergreen---------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
55A:							
Yogaville-----------	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Ponding	1.00	Low strength	1.00
		Low strength	0.50	Flooding	1.00		
				Wetness	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
1D:							
Arcola	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
1E:							
Arcola	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
2A:							
Batteau	85	Slight		Slight		Moderately suited	
						Flooding	0.50
						Low strength	0.50
						Wetness	0.50
3B:							
Belvoir	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Wetness	0.50
4B:							
Buffstat	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
4C:							
Buffstat	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
4D:							
Buffstat	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
5C:							
Bugley	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
5D:							
Bugley	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
5E:							
Bugley	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
6E:							
Catoctin	55	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	

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
7B:							
Chatuge-------------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Wetness	0.50
8A:							
Codorus-------------	85	Slight		Slight		Moderately suited	
						Ponding	0.50
						Flooding	0.50
						Low strength	0.50
9B:							
Colleen-------------	85	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
9C:							
Colleen-------------	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
9D:							
Colleen-------------	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
10A:							
Colvard-------------	85	Slight		Slight		Poorly suited	
						Flooding	1.00
11A:							
Craigsville---------	85	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
12B:							
Delanco-------------	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Wetness	0.50
12C:							
Delanco-------------	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Wetness	0.50
13C:							
Edneytown-----------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
13D:							
Edneytown-----------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
13E:							
Edneytown-----------	85	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
14C:							
Edneytown-----------	55	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
						Low strength	0.50
Peaks---------------	35	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
14D:							
Edneytown-----------	55	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
Peaks---------------	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
14E:							
Edneytown-----------	55	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
Peaks---------------	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
14F:							
Edneytown-----------	55	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
Peaks---------------	35	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
15B:							
Elioak--------------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
15C:							
Elioak--------------	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
15D:							
Elioak--------------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
16C:							
Elioak--------------	85	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
16D:							
Elioak	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
17B:							
Elsinboro	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
18C:							
Fauquier	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
18D:							
Fauquier	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
18E:							
Fauquier	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
19A:							
Galtsmill	85	Slight		Slight		Moderately suited	
						Flooding	0.50
						Low strength	0.50
20D:							
Glenelg	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
21A:							
Hatboro	85	Slight		Slight		Poorly suited	
						Ponding	1.00
						Flooding	1.00
						Wetness	1.00
22B:							
Hayesville	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
22C:							
Hayesville	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
22D:							
Hayesville	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
22E:							
Hayesville	90	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
23B:							
Hayesville	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
23C:							
Hayesville	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
23D:							
Hayesville	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
23E:							
Hayesville	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
24C:							
Hayesville	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
24D:							
Hayesville	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
24E:							
Hayesville	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
25C:							
Hazel	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
25D:							
Hazel	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
25E:							
Hazel	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
26D:							
Hazel	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
26E:							
Hazel	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
27B:							
Jackland	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Wetness	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
27C:							
Jackland------------	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Wetness	0.50
28B:							
Lew-----------------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
29B:							
Lew-----------------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Rock fragments	0.50
						Low strength	0.50
30C:							
Lew-----------------	85	Slight		Moderate		Poorly suited	
				Slope/erodibility	0.50	Rock fragments	1.00
						Slope	0.50
30D:							
Lew-----------------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
30E:							
Lew-----------------	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
31B:							
Littlejoe-----------	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
31C:							
Littlejoe-----------	90	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
32B:							
Minnieville---------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
32C:							
Minnieville---------	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
32D:							
Minnieville---------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
32E:							
Minnieville---------	85	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
33C:							
Myersville----------	55	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Rock fragments	0.50
						Low strength	0.50
Catoctin------------	35	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
						Low strength	0.50
33D:							
Myersville----------	55	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
Catoctin------------	35	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
33E:							
Myersville----------	55	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
Catoctin------------	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
34C:							
Occoquan------------	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
34D:							
Occoquan------------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
34E:							
Occoquan------------	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
35D:							
Occoquan------------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
35E:							
Occoquan------------	85	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
36D:							
Peaks----------------	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated		Not rated	
36E:							
Peaks----------------	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated		Not rated	
36F:							
Peaks----------------	60	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated		Not rated	
37A:							
Pineywoods----------	85	Slight		Slight		Poorly suited	
						Wetness	1.00
						Low strength	0.50
38:							
Pits-----------------	100	Not rated		Not rated		Not rated	
39C:							
Saunook-------------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
39D:							
Saunook-------------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
40C:							
Saunook-------------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
40D:							
Saunook-------------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
40E:							
Saunook-------------	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
41B:							
Sketerville---------	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
42C:							
Spriggs-------------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	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
42D:							
Spriggs	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
42E:							
Spriggs	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
43A:							
Suches	85	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
44C:							
Sylco	55	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
						Low strength	0.50
Sylvatus	35	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
44D:							
Sylco	55	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
Sylvatus	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
44E:							
Sylco	55	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
Sylvatus	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
45E:							
Sylvatus	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
45F:							
Sylvatus	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	

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
46B:							
Thurmont	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
46C:							
Thurmont	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
46D:							
Thurmont	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
47B:							
Thurmont	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
47C:							
Thurmont	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
47D:							
Thurmont	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
48:							
Udorthents	85	Not rated		Not rated		Not rated	
49B:							
Unison	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
49C:							
Unison	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
49D:							
Unison	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
50B:							
Warminster	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
50C:							
Warminster	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
50D:							
Warminster	90	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
51A:							
Wingina	85	Slight		Slight		Moderately suited	
						Flooding	0.50
						Low strength	0.50
52B:							
Wintergreen	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
52C:							
Wintergreen	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
52D:							
Wintergreen	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
53B:							
Wintergreen	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
53C:							
Wintergreen	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
53D:							
Wintergreen	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
54C:							
Wintergreen	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
55A:							
Yogaville	85	Slight		Slight		Poorly suited	
						Ponding	1.00
						Flooding	1.00
						Wetness	1.00
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
1D:							
Arcola	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
1E:							
Arcola	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
2A:							
Batteau	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
3B:							
Belvoir	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
4B:							
Buffstat	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		
				Rock fragments	0.50		
4C:							
Buffstat	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		
				Rock fragments	0.50		
4D:							
Buffstat	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
				Rock fragments	0.50		
5C:							
Bugley	85	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
5D:							
Bugley	85	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.75	Slope	0.50
5E:							
Bugley	85	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	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
6E:							
Catoctin	55	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75	Rock fragments	0.50
						Low strength	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
7B:							
Chatuge	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
8A:							
Codorus	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
9B:							
Colleen	85	Poorly suited		Poorly suited		Well suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
9C:							
Colleen	90	Poorly suited		Poorly suited		Well suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
9D:							
Colleen	90	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Slope	0.50
				Stickiness; high plasticity index	0.75		
				Rock fragments	0.50		
10A:							
Colvard	85	Well suited		Well suited		Well suited	
11A:							
Craigsville	85	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	0.50
12B:							
Delanco	90	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		
12C:							
Delanco	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
13C:							
Edneytown	85	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
13D:							
Edneytown-----------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
13E:							
Edneytown-----------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
14C:							
Edneytown-----------	55	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	0.50
				Slope	0.50	Low strength	0.50
Peaks---------------	35	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	0.50
				Slope	0.50		
14D:							
Edneytown-----------	55	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	0.50
				Rock fragments	0.75	Low strength	0.50
						Slope	0.50
Peaks---------------	35	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	0.50
				Rock fragments	0.75	Slope	0.50
14E:							
Edneytown-----------	55	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
Peaks---------------	35	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
14F:							
Edneytown-----------	55	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
Peaks---------------	35	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
15B:							
Elioak--------------	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
15C:							
Elioak--------------	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	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
15D:							
Elioak--------------	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75	Slope	0.50
16C:							
Elioak--------------	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
16D:							
Elioak--------------	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75	Slope	0.50
17B:							
Elsinboro-----------	90	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		
18C:							
Fauquier------------	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
				Rock fragments	0.50		
18D:							
Fauquier------------	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75	Slope	0.50
				Rock fragments	0.50		
18E:							
Fauquier------------	85	Poorly suited		Unsuited		Poorly suited	
		Stickiness; high plasticity index	0.75	Slope	1.00	Slope	1.00
		Slope	0.50	Stickiness; high plasticity index	0.75	Low strength	0.50
				Rock fragments	0.50		
19A:							
Galtsmill-----------	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
20D:							
Glenelg-------------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
21A:							
Hatboro-------------	85	Well suited		Well suited		Moderately suited	
						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
22B:							
Hayesville----------	90	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		
22C:							
Hayesville----------	90	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		
22D:							
Hayesville----------	90	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
22E:							
Hayesville----------	90	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
23B:							
Hayesville----------	90	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		
23C:							
Hayesville----------	90	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		
23D:							
Hayesville----------	90	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
23E:							
Hayesville----------	90	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
24C:							
Hayesville----------	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		
				Rock fragments	0.50		
24D:							
Hayesville----------	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
				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
24E:							
Hayesville----------	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
				Rock fragments	0.50		
25C:							
Hazel---------------	85	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		
				Slope	0.50		
25D:							
Hazel---------------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
25E:							
Hazel---------------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
26D:							
Hazel---------------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
26E:							
Hazel---------------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
27B:							
Jackland------------	85	Poorly suited		Poorly suited		Well suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
27C:							
Jackland------------	85	Poorly suited		Poorly suited		Well suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
28B:							
Lew-----------------	85	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
		Stickiness; high plasticity index	0.50	Slope	0.50		
				Stickiness; high plasticity index	0.50		
29B:							
Lew-----------------	85	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	0.50
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	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
30C:							
Lew	85	Moderately suited		Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	1.00
		Stickiness; high plasticity index	0.50	Slope	0.50		
				Stickiness; high plasticity index	0.50		
30D:							
Lew	85	Moderately suited		Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	1.00
		Stickiness; high plasticity index	0.50	Slope	0.75	Slope	0.50
				Stickiness; high plasticity index	0.50		
30E:							
Lew	85	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Rock fragments	1.00
		Slope	0.50	Rock fragments	0.75	Slope	1.00
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		
31B:							
Littlejoe	90	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
31C:							
Littlejoe	90	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
32B:							
Minnieville	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
32C:							
Minnieville	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
32D:							
Minnieville	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75	Slope	0.50
32E:							
Minnieville	85	Poorly suited		Unsuited		Poorly suited	
		Stickiness; high plasticity index	0.75	Slope	1.00	Slope	1.00
		Slope	0.50	Stickiness; high plasticity index	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
33C:							
Myersville----------	55	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	0.50
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
Catoctin-----------	35	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	0.50
				Slope	0.50	Low strength	0.50
33D:							
Myersville----------	55	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	0.50
		Stickiness; high plasticity index	0.50	Rock fragments	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
Catoctin-----------	35	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	0.50
				Rock fragments	0.75	Low strength	0.50
						Slope	0.50
33E:							
Myersville----------	55	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
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
Catoctin-----------	35	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
34C:							
Occoquan-----------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
34D:							
Occoquan-----------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
34E:							
Occoquan-----------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
35D:							
Occoquan-----------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
35E:							
Occoquan-----------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				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
36D:							
Peaks	60	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
Rock outcrop	30	Not rated		Not rated		Not rated	
36E:							
Peaks	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	30	Not rated		Not rated		Not rated	
36F:							
Peaks	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	30	Not rated		Not rated		Not rated	
37A:							
Pineywoods	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
38:							
Pits	100	Not rated		Not rated		Not rated	
39C:							
Saunook	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
39D:							
Saunook	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
40C:							
Saunook	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
40D:							
Saunook	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
40E:							
Saunook	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
41B:							
Sketerville	90	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	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
42C:							
Spriggs	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
42D:							
Spriggs	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
42E:							
Spriggs	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
43A:							
Suches	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
44C:							
Sylco	55	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	0.50
				Slope	0.50	Low strength	0.50
Sylvatus	35	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
		Stickiness; high plasticity index	0.50	Slope	0.50		
				Stickiness; high plasticity index	0.50		
44D:							
Sylco	55	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	0.50
				Rock fragments	0.75	Low strength	0.50
						Slope	0.50
Sylvatus	35	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
		Stickiness; high plasticity index	0.50	Slope	0.75	Slope	0.50
				Stickiness; high plasticity index	0.50		
44E:							
Sylco	55	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
Sylvatus	35	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
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	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
45E:							
Sylvatus	60	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
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		
Rock outcrop	30	Not rated		Not rated		Not rated	
45F:							
Sylvatus	60	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
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		
Rock outcrop	30	Not rated		Not rated		Not rated	
46B:							
Thurmont	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
46C:							
Thurmont	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
46D:							
Thurmont	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
47B:							
Thurmont	85	Well suited		Moderately suited		Moderately suited	
				Rock fragments	0.50	Low strength	0.50
				Slope	0.50		
47C:							
Thurmont	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
47D:							
Thurmont	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
48:							
Udorthents	85	Not rated		Not rated		Not rated	
49B:							
Unison	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		
49C:							
Unison	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		

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
49D:							
Unison	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
50B:							
Warminster	90	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
50C:							
Warminster	90	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
50D:							
Warminster	90	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75	Slope	0.50
51A:							
Wingina	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
52B:							
Wintergreen	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
52C:							
Wintergreen	90	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
52D:							
Wintergreen	90	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75	Slope	0.50
53B:							
Wintergreen	90	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
53C:							
Wintergreen	90	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	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
53D:							
Wintergreen----------	90	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75	Slope	0.50
54C:							
Wintergreen----------	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Rock fragments	0.50		
				Slope	0.50		
55A:							
Yogaville-----------	85	Well suited		Well suited		Moderately suited	
						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
1D:					
Arcola	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
1E:					
Arcola	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
2A:					
Batteau	85	Well suited		Well suited	
3B:					
Belvoir	85	Well suited		Unsuited	
				Restrictive layer	1.00
4B:					
Buffstat	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
4C:					
Buffstat	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
4D:					
Buffstat	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
5C:					
Bugley	85	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
5D:					
Bugley	85	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50
5E:					
Bugley	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
6E:					
Catoctin	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Rock outcrop	30	Not rated		Not rated	

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
7B:					
Chatuge	85	Well suited		Well suited	
8A:					
Codorus	85	Well suited		Well suited	
9B:					
Colleen	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
9C:					
Colleen	90	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
9D:					
Colleen	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
10A:					
Colvard	85	Well suited		Well suited	
11A:					
Craigsville	85	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
12B:					
Delanco	90	Well suited		Well suited	
12C:					
Delanco	85	Well suited		Well suited	
13C:					
Edneytown	85	Well suited		Well suited	
13D:					
Edneytown	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
13E:					
Edneytown	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
14C:					
Edneytown	55	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
Peaks	35	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
14D:					
Edneytown	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	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
14D:					
Peaks	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
14E:					
Edneytown	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Peaks	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
14F:					
Edneytown	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Peaks	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
15B:					
Elioak	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
15C:					
Elioak	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
15D:					
Elioak	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
16C:					
Elioak	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
16D:					
Elioak	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
17B:					
Elsinboro	90	Well suited		Well suited	
18C:					
Fauquier	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	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
18D:					
Fauquier-----------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
18E:					
Fauquier-----------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Stickiness; high plasticity index	0.50		
19A:					
Galtsmill----------	85	Well suited		Well suited	
20D:					
Glenelg------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
21A:					
Hatboro------------	85	Well suited		Well suited	
22B:					
Hayesville---------	90	Well suited		Well suited	
22C:					
Hayesville---------	90	Well suited		Well suited	
22D:					
Hayesville---------	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
22E:					
Hayesville---------	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
23B:					
Hayesville---------	90	Well suited		Well suited	
23C:					
Hayesville---------	90	Well suited		Well suited	
23D:					
Hayesville---------	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
23E:					
Hayesville---------	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
24C:					
Hayesville---------	85	Well suited		Well suited	
24D:					
Hayesville---------	85	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)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
24E:					
Hayesville----------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
25C:					
Hazel---------------	85	Well suited		Poorly suited	
				Restrictive layer	0.50
25D:					
Hazel---------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
25E:					
Hazel---------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
26D:					
Hazel---------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
26E:					
Hazel---------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
27B:					
Jackland------------	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
27C:					
Jackland------------	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
28B:					
Lew-----------------	85	Poorly suited		Well suited	
		Rock fragments	0.50		
29B:					
Lew-----------------	85	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
30C:					
Lew-----------------	85	Unsuited		Poorly suited	
		Rock fragments	1.00	Rock fragments	0.50
30D:					
Lew-----------------	85	Unsuited		Poorly suited	
		Rock fragments	1.00	Slope	0.50
		Slope	0.50	Rock fragments	0.50
30E:					
Lew-----------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	1.00	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
31B:					
Littlejoe----------	90	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
31C:					
Littlejoe----------	90	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
32B:					
Minnieville---------	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
32C:					
Minnieville---------	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
32D:					
Minnieville---------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
32E:					
Minnieville---------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Stickiness; high plasticity index	0.50		
33C:					
Myersville----------	55	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
Catoctin------------	35	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
33D:					
Myersville----------	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
Catoctin------------	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
33E:					
Myersville----------	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Catoctin------------	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
34C:					
Occoquan------------	85	Well suited		Well suited	

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
34D:					
Occoquan-----------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
34E:					
Occoquan-----------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
35D:					
Occoquan-----------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
35E:					
Occoquan-----------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
36D:					
Peaks---------------	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Rock outcrop--------	30	Not rated		Not rated	
36E:					
Peaks---------------	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated	
36F:					
Peaks---------------	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated	
37A:					
Pineywoods----------	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
38:					
Pits----------------	100	Not rated		Not rated	
39C:					
Saunook-------------	85	Well suited		Well suited	
39D:					
Saunook-------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
40C:					
Saunook-------------	85	Well suited		Well suited	
40D:					
Saunook-------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
40E:					
Saunook-------------	85	Unsuited		Unsuited	
		Slope	1.00	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)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
41B:					
Sketerville---------	90	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
42C:					
Spriggs------------	85	Well suited		Well suited	
42D:					
Spriggs------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
42E:					
Spriggs------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
43A:					
Suches--------------	85	Well suited		Well suited	
44C:					
Sylco---------------	55	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
Sylvatus------------	35	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
				Rock fragments	0.50
44D:					
Sylco---------------	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
Sylvatus------------	35	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50
				Rock fragments	0.50
44E:					
Sylco---------------	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Sylvatus------------	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
				Rock fragments	0.50
45E:					
Sylvatus------------	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
				Rock fragments	0.50
Rock outcrop--------	30	Not rated		Not rated	

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
45F:					
Sylvatus------------	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
				Rock fragments	0.50
Rock outcrop---------	30	Not rated		Not rated	
46B:					
Thurmont------------	85	Well suited		Well suited	
46C:					
Thurmont------------	85	Well suited		Well suited	
46D:					
Thurmont------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
47B:					
Thurmont------------	85	Well suited		Well suited	
47C:					
Thurmont------------	85	Well suited		Well suited	
47D:					
Thurmont------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
48:					
Udorthents----------	85	Not rated		Not rated	
49B:					
Unison--------------	85	Well suited		Well suited	
49C:					
Unison--------------	85	Well suited		Well suited	
49D:					
Unison--------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
50B:					
Warminster----------	90	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
50C:					
Warminster----------	90	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
50D:					
Warminster----------	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
51A:					
Wingina-------------	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
52B:					
Wintergreen----------	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
52C:					
Wintergreen----------	90	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
52D:					
Wintergreen----------	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
53B:					
Wintergreen----------	90	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
53C:					
Wintergreen----------	90	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
53D:					
Wintergreen----------	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness; high plasticity index	0.50		
54C:					
Wintergreen----------	85	Poorly suited		Well suited	
		Stickiness; high plasticity index	0.50		
55A:					
Yogaville-----------	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
1D:					
Arcola	90	Moderate		Low	
		Texture/rock fragments	0.50		
1E:					
Arcola	90	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
2A:					
Batteau	85	Low		Moderate	
		Texture/rock fragments	0.10	Wetness	0.50
3B:					
Belvoir	85	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
4B:					
Buffstat	85	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
4C:					
Buffstat	85	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
4D:					
Buffstat	85	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
5C:					
Bugley	85	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
5D:					
Bugley	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
5E:					
Bugley	85	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
6E:					
Catoctin	55	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
Rock outcrop	30	Not rated		Not rated	
7B:					
Chatuge	85	Moderate		Low	
		Texture/rock fragments	0.50		
8A:					
Codorus	85	Low		Low	
		Texture/surface depth/rock fragments	0.10		
9B:					
Colleen	85	Moderate		Low	
		Texture/rock fragments	0.50		
9C:					
Colleen	90	Moderate		Low	
		Texture/rock fragments	0.50		
9D:					
Colleen	90	Moderate		Low	
		Texture/rock fragments	0.50		
10A:					
Colvard	85	Moderate		Low	
		Texture/rock fragments	0.50		
11A:					
Craigsville	85	Low		Low	
		Texture/rock fragments	0.10		
12B:					
Delanco	90	Low		Low	
		Texture/rock fragments	0.10		
12C:					
Delanco	85	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
13C:					
Edneytown-----------	85	Low		Low	
		Texture/rock fragments	0.10		
13D:					
Edneytown-----------	85	Low		Low	
		Texture/rock fragments	0.10		
13E:					
Edneytown-----------	85	Low		Low	
		Texture/slope/ rock fragments	0.10		
14C:					
Edneytown-----------	55	Low		Low	
		Texture/rock fragments	0.10		
Peaks---------------	35	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
14D:					
Edneytown-----------	55	Low		Low	
		Texture/rock fragments	0.10		
Peaks---------------	35	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
14E:					
Edneytown-----------	55	Low		Low	
		Texture/slope/ rock fragments	0.10		
Peaks---------------	35	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
14F:					
Edneytown-----------	55	Low		Low	
		Texture/slope/ rock fragments	0.10		
Peaks---------------	35	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
15B:					
Elioak--------------	85	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
15C:					
Elioak	85	Low		Low	
		Texture/rock fragments	0.10		
15D:					
Elioak	85	Low		Low	
		Texture/rock fragments	0.10		
16C:					
Elioak	85	Low		Low	
16D:					
Elioak	85	Low		Low	
17B:					
Elsinboro	90	Low		Low	
		Texture/rock fragments	0.10		
18C:					
Fauquier	85	Low		Low	
		Texture/rock fragments	0.10		
18D:					
Fauquier	85	Low		Low	
		Texture/rock fragments	0.10		
18E:					
Fauquier	85	Low		Low	
		Texture/slope/ rock fragments	0.10		
19A:					
Galtsmill	85	Low		Low	
		Texture/rock fragments	0.10		
20D:					
Glenelg	85	Low		Low	
		Texture/rock fragments	0.10		
21A:					
Hatboro	85	Low		High	
		Texture/rock fragments	0.10	Wetness	1.00
22B:					
Hayesville	90	Low		Low	
		Texture/rock fragments	0.10		
22C:					
Hayesville	90	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
22D:					
Hayesville----------	90	Low		Low	
		Texture/rock fragments	0.10		
22E:					
Hayesville----------	90	Low		Low	
		Texture/slope/ rock fragments	0.10		
23B:					
Hayesville----------	90	Low		Low	
23C:					
Hayesville----------	90	Low		Low	
23D:					
Hayesville----------	90	Low		Low	
23E:					
Hayesville----------	90	Low		Low	
24C:					
Hayesville----------	85	Low		Low	
		Texture/rock fragments	0.10		
24D:					
Hayesville----------	85	Low		Low	
		Texture/rock fragments	0.10		
24E:					
Hayesville----------	85	Low		Low	
		Texture/slope/ rock fragments	0.10		
25C:					
Hazel---------------	85	Moderate		Low	
		Texture/rock fragments	0.50		
25D:					
Hazel---------------	85	Moderate		Low	
		Texture/rock fragments	0.50		
25E:					
Hazel---------------	85	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
26D:					
Hazel---------------	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
26E:					
Hazel	85	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
27B:					
Jackland	85	Moderate		Low	
		Texture/rock fragments	0.50		
27C:					
Jackland	85	Moderate		Low	
		Texture/rock fragments	0.50		
28B:					
Lew	85	Low		Low	
		Texture/rock fragments	0.10		
29B:					
Lew	85	Low		Low	
		Texture/rock fragments	0.10		
30C:					
Lew	85	Moderate		Low	
		Texture/rock fragments	0.50		
30D:					
Lew	85	Moderate		Low	
		Texture/rock fragments	0.50		
30E:					
Lew	85	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
31B:					
Littlejoe	90	Moderate		Low	
		Texture/rock fragments	0.50		
31C:					
Littlejoe	90	Moderate		Low	
		Texture/rock fragments	0.50		
32B:					
Minnieville	85	Moderate		Low	
		Texture/rock fragments	0.50		
32C:					
Minnieville	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
32D:					
Minnieville	85	Moderate		Low	
		Texture/rock fragments	0.50		
32E:					
Minnieville	85	Moderate		Low	
		Texture/rock fragments	0.50		
33C:					
Myersville	55	Moderate		Low	
		Texture/rock fragments	0.50		
Catoctin	35	Moderate		Low	
		Texture/rock fragments	0.50		
33D:					
Myersville	55	Moderate		Low	
		Texture/rock fragments	0.50		
Catoctin	35	Moderate		Low	
		Texture/rock fragments	0.50		
33E:					
Myersville	55	Moderate		Low	
		Texture/rock fragments	0.50		
Catoctin	35	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
34C:					
Occoquan	85	Low		Low	
		Texture/surface depth/rock fragments	0.10		
34D:					
Occoquan	85	Low		Low	
		Texture/surface depth/rock fragments	0.10		
34E:					
Occoquan	85	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
35D:					
Occoquan	85	Low		Low	
		Texture/surface depth/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
35E:					
Occoquan------------	85	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
36D:					
Peaks---------------	60	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Rock outcrop--------	30	Not rated		Not rated	
36E:					
Peaks---------------	60	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
Rock outcrop--------	30	Not rated		Not rated	
36F:					
Peaks---------------	60	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
Rock outcrop--------	30	Not rated		Not rated	
37A:					
Pineywoods----------	85	Low		High	
		Texture/rock fragments	0.10	Wetness	1.00
38:					
Pits----------------	100	Not rated		Not rated	
39C:					
Saunook-------------	85	Low		Low	
		Texture/rock fragments	0.10		
39D:					
Saunook-------------	85	Low		Low	
		Texture/rock fragments	0.10		
40C:					
Saunook-------------	85	Low		Low	
		Texture/rock fragments	0.10		
40D:					
Saunook-------------	85	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
40E:					
Saunook-------------	85	Low		Low	
		Texture/rock fragments	0.10		
41B:					
Sketerville---------	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
42C:					
Spriggs-------------	85	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
42D:					
Spriggs-------------	85	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
42E:					
Spriggs-------------	85	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
43A:					
Suches--------------	85	Low		Low	
		Texture/rock fragments	0.10		
44C:					
Sylco---------------	55	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Sylvatus------------	35	High		Moderate	
		Texture/surface depth/rock fragments	1.00	Soil reaction	0.50
44D:					
Sylco---------------	55	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Sylvatus------------	35	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
44E:					
Sylco	55	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Sylvatus	35	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
45E:					
Sylvatus	60	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
Rock outcrop	30	Not rated		Not rated	
45F:					
Sylvatus	60	High		Moderate	
		Texture/slope/ surface depth/ rock fragments	1.00	Soil reaction	0.50
Rock outcrop	30	Not rated		Not rated	
46B:					
Thurmont	85	Moderate		Low	
		Texture/rock fragments	0.50		
46C:					
Thurmont	85	Moderate		Low	
		Texture/rock fragments	0.50		
46D:					
Thurmont	85	Moderate		Low	
		Texture/rock fragments	0.50		
47B:					
Thurmont	85	Moderate		Low	
		Texture/rock fragments	0.50		
47C:					
Thurmont	85	Moderate		Low	
		Texture/rock fragments	0.50		
47D:					
Thurmont	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
48:					
Udorthents	85	Not rated		Not rated	
49B:					
Unison	85	Low		Low	
		Texture/surface depth/rock fragments	0.10		
49C:					
Unison	85	Low		Low	
		Texture/surface depth/rock fragments	0.10		
49D:					
Unison	85	Low		Low	
		Texture/surface depth/rock fragments	0.10		
50B:					
Warminster	90	Low		Low	
50C:					
Warminster	90	Low		Low	
50D:					
Warminster	90	Low		Low	
51A:					
Wingina	85	Low		Low	
		Texture/rock fragments	0.10		
52B:					
Wintergreen	85	Moderate		Low	
		Texture/rock fragments	0.50		
52C:					
Wintergreen	90	Moderate		Low	
		Texture/rock fragments	0.50		
52D:					
Wintergreen	90	Moderate		Low	
		Texture/rock fragments	0.50		
53B:					
Wintergreen	90	Low		Low	
53C:					
Wintergreen	90	Low		Low	
53D:					
Wintergreen	90	Low		Low	

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
54C:					
Wintergreen----------	85	Moderate		Low	
		Texture/rock fragments	0.50		
55A:					
Yogaville-----------	85	Low		High	
		Texture/rock fragments	0.10	Wetness	1.00
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
1D:							
Arcola--------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
						Depth to bedrock	0.16
1E:							
Arcola--------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
						Depth to bedrock	0.16
2A:							
Batteau-------------	85	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.90	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
						Gravel content	0.22
3B:							
Belvoir-------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to cemented pan	0.84	Depth to saturated zone	0.98
		Depth to cemented pan	0.84	Depth to saturated zone	0.75	Slope	0.88
						Depth to cemented pan	0.84
4B:							
Buffstat------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
						Gravel content	0.18
4C:							
Buffstat------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
						Gravel content	0.18
4D:							
Buffstat------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
5C:							
Bugley--------------	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to bedrock	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
5D:							
Bugley--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
5E:							
Bugley	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
6E:							
Catoctin	55	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.44	Gravel content	0.44	Gravel content	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
7B:							
Chatuge	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
						Slope	0.12
8A:							
Codorus	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Depth to saturated zone	0.98			Flooding	0.60
9B:							
Colleen	85	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.94	Slow water movement	0.94	Gravel content	1.00
		Gravel content	0.92	Gravel content	0.92	Slow water movement	0.94
						Slope	0.88
9C:							
Colleen	90	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.94	Slow water movement	0.94	Gravel content	1.00
		Gravel content	0.92	Gravel content	0.92	Slope	1.00
		Slope	0.37	Slope	0.37	Slow water movement	0.94
9D:							
Colleen	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Slow water movement	0.94	Slow water movement	0.94	Slope	1.00
		Gravel content	0.92	Gravel content	0.92	Slow water movement	0.94
10A:							
Colvard	85	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.01	Flooding	0.60
		Too sandy	0.01			Too sandy	0.01
11A:							
Craigsville	85	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Large stones content	0.32	Large stones content	0.32	Large stones content	0.32
						Gravel content	0.12

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
12B:							
Delanco	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.81	Depth to saturated zone	0.48	Slope	0.88
		Slow water movement	0.15	Slow water movement	0.15	Depth to saturated zone	0.81
						Slow water movement	0.15
12C:							
Delanco	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.81	Depth to saturated zone	0.48	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to saturated zone	0.81
		Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15
13C:							
Edneytown	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
13D:							
Edneytown	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
13E:							
Edneytown	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
14C:							
Edneytown	55	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Slope	0.37	Slope	0.37	Slope	1.00
Peaks	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	0.37	Slope	0.37	Slope	1.00
14D:							
Edneytown	55	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00
Peaks	35	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
14E:							
Edneytown	55	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00

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
14E:							
Peaks----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
14F:							
Edneytown------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00
Peaks----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
15B:							
Elioak---------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
15C:							
Elioak---------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
15D:							
Elioak---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
16C:							
Elioak---------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
16D:							
Elioak---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
17B:							
Elsinboro------------	90	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Slope	0.88
18C:							
Fauquier-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.47
						Gravel content	0.20
18D:							
Fauquier-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
						Gravel content	0.20

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
18E:							
Fauquier-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
						Gravel content	0.20
19A:							
Galtsmill----------	85	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
20D:							
Glenelg------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
21A:							
Hatboro------------	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
		Flooding	1.00	Ponding	1.00	Flooding	1.00
		Ponding	1.00	Flooding	0.40	Ponding	1.00
22B:							
Hayesville---------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
22C:							
Hayesville---------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
22D:							
Hayesville---------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
22E:							
Hayesville---------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
23B:							
Hayesville---------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
23C:							
Hayesville---------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
23D:							
Hayesville---------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
23E:							
Hayesville---------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
24C:							
Hayesville---------	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.47

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
24D:							
Hayesville----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
24E:							
Hayesville----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
25C:							
Hazel---------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
		Gravel content	0.24	Gravel content	0.24	Gravel content	1.00
						Depth to bedrock	0.35
25D:							
Hazel---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.24	Gravel content	0.24	Gravel content	1.00
						Depth to bedrock	0.35
25E:							
Hazel---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.24	Gravel content	0.24	Gravel content	1.00
						Depth to bedrock	0.35
26D:							
Hazel---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
						Depth to bedrock	0.35
26E:							
Hazel---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
						Depth to bedrock	0.35
27B:							
Jackland------------	85	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.98	Gravel content	0.87	Gravel content	1.00
		Gravel content	0.87	Depth to saturated zone	0.75	Depth to saturated zone	0.98
27C:							
Jackland------------	85	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	0.98	Gravel content	0.87	Slow water movement	1.00
		Gravel content	0.87	Depth to saturated zone	0.75	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
28B:							
Lew-----------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
29B:							
Lew-----------------	85	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
						Slope	0.88
30C:							
Lew-----------------	85	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Gravel content	0.38	Gravel content	0.38	Slope	1.00
		Slope	0.37	Slope	0.37	Gravel content	1.00
30D:							
Lew-----------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.38	Gravel content	0.38	Gravel content	1.00
30E:							
Lew-----------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.38	Gravel content	0.38	Gravel content	1.00
31B:							
Littlejoe-----------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
31C:							
Littlejoe-----------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
32B:							
Minnieville---------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
32C:							
Minnieville---------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
32D:							
Minnieville---------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
32E:							
Minnieville---------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
33C:							
Myersville----------	55	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Slope	0.37	Slope	0.37	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
33C:							
Catoctin------------	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Gravel content	0.44	Gravel content	0.44	Slope	1.00
		Slope	0.37	Slope	0.37	Gravel content	1.00
33D:							
Myersville----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
Catoctin------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.44	Gravel content	0.44	Gravel content	1.00
33E:							
Myersville----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
Catoctin------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.44	Gravel content	0.44	Gravel content	1.00
34C:							
Occoquan------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
						Gravel content	0.72
34D:							
Occoquan------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.72
34E:							
Occoquan------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.72
35D:							
Occoquan------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	0.72
						Large stones content	0.47
35E:							
Occoquan------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	0.72
						Large stones content	0.47

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
36D:							
Peaks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
						Depth to bedrock	0.84
Rock outcrop	30	Not rated		Not rated		Not rated	
36E:							
Peaks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
						Depth to bedrock	0.84
Rock outcrop	30	Not rated		Not rated		Not rated	
36F:							
Peaks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
						Depth to bedrock	0.84
Rock outcrop	30	Not rated		Not rated		Not rated	
37A:							
Pineywoods	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
		Slow water movement	0.94	Slow water movement	0.94	Slow water movement	0.94
38:							
Pits	100	Not rated		Not rated		Not rated	
39C:							
Saunook	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
39D:							
Saunook	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
40C:							
Saunook	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.47
40D:							
Saunook	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
40E:							
Saunook	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
41B:							
Sketerville	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.94	Slow water movement	0.94	Slow water movement	0.94
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slope	0.88
						Depth to saturated zone	0.39
42C:							
Spriggs	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to bedrock	0.99
						Large stones content	0.47
42D:							
Spriggs	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.99
						Large stones content	0.47
42E:							
Spriggs	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.99
						Large stones content	0.47
43A:							
Suches	85	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
44C:							
Sylco	55	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Gravel content	0.41	Gravel content	0.41	Slope	1.00
		Slope	0.37	Slope	0.37	Gravel content	1.00
Sylvatus	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
44D:							
Sylco	55	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.41	Gravel content	0.41	Gravel content	1.00
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00

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
44E:							
Sylco	55	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.41	Gravel content	0.41	Gravel content	1.00
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
45E:							
Sylvatus	60	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
45F:							
Sylvatus	60	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
46B:							
Thurmont	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
46C:							
Thurmont	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
46D:							
Thurmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
47B:							
Thurmont	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.47	Large stones content	0.47	Slope	0.88
						Large stones content	0.47
47C:							
Thurmont	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.47
47D:							
Thurmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
48:							
Udorthents	85	Not rated		Not rated		Not rated	
49B:							
Unison	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
49C:							
Unison	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
49D:							
Unison	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
50B:							
Warminster	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
50C:							
Warminster	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
50D:							
Warminster	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
51A:							
Wingina	85	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
52B:							
Wintergreen	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
52C:							
Wintergreen	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
52D:							
Wintergreen	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
53B:							
Wintergreen	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
53C:							
Wintergreen	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
53D:							
Wintergreen	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
54C:							
Wintergreen	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.47

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
55A:							
Yogaville-----------	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
		Flooding	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00			Flooding	0.60
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		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1D:							
Arcola--------------	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Gravel content	0.25
						Depth to bedrock	0.16
1E:							
Arcola--------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
						Gravel content	0.25
						Depth to bedrock	0.16
2A:							
Batteau-------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.78	Depth to saturated zone	0.78	Depth to saturated zone	0.90
						Flooding	0.60
3B:							
Belvoir-------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to cemented pan	0.84
						Depth to saturated zone	0.75
						Droughty	0.01
4B:							
Buffstat------------	85	Not limited		Not limited		Not limited	
4C:							
Buffstat------------	85	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.37
4D:							
Buffstat------------	85	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.50				
5C:							
Bugley--------------	85	Not limited		Not limited		Very limited	
						Droughty	1.00
						Depth to bedrock	1.00
						Slope	0.37
5D:							
Bugley--------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Droughty	1.00
						Depth to bedrock	1.00
5E:							
Bugley--------------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
						Droughty	1.00
						Depth to bedrock	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
6E:							
Catoctin	55	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	0.44
		Slope	1.00	Slope	1.00	Depth to bedrock	0.06
Rock outcrop	30	Not rated		Not rated		Not rated	
7B:							
Chatuge	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
8A:							
Codorus	85	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
						Flooding	0.60
9B:							
Colleen	85	Not limited		Not limited		Somewhat limited	
						Gravel content	0.92
9C:							
Colleen	90	Not limited		Not limited		Somewhat limited	
						Gravel content	0.92
						Slope	0.37
9D:							
Colleen	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Gravel content	0.92
10A:							
Colvard	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.01	Too sandy	0.01	Flooding	0.60
11A:							
Craigsville	85	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
		Large stones content	0.32	Large stones content	0.32	Large stones content	1.00
						Droughty	0.13
12B:							
Delanco	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
12C:							
Delanco	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
						Slope	0.37
13C:							
Edneytown	85	Not limited		Not limited		Somewhat limited	
						Slope	0.37

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
13D:							
Edneytown-----------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
13E:							
Edneytown-----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
14C:							
Edneytown-----------	55	Very limited		Very limited		Somewhat limited	
		Large stones content	1.00	Large stones content	1.00	Slope	0.37
Peaks---------------	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Gravel content	1.00
						Droughty	0.99
						Depth to bedrock	0.84
14D:							
Edneytown-----------	55	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
		Slope	1.00				
Peaks---------------	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	1.00
		Slope	1.00			Droughty	0.99
14E:							
Edneytown-----------	55	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
		Slope	1.00	Slope	1.00		
Peaks---------------	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	1.00
		Slope	1.00	Slope	1.00	Droughty	0.99
14F:							
Edneytown-----------	55	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
		Slope	1.00	Slope	1.00		
Peaks---------------	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	1.00
		Slope	1.00	Slope	1.00	Droughty	0.99
15B:							
Elioak--------------	85	Not limited		Not limited		Not limited	
15C:							
Elioak--------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.37

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
15D:							
Elioak--------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
16C:							
Elioak--------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.37
						Droughty	0.01
16D:							
Elioak--------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Droughty	0.01
17B:							
Elsinboro-----------	90	Not limited		Not limited		Not limited	
18C:							
Fauquier------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.47	Large stones content	0.47	Slope	0.37
18D:							
Fauquier------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Large stones content	0.47	Slope	1.00
		Large stones content	0.47				
18E:							
Fauquier------------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
		Large stones content	0.47	Large stones content	0.47		
19A:							
Galtsmill-----------	85	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
20D:							
Glenelg-------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
21A:							
Hatboro-------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40	Ponding	1.00
22B:							
Hayesville----------	90	Not limited		Not limited		Not limited	
22C:							
Hayesville----------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
22D:							
Hayesville----------	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
22E:							
Hayesville----------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
23B:							
Hayesville----------	90	Not limited		Not limited		Not limited	
23C:							
Hayesville----------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
23D:							
Hayesville----------	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
23E:							
Hayesville----------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
24C:							
Hayesville----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.47	Large stones content	0.47	Slope	0.37
24D:							
Hayesville----------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Large stones content	0.47	Slope	1.00
		Large stones content	0.47				
24E:							
Hayesville----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
		Large stones content	0.47	Large stones content	0.47		
25C:							
Hazel---------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.37
						Depth to bedrock	0.35
						Gravel content	0.24
25D:							
Hazel---------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Depth to bedrock	0.35
						Gravel content	0.24
25E:							
Hazel---------------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
						Depth to bedrock	0.35
						Gravel content	0.24
26D:							
Hazel---------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Depth to bedrock	0.35
						Droughty	0.01

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
26E:							
Hazel	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.35
						Droughty	0.01
27B:							
Jackland	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Gravel content	0.87
						Depth to saturated zone	0.75
27C:							
Jackland	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Gravel content	0.87
						Depth to saturated zone	0.75
						Slope	0.37
28B:							
Lew	85	Not limited		Not limited		Somewhat limited	
						Large stones content	0.20
29B:							
Lew	85	Very limited		Very limited		Somewhat limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	0.20
30C:							
Lew	85	Very limited		Very limited		Somewhat limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	0.68
						Gravel content	0.38
						Slope	0.37
30D:							
Lew	85	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
		Slope	0.50			Large stones content	0.68
						Gravel content	0.38
30E:							
Lew	85	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Large stones content	0.68
						Gravel content	0.38
31B:							
Littlejoe	90	Not limited		Not limited		Not limited	
31C:							
Littlejoe	90	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.37
32B:							
Minnieville	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
32C:							
Minnieville----------	85	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.37
32D:							
Minnieville----------	85	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.50				
32E:							
Minnieville----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	0.96		
33C:							
Myersville-----------	55	Very limited		Very limited		Somewhat limited	
		Large stones content	1.00	Large stones content	1.00	Slope	0.37
						Large stones content	0.08
						Gravel content	0.01
Catoctin------------	35	Very limited		Very limited		Somewhat limited	
		Large stones content	1.00	Large stones content	1.00	Gravel content	0.44
						Slope	0.37
						Depth to bedrock	0.06
33D:							
Myersville-----------	55	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	0.08
						Gravel content	0.01
Catoctin------------	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	0.44
		Slope	1.00			Depth to bedrock	0.06
33E:							
Myersville-----------	55	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Large stones content	0.08
		Slope	1.00	Slope	1.00		
						Gravel content	0.01
Catoctin------------	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	0.44
		Slope	1.00	Slope	1.00	Depth to bedrock	0.06
34C:							
Occoquan------------	85	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.37
34D:							
Occoquan------------	85	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.50				

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:							
Occoquan	85	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	0.96		
35D:							
Occoquan	85	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.50	Large stones content	0.47		
		Large stones content	0.47				
35E:							
Occoquan	85	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	0.96		
		Large stones content	0.47	Large stones content	0.47		
36D:							
Peaks	60	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Gravel content	1.00
						Droughty	0.99
Rock outcrop	30	Not rated		Not rated		Not rated	
36E:							
Peaks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
						Droughty	0.99
Rock outcrop	30	Not rated		Not rated		Not rated	
36F:							
Peaks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
						Droughty	0.99
Rock outcrop	30	Not rated		Not rated		Not rated	
37A:							
Pineywoods	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
38:							
Pits	100	Not rated		Not rated		Not rated	
39C:							
Saunook	85	Not limited		Not limited		Somewhat limited	
						Slope	0.37
39D:							
Saunook	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
40C:							
Saunook	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.47	Large stones content	0.47	Slope	0.37
40D:							
Saunook	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Large stones content	0.47	Slope	1.00
		Large stones content	0.47				
40E:							
Saunook	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
		Large stones content	0.47	Large stones content	0.47		
41B:							
Sketerville	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
42C:							
Spriggs	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.99
						Slope	0.37
						Droughty	0.27
42D:							
Spriggs	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Depth to bedrock	0.99
						Droughty	0.27
42E:							
Spriggs	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.99
						Droughty	0.27
43A:							
Suches	85	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
44C:							
Sylco	55	Very limited		Very limited		Somewhat limited	
		Large stones content	1.00	Large stones content	1.00	Droughty	0.60
						Gravel content	0.41
						Slope	0.37
Sylvatus	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Gravel content	1.00
						Depth to bedrock	1.00
						Droughty	1.00
44D:							
Sylco	55	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Droughty	0.60
		Slope	1.00			Gravel content	0.41

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
44D:							
Sylvatus------------	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	1.00
		Slope	1.00			Depth to bedrock	1.00
44E:							
Sylco---------------	55	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Droughty	0.60
		Slope	1.00	Slope	1.00	Gravel content	0.41
Sylvatus------------	35	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
45E:							
Sylvatus------------	60	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
Rock outcrop--------	30	Not rated		Not rated		Not rated	
45F:							
Sylvatus------------	60	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
Rock outcrop--------	30	Not rated		Not rated		Not rated	
46B:							
Thurmont------------	85	Not limited		Not limited		Not limited	
46C:							
Thurmont------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.37
46D:							
Thurmont------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
47B:							
Thurmont------------	85	Somewhat limited		Somewhat limited		Not limited	
		Large stones content	0.47	Large stones content	0.47		
47C:							
Thurmont------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.47	Large stones content	0.47	Slope	0.37
47D:							
Thurmont------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Large stones content	0.47	Slope	1.00
		Large stones content	0.47				

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
48:							
Udorthents	85	Not rated		Not rated		Not rated	
49B:							
Unison	85	Not limited		Not limited		Not limited	
49C:							
Unison	85	Not limited		Not limited		Somewhat limited	
						Slope	0.37
49D:							
Unison	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
50B:							
Warminster	90	Not limited		Not limited		Not limited	
50C:							
Warminster	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
50D:							
Warminster	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
51A:							
Wingina	85	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
52B:							
Wintergreen	85	Not limited		Not limited		Not limited	
52C:							
Wintergreen	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
52D:							
Wintergreen	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
53B:							
Wintergreen	90	Not limited		Not limited		Not limited	
53C:							
Wintergreen	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
53D:							
Wintergreen	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
54C:							
Wintergreen	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.47	Large stones content	0.47	Slope	0.37

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
55A:							
Yogaville	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
						Flooding	0.60
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
1D:							
Arcola--------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.15		
				Depth to hard bedrock	0.01		
1E:							
Arcola--------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.15		
				Depth to hard bedrock	0.01		
2A:							
Batteau-------------	85	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
3B:							
Belvoir-------------	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
4B:							
Buffstat------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to hard bedrock	0.01	Slope	0.12
4C:							
Buffstat------------	85	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
				Depth to hard bedrock	0.01		
4D:							
Buffstat------------	85	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
				Depth to hard bedrock	0.01		

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
5C:							
Bugley	85	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.37	Slope	0.37	Slope	1.00
5D:							
Bugley	85	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
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
5E:							
Bugley	85	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
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
6E:							
Catoctin	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Depth to hard bedrock	1.00	Depth to hard bedrock	0.06
Rock outcrop	30	Not rated		Not rated		Not rated	
7B:							
Chatuge	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
8A:							
Codorus	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Depth to saturated zone	0.98	Ponding	1.00	Depth to saturated zone	0.98
9B:							
Colleen	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
9C:							
Colleen	90	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
9D:							
Colleen	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

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
10A:							
Colvard	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.15		
11A:							
Craigsville	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
12B:							
Delanco	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
12C:							
Delanco	85	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Depth to saturated zone	0.81
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
13C:							
Edneytown	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
13D:							
Edneytown	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
13E:							
Edneytown	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
14C:							
Edneytown	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
Peaks	35	Somewhat limited		Very limited		Very limited	
		Slope	0.37	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Depth to soft bedrock	0.84	Depth to hard bedrock	0.06
				Slope	0.37		
14D:							
Edneytown	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Peaks	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Depth to hard bedrock	1.00	Depth to hard bedrock	0.06
				Depth to soft bedrock	0.84		

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:							
Edneytown	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Peaks	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Depth to hard bedrock	1.00	Depth to hard bedrock	0.06
				Depth to soft bedrock	0.84		
14F:							
Edneytown	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Peaks	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Depth to hard bedrock	1.00	Depth to hard bedrock	0.06
				Depth to soft bedrock	0.84		
15B:							
Elioak	85	Not limited		Not limited		Somewhat limited	
						Slope	0.12
15C:							
Elioak	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
15D:							
Elioak	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
16C:							
Elioak	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
16D:							
Elioak	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
17B:							
Elsinboro	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.16	Slope	0.12
18C:							
Fauquier	85	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Depth to hard bedrock	0.42	Shrink-swell	0.50
				Slope	0.37		
18D:							
Fauquier	85	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
				Depth to hard bedrock	0.42		

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
18E:							
Fauquier	85	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
				Depth to hard bedrock	0.42		
19A:							
Galtsmill	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
20D:							
Glenelg	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
21A:							
Hatboro	85	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
22B:							
Hayesville	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
22C:							
Hayesville	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
22D:							
Hayesville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
22E:							
Hayesville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
23B:							
Hayesville	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
23C:							
Hayesville	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
23D:							
Hayesville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
23E:							
Hayesville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
24C:							
Hayesville	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
24D:							
Hayesville----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
24E:							
Hayesville----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
25C:							
Hazel---------------	85	Somewhat limited		Very limited		Very limited	
		Slope	0.37	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Slope	0.37	Depth to hard bedrock	0.35
25D:							
Hazel---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Depth to hard bedrock	1.00	Depth to hard bedrock	0.35
25E:							
Hazel---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Depth to hard bedrock	1.00	Depth to hard bedrock	0.35
26D:							
Hazel---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Depth to hard bedrock	1.00	Depth to hard bedrock	0.35
26E:							
Hazel---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Depth to hard bedrock	1.00	Depth to hard bedrock	0.35
27B:							
Jackland------------	85	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	0.98			Depth to saturated zone	0.98
						Slope	0.12
27C:							
Jackland------------	85	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	0.98	Slope	0.37	Slope	1.00
		Slope	0.37			Depth to saturated zone	0.98
28B:							
Lew-----------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12

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
29B:							
Lew	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
30C:							
Lew	85	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
30D:							
Lew	85	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
30E:							
Lew	85	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
31B:							
Littlejoe	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
31C:							
Littlejoe	90	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
32B:							
Minnieville	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
32C:							
Minnieville	85	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
32D:							
Minnieville	85	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
32E:							
Minnieville	85	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
33C:							
Myersville	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
Catoctin	35	Somewhat limited		Very limited		Very limited	
		Slope	0.37	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Slope	0.37	Depth to hard bedrock	0.06

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
33D:							
Myersville----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Catoctin-----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Depth to hard bedrock	1.00	Depth to hard bedrock	0.06
33E:							
Myersville----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Catoctin-----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Depth to hard bedrock	1.00	Depth to hard bedrock	0.06
34C:							
Occoquan-----------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
34D:							
Occoquan-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
34E:							
Occoquan-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
35D:							
Occoquan-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
35E:							
Occoquan-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
36D:							
Peaks---------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Depth to hard bedrock	1.00	Depth to hard bedrock	0.06
				Depth to soft bedrock	0.84		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
36E:							
Peaks---------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Depth to hard bedrock	1.00	Depth to hard bedrock	0.06
				Depth to soft bedrock	0.84		
Rock outcrop--------	30	Not rated		Not rated		Not rated	

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
36F:							
Peaks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Depth to hard bedrock	1.00	Depth to hard bedrock	0.06
				Depth to soft bedrock	0.84		
Rock outcrop	30	Not rated		Not rated		Not rated	
37A:							
Pineywoods	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
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
38:							
Pits	100	Not rated		Not rated		Not rated	
39C:							
Saunook	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
39D:							
Saunook	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
40C:							
Saunook	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
40D:							
Saunook	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
40E:							
Saunook	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
41B:							
Sketerville	90	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
						Slope	0.12
42C:							
Spriggs	85	Somewhat limited		Very limited		Very limited	
		Slope	0.37	Depth to soft bedrock	0.99	Slope	1.00
				Depth to hard bedrock	0.99		
				Slope	0.37		
42D:							
Spriggs	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.99		
				Depth to hard bedrock	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
42E:							
Spriggs	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.99		
				Depth to hard bedrock	0.99		
43A:							
Suches	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.90		
44C:							
Sylco	55	Somewhat limited		Very limited		Very limited	
		Slope	0.37	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.01	Slope	0.37	Depth to hard bedrock	0.01
				Depth to soft bedrock	0.15		
Sylvatus	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
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.37	Slope	0.37	Slope	1.00
44D:							
Sylco	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.01	Depth to hard bedrock	1.00	Depth to hard bedrock	0.01
				Depth to soft bedrock	0.15		
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
44E:							
Sylco	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.01	Depth to hard bedrock	1.00	Depth to hard bedrock	0.01
				Depth to soft bedrock	0.15		
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft 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
45E:							
Sylvatus	60	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
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
45F:							
Sylvatus	60	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
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
46B:							
Thurmont	85	Not limited		Somewhat limited		Somewhat limited	
				Depth to saturated zone	0.15	Slope	0.12
46C:							
Thurmont	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
				Depth to saturated zone	0.15		
46D:							
Thurmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to saturated zone	0.15		
47B:							
Thurmont	85	Not limited		Somewhat limited		Somewhat limited	
				Depth to saturated zone	0.15	Slope	0.12
47C:							
Thurmont	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
				Depth to saturated zone	0.15		
47D:							
Thurmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to saturated zone	0.15		
48:							
Udorthents	85	Not rated		Not rated		Not rated	

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
49B:							
Unison	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
49C:							
Unison	85	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
49D:							
Unison	85	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
50B:							
Warminster	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
50C:							
Warminster	90	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
50D:							
Warminster	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
51A:							
Wingina	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.61		
52B:							
Wintergreen	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
52C:							
Wintergreen	90	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
52D:							
Wintergreen	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
53B:							
Wintergreen	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
53C:							
Wintergreen	90	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Slope	0.37	Shrink-swell	0.50

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
53D:							
Wintergreen	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
54C:							
Wintergreen	85	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
55A:							
Yogaville	85	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
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: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
1D:							
Arcola	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.25
		Low strength	0.22	Depth to soft bedrock	0.15	Depth to bedrock	0.16
1E:							
Arcola	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.25
		Low strength	0.22	Depth to soft bedrock	0.15	Depth to bedrock	0.16
2A:							
Batteau	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.90
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Depth to saturated zone	0.90	Cutbanks cave	0.10		
3B:							
Belvoir	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to cemented pan	0.84
		Depth to saturated zone	0.75	Dense layer	0.50	Depth to saturated zone	0.75
		Shrink-swell	0.50	Too clayey	0.12	Droughty	0.01
4B:							
Buffstat	85	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Too clayey	0.03		
		Frost action	0.50	Depth to hard bedrock	0.01		
4C:							
Buffstat	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50	Too clayey	0.03		
4D:							
Buffstat	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Too clayey	0.03		
5C:							
Bugley	85	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Slope	0.37	Slope	0.37

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
5D:							
Bugley	85	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Depth to soft bedrock	1.00	Droughty	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
5E:							
Bugley	85	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Depth to soft bedrock	1.00	Droughty	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
6E:							
Catoctin	55	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Slope	1.00	Gravel content	0.44
				Cutbanks cave	0.10	Depth to bedrock	0.06
Rock outcrop	30	Not rated		Not rated		Not rated	
7B:							
Chatuge	85	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
8A:							
Codorus	85	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Ponding	1.00	Flooding	0.60
9B:							
Colleen	85	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Cutbanks cave	1.00	Gravel content	0.92
		Frost action	0.50	Too clayey	0.28		
		Low strength	0.10				
9C:							
Colleen	90	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Cutbanks cave	1.00	Gravel content	0.92
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Too clayey	0.28		
9D:							
Colleen	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Gravel content	0.92
		Frost action	0.50	Too clayey	0.28		

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
10A:							
Colvard	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
				Depth to saturated zone	0.15		
11A:							
Craigsville	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Frost action	0.50	Flooding	0.80	Droughty	0.13
12B:							
Delanco	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
12C:							
Delanco	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	0.50	Cutbanks cave	0.10		
13C:							
Edneytown	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Frost action	0.50	Cutbanks cave	0.10		
		Slope	0.37				
13D:							
Edneytown	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
13E:							
Edneytown	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
14C:							
Edneytown	55	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Frost action	0.50	Cutbanks cave	0.10		
		Slope	0.37				
Peaks	35	Somewhat limited		Very limited		Very limited	
		Slope	0.37	Depth to hard bedrock	1.00	Gravel content	1.00
		Depth to hard bedrock	0.06	Cutbanks cave	1.00	Droughty	0.99
				Depth to soft bedrock	0.84	Depth to bedrock	0.84

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
14D:							
Edneytown-----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
Peaks---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.06			Gravel content	1.00
				Slope	1.00	Droughty	0.99
				Cutbanks cave	1.00		
14E:							
Edneytown-----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
Peaks---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.06			Gravel content	1.00
				Slope	1.00	Droughty	0.99
				Cutbanks cave	1.00		
14F:							
Edneytown-----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
Peaks---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.06			Gravel content	1.00
				Slope	1.00	Droughty	0.99
				Cutbanks cave	1.00		
15B:							
Elioak--------------	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Too clayey	0.12		
		Low strength	0.10	Cutbanks cave	0.10		
15C:							
Elioak--------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Too clayey	0.12		
		Low strength	0.10	Cutbanks cave	0.10		
15D:							
Elioak--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Too clayey	0.12		
		Low strength	0.10	Cutbanks cave	0.10		
16C:							
Elioak--------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Too clayey	0.12	Droughty	0.01
		Low strength	0.10	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
16D:							
Elioak	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Too clayey	0.12	Droughty	0.01
		Low strength	0.10	Cutbanks cave	0.10		
17B:							
Elsinboro	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Depth to saturated zone	0.16		
		Frost action	0.50	Cutbanks cave	0.10		
		Flooding	0.40				
18C:							
Fauquier	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Depth to hard bedrock	0.42	Slope	0.37
		Shrink-swell	0.50	Slope	0.37		
		Frost action	0.50	Too clayey	0.28		
18D:							
Fauquier	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to hard bedrock	0.42		
		Shrink-swell	0.50	Too clayey	0.28		
18E:							
Fauquier	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to hard bedrock	0.42		
		Shrink-swell	0.50	Too clayey	0.28		
19A:							
Galtsmill	85	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Frost action	0.50	Cutbanks cave	0.10		
20D:							
Glenelg	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
21A:							
Hatboro	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.80	Ponding	1.00
22B:							
Hayesville	90	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Low strength	0.10				
22C:							
Hayesville	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		
		Low strength	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
22D:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
		Low strength	0.10				
22E:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
		Low strength	0.10				
23B:							
Hayesville----------	90	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Low strength	0.10				
23C:							
Hayesville----------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		
		Low strength	0.10				
23D:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
		Low strength	0.10				
23E:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
		Low strength	0.10				
24C:							
Hayesville----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		
		Low strength	0.10				
24D:							
Hayesville----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
		Low strength	0.10				
24E:							
Hayesville----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
		Low strength	0.10				
25C:							
Hazel---------------	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to hard bedrock	1.00	Slope	0.37
		Slope	0.37			Depth to bedrock	0.35
		Depth to hard bedrock	0.35	Slope	0.37	Gravel content	0.24
				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
25D:							
Hazel	85	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	0.35
		Depth to hard bedrock	0.35	Cutbanks cave	0.10	Gravel content	0.24
25E:							
Hazel	85	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	0.35
		Depth to hard bedrock	0.35	Cutbanks cave	0.10	Gravel content	0.24
26D:							
Hazel	85	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	0.35
		Depth to hard bedrock	0.35	Cutbanks cave	0.10	Droughty	0.01
26E:							
Hazel	85	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	0.35
		Depth to hard bedrock	0.35	Cutbanks cave	0.10	Droughty	0.01
27B:							
Jackland	85	Very limited		Very limited		Somewhat limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Gravel content	0.87
		Frost action	1.00	Too clayey	0.50	Depth to saturated zone	0.75
		Low strength	1.00	Cutbanks cave	0.10		
27C:							
Jackland	85	Very limited		Very limited		Somewhat limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Gravel content	0.87
		Frost action	1.00	Too clayey	0.50	Depth to saturated zone	0.75
		Low strength	1.00	Slope	0.37	Slope	0.37
28B:							
Lew	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Cutbanks cave	0.10	Large stones content	0.20
		Frost action	0.50				
29B:							
Lew	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Cutbanks cave	0.10	Large stones content	0.20
		Frost action	0.50				
30C:							
Lew	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Slope	0.37	Large stones content	0.68
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.38
		Slope	0.37			Slope	0.37

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
30D:							
Lew-----------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Large stones content	0.68
		Frost action	0.50			Gravel content	0.38
30E:							
Lew-----------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Large stones content	0.68
		Frost action	0.50			Gravel content	0.38
31B:							
Littlejoe-----------	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.28		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
31C:							
Littlejoe-----------	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	0.50	Too clayey	0.28		
		Frost action	0.50	Cutbanks cave	0.10		
32B:							
Minnieville---------	85	Somewhat limited		Somewhat limited		Not limited	
		Shrink-swell	0.50	Too clayey	0.72		
		Frost action	0.50	Cutbanks cave	0.10		
		Low strength	0.10				
32C:							
Minnieville---------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Too clayey	0.72	Slope	0.37
		Frost action	0.50	Slope	0.37		
		Slope	0.37	Cutbanks cave	0.10		
32D:							
Minnieville---------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Too clayey	0.72		
		Frost action	0.50	Cutbanks cave	0.10		
32E:							
Minnieville---------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Too clayey	0.72		
		Frost action	0.50	Cutbanks cave	0.10		
33C:							
Myersville----------	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10	Large stones content	0.08
						Gravel content	0.01

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
33C:							
Catoctin	35	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.37	Depth to hard bedrock	1.00	Gravel content	0.44
		Depth to hard bedrock	0.06	Slope	0.37	Slope	0.37
				Cutbanks cave	0.10	Depth to bedrock	0.06
33D:							
Myersville	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Large stones content	0.08
						Gravel content	0.01
Catoctin	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Slope	1.00	Gravel content	0.44
				Cutbanks cave	0.10	Depth to bedrock	0.06
33E:							
Myersville	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Large stones content	0.08
						Gravel content	0.01
Catoctin	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Slope	1.00	Gravel content	0.44
				Cutbanks cave	0.10	Depth to bedrock	0.06
34C:							
Occoquan	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		
34D:							
Occoquan	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
34E:							
Occoquan	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
35D:							
Occoquan	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
35E:							
Occoquan	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
36D:							
Peaks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Slope	1.00	Gravel content	1.00
				Cutbanks cave	1.00	Droughty	0.99
Rock outcrop	30	Not rated		Not rated		Not rated	
36E:							
Peaks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Slope	1.00	Gravel content	1.00
				Cutbanks cave	1.00	Droughty	0.99
Rock outcrop	30	Not rated		Not rated		Not rated	
36F:							
Peaks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Slope	1.00	Gravel content	1.00
				Cutbanks cave	1.00	Droughty	0.99
Rock outcrop	30	Not rated		Not rated		Not rated	
37A:							
Pineywoods	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	0.28		
		Shrink-swell	0.50	Cutbanks cave	0.10		
38:							
Pits	100	Not rated		Not rated		Not rated	
39C:							
Saunook	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Frost action	0.50	Cutbanks cave	0.10		
		Slope	0.37				
39D:							
Saunook	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
40C:							
Saunook	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Frost action	0.50	Cutbanks cave	0.10		
		Slope	0.37				
40D:							
Saunook	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
40E:							
Saunook	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
41B:							
Sketerville	90	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Frost action	0.50	Too clayey	0.28		
		Depth to saturated zone	0.19	Cutbanks cave	0.10		
42C:							
Spriggs	85	Somewhat limited		Very limited		Very limited	
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.99
		Slope	0.37	Depth to soft bedrock	0.99	Slope	0.37
				Depth to hard bedrock	0.99	Droughty	0.27
42D:							
Spriggs	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.99
				Depth to soft bedrock	0.99	Droughty	0.27
42E:							
Spriggs	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.99
				Depth to soft bedrock	0.99	Droughty	0.27
43A:							
Suches	85	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Depth to saturated zone	0.90	Flooding	1.00
		Low strength	1.00	Flooding	0.80		
				Cutbanks cave	0.10		
44C:							
Sylco	55	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to hard bedrock	1.00	Droughty	0.60
		Slope	0.37	Slope	0.37	Gravel content	0.41
		Depth to hard bedrock	0.01	Depth to soft bedrock	0.15	Slope	0.37
Sylvatus	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Gravel content	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Slope	0.37	Droughty	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
44D:							
Sylco	55	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	0.60
		Depth to hard bedrock	0.01	Depth to soft bedrock	0.15	Gravel content	0.41
Sylvatus	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Depth to soft bedrock	1.00	Gravel content	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
44E:							
Sylco	55	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	0.60
		Depth to hard bedrock	0.01	Depth to soft bedrock	0.15	Gravel content	0.41
Sylvatus	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Depth to soft bedrock	1.00	Gravel content	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
45E:							
Sylvatus	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Depth to soft bedrock	1.00	Gravel content	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
45F:							
Sylvatus	60	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Depth to soft bedrock	1.00	Gravel content	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
46B:							
Thurmont	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Depth to saturated zone	0.15		
				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
46C:							
Thurmont------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Depth to saturated zone	0.15		
				Cutbanks cave	0.10		
46D:							
Thurmont------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to saturated zone	0.15		
				Cutbanks cave	0.10		
47B:							
Thurmont------------	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Depth to saturated zone	0.15		
				Cutbanks cave	0.10		
47C:							
Thurmont------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Depth to saturated zone	0.15		
				Cutbanks cave	0.10		
47D:							
Thurmont------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to saturated zone	0.15		
				Cutbanks cave	0.10		
48:							
Udorthents----------	85	Not rated		Not rated		Not rated	
49B:							
Unison--------------	85	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
49C:							
Unison--------------	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
49D:							
Unison--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
50B:							
Warminster----------	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.28		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
50C:							
Warminster----------	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	0.50	Too clayey	0.28		
		Frost action	0.50	Cutbanks cave	0.10		
50D:							
Warminster----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	0.28		
		Shrink-swell	0.50	Cutbanks cave	0.10		
51A:							
Wingina-------------	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
		Low strength	0.78	Depth to saturated zone	0.61		
				Flooding	0.60		
52B:							
Wintergreen---------	85	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
52C:							
Wintergreen---------	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	0.50	Too clayey	0.12		
		Frost action	0.50	Cutbanks cave	0.10		
52D:							
Wintergreen---------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Cutbanks cave	0.10		
53B:							
Wintergreen---------	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
53C:							
Wintergreen---------	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	0.50	Too clayey	0.12		
		Frost action	0.50	Cutbanks cave	0.10		
53D:							
Wintergreen---------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Cutbanks cave	0.10		
54C:							
Wintergreen---------	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	0.50	Too clayey	0.12		
		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
55A:							
Yogaville-----------	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	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	0.60	Flooding	0.60
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 12.—Sanitary Facilities, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
1D:					
Arcola---------------	90	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
1E:					
Arcola---------------	90	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
2A:					
Batteau--------------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Seepage	0.50
3B:					
Belvoir--------------	85	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Slope	0.68
4B:					
Buffstat-------------	85	Somewhat limited		Somewhat limited	
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Slow water movement	0.50	Slope	0.68
				Seepage	0.50
4C:					
Buffstat-------------	85	Somewhat limited		Very limited	
		Depth to bedrock	0.99	Slope	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.96
		Slope	0.37	Seepage	0.50
4D:					
Buffstat-------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Slow water movement	0.50	Seepage	0.50

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
5C:					
Bugley	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Depth to soft bedrock	1.00
		Slope	0.37	Slope	1.00
5D:					
Bugley	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
5E:					
Bugley	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
6E:					
Catoctin	55	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Rock outcrop	30	Not rated		Not rated	
7B:					
Chatuge	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Slope	0.08
8A:					
Codorus	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
9B:					
Colleen	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Slope	0.68
9C:					
Colleen	90	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.37		

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
9D:					
Colleen	90	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00		
10A:					
Colvard	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Depth to saturated zone	0.40		
11A:					
Craigsville	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Large stones content	1.00
		Large stones content	1.00		
12B:					
Delanco	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	0.68
				Seepage	0.50
12C:					
Delanco	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
				Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.50
		Slope	0.37		
13C:					
Edneytown	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
		Slow water movement	0.50		
		Slope	0.37		
13D:					
Edneytown	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
13E:					
Edneytown	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
14C:					
Edneytown	55	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	1.00
		Slope	0.37		
Peaks	35	Very limited		Very limited	
		Seepage, bottom layer	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Filtering capacity	1.00	Slope	1.00
14D:					
Edneytown	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
Peaks	35	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
14E:					
Edneytown	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
Peaks	35	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
14F:					
Edneytown	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
Peaks	35	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	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
15B:					
Elioak	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.68	Slope	0.68
				Seepage	0.50
15C:					
Elioak	85	Somewhat limited		Very limited	
		Slow water movement	0.68	Slope	1.00
				Seepage	0.50
		Slope	0.37		
15D:					
Elioak	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.68	Seepage	0.50
16C:					
Elioak	85	Somewhat limited		Very limited	
		Slow water movement	0.68	Slope	1.00
				Seepage	0.50
		Slope	0.37		
16D:					
Elioak	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.68	Seepage	0.50
17B:					
Elsinboro	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
		Slow water movement	0.50	Flooding	0.40
		Depth to saturated zone	0.43		
18C:					
Fauquier	85	Somewhat limited		Very limited	
		Depth to bedrock	0.99	Slope	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.99
		Slope	0.37	Seepage	0.50
18D:					
Fauquier	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.99
		Slow water movement	0.50	Seepage	0.50
18E:					
Fauquier	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.99
		Slow water movement	0.50	Seepage	0.50

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
19A:					
Galtsmill-----------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
20D:					
Glenelg-------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
21A:					
Hatboro-------------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
22B:					
Hayesville----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
		Slow water movement	0.50		
22C:					
Hayesville----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
		Slow water movement	0.50		
		Slope	0.37		
22D:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
22E:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
23B:					
Hayesville----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
		Slow water movement	0.50		

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
23C:					
Hayesville----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	1.00
		Slope	0.37		
23D:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
23E:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
24C:					
Hayesville----------	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	1.00
		Slope	0.37		
24D:					
Hayesville----------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
24E:					
Hayesville----------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
25C:					
Hazel---------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.37	Seepage	1.00
25D:					
Hazel---------------	85	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
25E:					
Hazel----------------	85	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
26D:					
Hazel----------------	85	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
26E:					
Hazel----------------	85	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
27B:					
Jackland------------	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
27C:					
Jackland------------	85	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.37	Seepage	0.50
28B:					
Lew------------------	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.68
				Seepage	0.50
				Large stones content	0.01
29B:					
Lew------------------	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.68
				Seepage	0.50
				Large stones content	0.01
30C:					
Lew------------------	85	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
		Slope	0.37	Seepage	0.50
				Large stones content	0.08

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
30D:					
Lew-----------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
				Large stones content	0.08
30E:					
Lew-----------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
				Large stones content	0.08
31B:					
Littlejoe-----------	90	Somewhat limited		Somewhat limited	
		Depth to bedrock	0.99	Depth to soft bedrock	0.99
		Slow water movement	0.68	Slope	0.68
				Seepage	0.32
31C:					
Littlejoe-----------	90	Somewhat limited		Very limited	
		Depth to bedrock	0.99	Slope	1.00
		Slow water movement	0.68	Depth to soft bedrock	0.99
		Slope	0.37	Seepage	0.32
32B:					
Minnieville---------	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.68
				Seepage	0.50
32C:					
Minnieville---------	85	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
		Slope	0.37		
32D:					
Minnieville---------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
32E:					
Minnieville---------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
33C:					
Myersville----------	55	Somewhat limited		Very limited	
		Depth to bedrock	0.89	Slope	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.71
		Slope	0.37	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
33C:					
Catoctin	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.37	Seepage	1.00
33D:					
Myersville	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.89	Depth to soft bedrock	0.71
		Slow water movement	0.50	Seepage	0.50
Catoctin	35	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
33E:					
Myersville	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.89	Depth to soft bedrock	0.71
		Slow water movement	0.50	Seepage	0.50
Catoctin	35	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
34C:					
Occoquan	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	0.99	Seepage	1.00
		Slope	0.37	Depth to soft bedrock	0.99
34D:					
Occoquan	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.99
34E:					
Occoquan	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.99
35D:					
Occoquan	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.99

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
35E:					
Occoquan------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.99
36D:					
Peaks---------------	60	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated	
36E:					
Peaks---------------	60	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated	
36F:					
Peaks---------------	60	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated	
37A:					
Pineywoods----------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Depth to soft bedrock	0.99
		Depth to bedrock	0.99	Seepage	0.18
38:					
Pits----------------	100	Not rated		Not rated	
39C:					
Saunook-------------	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	1.00
		Slope	0.37		

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
39D:					
Saunook-------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
40C:					
Saunook-------------	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	1.00
		Slope	0.37		
40D:					
Saunook-------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
40E:					
Saunook-------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
41B:					
Sketerville---------	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	0.68
42C:					
Spriggs-------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.37	Slope	1.00
				Depth to hard bedrock	0.99
42D:					
Spriggs-------------	85	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
				Depth to hard bedrock	0.99

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
42E:					
Spriggs-------------	85	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
				Depth to hard bedrock	0.99
43A:					
Suches--------------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Seepage	0.50
44C:					
Sylco---------------	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slow water movement	0.50	Depth to soft bedrock	1.00
		Slope	0.37	Slope	1.00
Sylvatus------------	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.37	Depth to soft bedrock	1.00
				Slope	1.00
44D:					
Sylco---------------	55	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.50	Slope	1.00
Sylvatus------------	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
				Slope	1.00
44E:					
Sylco---------------	55	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.50	Slope	1.00
Sylvatus------------	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
				Slope	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
45E:					
Sylvatus	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
				Slope	1.00
Rock outcrop	30	Not rated		Not rated	
45F:					
Sylvatus	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
				Slope	1.00
Rock outcrop	30	Not rated		Not rated	
46B:					
Thurmont	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.68
		Depth to saturated zone	0.40	Seepage	0.50
46C:					
Thurmont	85	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
		Depth to saturated zone	0.40	Seepage	0.50
		Slope	0.37		
46D:					
Thurmont	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
		Depth to saturated zone	0.40		
47B:					
Thurmont	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.68
		Depth to saturated zone	0.40	Seepage	0.50
47C:					
Thurmont	85	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
		Depth to saturated zone	0.40	Seepage	0.50
		Slope	0.37		

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
47D:					
Thurmont------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
		Depth to saturated zone	0.40		
48:					
Udorthents----------	85	Not rated		Not rated	
49B:					
Unison--------------	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
		Slow water movement	0.50		
49C:					
Unison--------------	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
		Slow water movement	0.50		
		Slope	0.37		
49D:					
Unison--------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
50B:					
Warminster----------	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Slope	0.68
				Seepage	0.50
		Depth to bedrock	0.52	Depth to soft bedrock	0.08
50C:					
Warminster----------	90	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.50
		Depth to bedrock	0.52	Depth to soft bedrock	0.08
		Slope	0.37		
50D:					
Warminster----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00	Seepage	0.50
				Depth to soft bedrock	0.08
		Depth to bedrock	0.52		

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
51A:					
Wingina-------------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.71
		Slow water movement	0.50	Seepage	0.50
52B:					
Wintergreen---------	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.68
				Seepage	0.50
52C:					
Wintergreen---------	90	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
		Slope	0.37		
52D:					
Wintergreen---------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
53B:					
Wintergreen---------	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.68
				Seepage	0.50
53C:					
Wintergreen---------	90	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
		Slope	0.37		
53D:					
Wintergreen---------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
54C:					
Wintergreen---------	85	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
		Slope	0.37		
55A:					
Yogaville-----------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
W:					
Water---------------	100	Not rated		Not rated	

Table 12.—Sanitary Facilities, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		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
1D:							
Arcola----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
1E:							
Arcola----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
2A:							
Batteau---------------	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
3B:							
Belvoir---------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
				Depth to saturated zone	1.00	Depth to saturated zone	0.99
4B:							
Buffstat--------------	85	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.96	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to bedrock	0.96
4C:							
Buffstat--------------	85	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.96	Too clayey	1.00
		Too clayey	1.00	Slope	0.37	Hard to compact	1.00
		Slope	0.37			Depth to bedrock	0.96
4D:							
Buffstat--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.96	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
5C:							
Bugley----------------	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Slope	0.37	Gravel content	0.99
		Slope	0.37			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
5D:							
Bugley	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
		Seepage, bottom layer	1.00			Gravel content	0.99
5E:							
Bugley	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
		Seepage, bottom layer	1.00			Gravel content	0.99
6E:							
Catoctin	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.58
Rock outcrop	30	Not rated		Not rated		Not rated	
7B:							
Chatuge	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
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
8A:							
Codorus	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Seepage, bottom layer	1.00	Ponding	1.00	Too clayey	0.50
9B:							
Colleen	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Gravel content	0.72
						Too clayey	0.50
						Hard to compact	0.50
9C:							
Colleen	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.37	Gravel content	0.72
		Slope	0.37			Too clayey	0.50
						Hard to compact	0.50
9D:							
Colleen	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Gravel content	0.72
						Too clayey	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
10A:							
Colvard	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Seepage	0.50
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Seepage, bottom layer	1.00	Seepage	1.00		
11A:							
Craigsville	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones	1.00
		Large stones	1.00			Too sandy	0.50
12B:							
Delanco	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
		Too clayey	0.50			Too clayey	0.50
12C:							
Delanco	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
		Too clayey	0.50	Slope	0.37	Too clayey	0.50
		Slope	0.37			Slope	0.37
13C:							
Edneytown	85	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Slope	0.37	Slope	0.37	Slope	0.37
13D:							
Edneytown	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
13E:							
Edneytown	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
14C:							
Edneytown	55	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Slope	0.37	Slope	0.37	Slope	0.37
Peaks	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
		Slope	0.37	Slope	0.37	Depth to bedrock	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
14D:							
Edneytown-----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Peaks---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
14E:							
Edneytown-----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Peaks---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
14F:							
Edneytown-----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Peaks---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
15B:							
Elioak--------------	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
15C:							
Elioak--------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.37	Too clayey	0.50
		Slope	0.37			Hard to compact	0.50
						Slope	0.37
15D:							
Elioak--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
16C:							
Elioak--------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.37	Too clayey	0.50
		Slope	0.37			Hard to compact	0.50
						Slope	0.37

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
16D:							
Elioak	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
17B:							
Elsinboro	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.21
		Flooding	0.40	Flooding	0.40		
18C:							
Fauquier	85	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.99	Too clayey	1.00
		Too clayey	1.00	Slope	0.37	Hard to compact	1.00
		Slope	0.37			Depth to bedrock	0.99
18D:							
Fauquier	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.99	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
18E:							
Fauquier	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.99	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
19A:							
Galtsmill	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Seepage	0.50
		Seepage, bottom layer	1.00	Seepage	1.00		
20D:							
Glenelg	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
21A:							
Hatboro	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Too clayey	0.50
22B:							
Hayesville	90	Very limited		Not limited		Somewhat limited	
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
22C:							
Hayesville	90	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Too clayey	0.50
		Too clayey	0.50			Slope	0.37
		Slope	0.37				

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
22D:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
22E:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
23B:							
Hayesville----------	90	Very limited		Not limited		Somewhat limited	
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
23C:							
Hayesville----------	90	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Too clayey	0.50
						Slope	0.37
		Too clayey	0.50				
		Slope	0.37				
23D:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
23E:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
24C:							
Hayesville----------	85	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Too clayey	0.50
						Slope	0.37
		Too clayey	0.50				
		Slope	0.37				
24D:							
Hayesville----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
24E:							
Hayesville----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
25C:							
Hazel	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Slope	0.37	Slope	0.37	Gravel content	0.37
25D:							
Hazel	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
25E:							
Hazel	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
26D:							
Hazel	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
26E:							
Hazel	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
27B:							
Jackland	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
27C:							
Jackland	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
		Slope	0.37	Slope	0.37	Slope	0.37
28B:							
Lew	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Gravel content	0.97
						Too clayey	0.50
29B:							
Lew	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Gravel content	0.97
						Too clayey	0.50
30C:							
Lew	85	Somewhat limited		Somewhat limited		Very limited	
		Too clayey	0.50	Slope	0.37	Gravel content	1.00
		Slope	0.37			Too clayey	0.50
						Slope	0.37

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:							
Lew	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Gravel content	1.00
						Too clayey	0.50
30E:							
Lew	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Gravel content	1.00
						Too clayey	0.50
31B:							
Littlejoe	90	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.99	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to bedrock	0.99
31C:							
Littlejoe	90	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.99	Too clayey	1.00
		Too clayey	1.00	Slope	0.37	Hard to compact	1.00
		Slope	0.37			Depth to bedrock	0.99
32B:							
Minnieville	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
32C:							
Minnieville	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.37	Too clayey	0.50
		Slope	0.37			Slope	0.37
32D:							
Minnieville	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
32E:							
Minnieville	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
33C:							
Myersville	55	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.71	Depth to bedrock	0.71
		Too clayey	0.50	Slope	0.37	Gravel content	0.63
		Slope	0.37			Too clayey	0.50
Catoctin	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.58
				Slope	0.37	Seepage	0.50
		Slope	0.37				
33D:							
Myersville	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.71	Depth to bedrock	0.71
		Too clayey	0.50			Gravel content	0.63

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
33D:							
Catoctin	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.58
33E:							
Myersville	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.71	Depth to bedrock	0.71
		Too clayey	0.50			Gravel content	0.63
Catoctin	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.58
34C:							
Occoquan	85	Very limited		Very limited		Somewhat limited	
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.99
		Seepage, bottom layer	1.00	Depth to bedrock	0.99	Seepage	0.50
				Slope	0.37	Slope	0.37
		Slope	0.37				
34D:							
Occoquan	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.99
		Seepage, bottom layer	1.00	Depth to bedrock	0.99	Seepage	0.50
34E:							
Occoquan	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.99
		Seepage, bottom layer	1.00	Depth to bedrock	0.99	Seepage	0.50
35D:							
Occoquan	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.99
		Seepage, bottom layer	1.00	Depth to bedrock	0.99	Seepage	0.50
35E:							
Occoquan	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.99
		Seepage, bottom layer	1.00	Depth to bedrock	0.99	Seepage	0.50
36D:							
Peaks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: 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
36D:							
Rock outcrop	30	Not rated		Not rated		Not rated	
36E:							
Peaks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
36F:							
Peaks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
37A:							
Pineywoods	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
		Depth to bedrock	1.00	Depth to bedrock	0.99	Depth to bedrock	0.99
38:							
Pits	100	Not rated		Not rated		Not rated	
39C:							
Saunook	85	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Too clayey	0.50
		Too clayey	0.50			Slope	0.37
		Slope	0.37				
39D:							
Saunook	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
40C:							
Saunook	85	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Too clayey	0.50
		Too clayey	0.50			Slope	0.37
		Slope	0.37				
40D:							
Saunook	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				

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
40E:							
Saunook	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
41B:							
Sketerville	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50			Too clayey	0.50
						Hard to compact	0.50
42C:							
Spriggs	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.37	Slope	0.37	Slope	0.37
						Gravel content	0.01
42D:							
Spriggs	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Gravel content	0.01
42E:							
Spriggs	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Gravel content	0.01
43A:							
Suches	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Too clayey	0.50
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.02
		Too clayey	0.50				
44C:							
Sylco	55	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.37	Slope	0.37	Gravel content	0.88
						Slope	0.37
Sylvatus	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50	Slope	0.37	Gravel content	1.00
		Slope	0.37			Too clayey	0.50
44D:							
Sylco	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Gravel content	0.88
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too clayey	0.50			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
44E:							
Sylco	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Gravel content	0.88
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too clayey	0.50			Gravel content	1.00
45E:							
Sylvatus	60	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			Gravel content	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
45F:							
Sylvatus	60	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			Gravel content	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
46B:							
Thurmont	85	Very limited		Very limited		Not limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
46C:							
Thurmont	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	0.37
		Slope	0.37	Slope	0.37		
46D:							
Thurmont	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00		
47B:							
Thurmont	85	Very limited		Very limited		Not limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
47C:							
Thurmont	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	0.37
		Slope	0.37	Slope	0.37		
47D:							
Thurmont	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	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
48:							
Udorthents	85	Not rated		Not rated		Not rated	
49B:							
Unison	85	Very limited		Not limited		Very limited	
		Seepage, bottom layer	1.00			Hard to compact	1.00
		Too clayey	0.50			Too clayey	0.50
49C:							
Unison	85	Very limited		Somewhat limited		Very limited	
		Seepage, bottom layer	1.00	Slope	0.37	Hard to compact	1.00
		Too clayey	0.50			Too clayey	0.50
		Slope	0.37			Slope	0.37
49D:							
Unison	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Hard to compact	1.00
		Too clayey	0.50			Too clayey	0.50
50B:							
Warminster	90	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.08	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to bedrock	0.08
50C:							
Warminster	90	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Slope	0.37	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.08	Hard to compact	1.00
		Slope	0.37			Slope	0.37
50D:							
Warminster	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.08	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
51A:							
Wingina	85	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
52B:							
Wintergreen	85	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
52C:							
Wintergreen	90	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.37	Too clayey	1.00
		Slope	0.37			Hard to compact	1.00
						Slope	0.37

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
52D:							
Wintergreen---------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
53B:							
Wintergreen---------	90	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
53C:							
Wintergreen---------	90	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.37	Too clayey	1.00
		Slope	0.37			Hard to compact	1.00
						Slope	0.37
53D:							
Wintergreen---------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
54C:							
Wintergreen---------	85	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.37	Too clayey	1.00
		Slope	0.37			Hard to compact	1.00
						Slope	0.37
55A:							
Yogaville-----------	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	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
1D:					
Arcola--------------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
1E:					
Arcola--------------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
2A:					
Batteau-------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
3B:					
Belvoir-------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
4B:					
Buffstat------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
4C:					
Buffstat------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
4D:					
Buffstat------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
5C:					
Bugley--------------	85	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.12	Thickest layer	0.00
5D:					
Bugley--------------	85	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.12	Thickest layer	0.00
5E:					
Bugley--------------	85	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.12	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
6E:					
Catoctin------------	55	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.29	Thickest layer	0.00
Rock outcrop--------	30	Not rated		Not rated	
7B:					
Chatuge-------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.02
8A:					
Codorus-------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.10
9B:					
Colleen-------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
9C:					
Colleen-------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
9D:					
Colleen-------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
10A:					
Colvard-------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.02
		Bottom layer	0.00	Bottom layer	0.10
11A:					
Craigsville---------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
12B:					
Delanco-------------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
12C:					
Delanco-------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
13C:					
Edneytown-----------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
13D:					
Edneytown	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
13E:					
Edneytown	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
14C:					
Edneytown	55	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
Peaks	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
14D:					
Edneytown	55	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
Peaks	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
14E:					
Edneytown	55	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
Peaks	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
14F:					
Edneytown	55	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
Peaks	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
15B:					
Elioak	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
15C:					
Elioak	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
15D:					
Elioak	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
16C:					
Elioak--------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
16D:					
Elioak--------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
17B:					
Elsinboro-----------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
18C:					
Fauquier------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
18D:					
Fauquier------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
18E:					
Fauquier------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
19A:					
Galtsmill-----------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
20D:					
Glenelg-------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
21A:					
Hatboro-------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
22B:					
Hayesville----------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
22C:					
Hayesville----------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
22D:					
Hayesville----------	90	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
22E:					
Hayesville----------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
23B:					
Hayesville----------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
23C:					
Hayesville----------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
23D:					
Hayesville----------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
23E:					
Hayesville----------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
24C:					
Hayesville----------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
24D:					
Hayesville----------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
24E:					
Hayesville----------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
25C:					
Hazel---------------	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
25D:					
Hazel---------------	85	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
25E:					
Hazel---------------	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
26D:					
Hazel---------------	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		Potential source of sand	
		Rating class	Value	Rating class	Value
26E:					
Hazel	85	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
27B:					
Jackland	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
27C:					
Jackland	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
28B:					
Lew	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
29B:					
Lew	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
30C:					
Lew	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
30D:					
Lew	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
30E:					
Lew	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
31B:					
Littlejoe	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
31C:					
Littlejoe	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
32B:					
Minnieville	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
32C:					
Minnieville	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
32D:					
Minnieville---------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
32E:					
Minnieville---------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
33C:					
Myersville----------	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Catoctin------------	35	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.29	Thickest layer	0.00
33D:					
Myersville----------	55	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Catoctin------------	35	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.29	Thickest layer	0.00
33E:					
Myersville----------	55	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Catoctin------------	35	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.29	Thickest layer	0.00
34C:					
Occoquan------------	85	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
34D:					
Occoquan------------	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
34E:					
Occoquan------------	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
35D:					
Occoquan------------	85	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom 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
35E:					
Occoquan------------	85	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
36D:					
Peaks---------------	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop--------	30	Not rated		Not rated	
36E:					
Peaks---------------	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop--------	30	Not rated		Not rated	
36F:					
Peaks---------------	60	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Rock outcrop--------	30	Not rated		Not rated	
37A:					
Pineywoods----------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
38:					
Pits----------------	100	Not rated		Not rated	
39C:					
Saunook-------------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
39D:					
Saunook-------------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
40C:					
Saunook-------------	85	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
40D:					
Saunook-------------	85	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
40E:					
Saunook-------------	85	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
41B:					
Sketerville---------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
42C:					
Spriggs-------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
42D:					
Spriggs-------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
42E:					
Spriggs-------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
43A:					
Suches--------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
44C:					
Sylco---------------	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sylvatus------------	35	Fair		Poor	
		Thickest layer	0.09	Bottom layer	0.00
		Bottom layer	0.25	Thickest layer	0.00
44D:					
Sylco---------------	55	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Sylvatus------------	35	Fair		Poor	
		Thickest layer	0.09	Bottom layer	0.00
		Bottom layer	0.25	Thickest layer	0.00
44E:					
Sylco---------------	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Sylvatus------------	35	Fair		Poor	
		Thickest layer	0.09	Bottom layer	0.00
		Bottom layer	0.25	Thickest layer	0.00
45E:					
Sylvatus------------	60	Fair		Poor	
		Thickest layer	0.09	Bottom layer	0.00
		Bottom layer	0.25	Thickest layer	0.00
Rock outcrop--------	30	Not rated		Not rated	

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
45F:					
Sylvatus------------	60	Fair		Poor	
		Thickest layer	0.09	Bottom layer	0.00
		Bottom layer	0.25	Thickest layer	0.00
Rock outcrop--------	30	Not rated		Not rated	
46B:					
Thurmont------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
46C:					
Thurmont------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
46D:					
Thurmont------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
47B:					
Thurmont------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
47C:					
Thurmont------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
47D:					
Thurmont------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
48:					
Udorthents----------	85	Not rated		Not rated	
49B:					
Unison--------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
49C:					
Unison--------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
49D:					
Unison--------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
50B:					
Warminster----------	90	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
50C:					
Warminster----------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
50D:					
Warminster----------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
51A:					
Wingina-------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.11
52B:					
Wintergreen---------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
52C:					
Wintergreen---------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
52D:					
Wintergreen---------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
53B:					
Wintergreen---------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
53C:					
Wintergreen---------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
53D:					
Wintergreen---------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
54C:					
Wintergreen---------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
55A:					
Yogaville-----------	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: 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
1D:							
Arcola--------------	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.44	Slope	0.50	Rock fragments	0.00
		Too acid	0.50	Low strength	0.78	Depth to bedrock	0.84
1E:							
Arcola--------------	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Droughty	0.44	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50	Low strength	0.78	Depth to bedrock	0.84
2A:							
Batteau-------------	85	Good		Fair		Fair	
				Wetness depth	0.06	Wetness depth	0.06
				Low strength	0.22	Rock fragments	0.88
3B:							
Belvoir-------------	85	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to cemented pan	0.00	Wetness depth	0.14
		Depth to cemented pan	0.16	Wetness depth	0.14	Depth to cemented pan	0.16
		Droughty	0.19	Low strength	0.78	Too acid	0.88
4B:							
Buffstat------------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Depth to bedrock	0.04	Rock fragments	0.00
		Too acid	0.50	Shrink-swell	0.87	Hard to reclaim (rock fragments)	0.68
4C:							
Buffstat------------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Depth to bedrock	0.04	Rock fragments	0.00
		Too acid	0.50	Shrink-swell	0.87	Slope	0.63
4D:							
Buffstat------------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.04	Too clayey	0.00
		Too acid	0.50	Slope	0.50	Rock fragments	0.00
5C:							
Bugley--------------	85	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	0.59

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
5D:							
Bugley	85	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.50	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.00
5E:							
Bugley	85	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
6E:							
Catoctin	55	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.00	Rock fragments	0.00
		Droughty	0.30			Depth to bedrock	0.93
		Too acid	0.84				
Rock outcrop	30	Not rated		Not rated		Not rated	
7B:							
Chatuge	85	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Wetness depth	0.14
				Wetness depth	0.14	Too acid	0.98
		Too acid	0.54				
8A:							
Codorus	85	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Wetness depth	0.14
				Wetness depth	0.14	Hard to reclaim (rock fragments)	0.32
		Too acid	0.54				
		Water erosion	0.99				
9B:							
Colleen	85	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Rock fragments	0.00
		Too acid	0.12	Shrink-swell	0.87	Too clayey	0.00
		Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.32
9C:							
Colleen	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Rock fragments	0.00
		Too acid	0.12	Shrink-swell	0.87	Too clayey	0.00
		Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.32
9D:							
Colleen	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Slope	0.00
		Too acid	0.12	Slope	0.50	Rock fragments	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Too clayey	0.00

Table 13.—Construction Materials, Part II—Continued

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
10A:							
Colvard	85	Fair		Good		Fair	
		Organic matter content low	0.88			Too sandy	0.99
		Too sandy	0.99				
11A:							
Craigsville	85	Poor		Poor		Poor	
		Cobble content	0.00	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Too sandy	0.02			Rock fragments	0.00
		Organic matter content low	0.12			Too sandy	0.02
12B:							
Delanco	90	Fair		Poor		Fair	
		Too acid	0.12	Low strength	0.00	Wetness depth	0.29
		Organic matter content low	0.12	Wetness depth	0.29	Too acid	0.59
				Shrink-swell	0.98		
12C:							
Delanco	85	Fair		Poor		Fair	
		Too acid	0.12	Low strength	0.00	Wetness depth	0.29
		Organic matter content low	0.12	Wetness depth	0.29	Too acid	0.59
				Shrink-swell	0.98	Slope	0.63
13C:							
Edneytown	85	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
						Too acid	0.88
		Too acid	0.50			Rock fragments	0.88
13D:							
Edneytown	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
						Too acid	0.88
		Too acid	0.50			Rock fragments	0.88
13E:							
Edneytown	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Too acid	0.88
		Too acid	0.50			Rock fragments	0.88
14C:							
Edneytown	55	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
						Too acid	0.88
		Too acid	0.50			Rock fragments	0.88
Peaks	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.16			Depth to bedrock	0.16
		Too acid	0.54			Slope	0.63
14D:							
Edneytown	55	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Too acid	0.88
		Too acid	0.50			Rock fragments	0.88

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
14D:							
Peaks	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.16	Slope	0.00	Rock fragments	0.00
		Too acid	0.54			Depth to bedrock	0.16
14E:							
Edneytown	55	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Too acid	0.88
		Too acid	0.50			Rock fragments	0.88
Peaks	35	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.16	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.54			Depth to bedrock	0.16
14F:							
Edneytown	55	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Too acid	0.88
		Too acid	0.50			Rock fragments	0.88
Peaks	35	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.16	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.54			Depth to bedrock	0.16
15B:							
Elioak	85	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.88
		Too acid	0.32				
15C:							
Elioak	85	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Slope	0.63
						Too acid	0.88
		Too acid	0.32				
15D:							
Elioak	85	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Slope	0.00
		Organic matter content low	0.12	Slope	0.50	Too clayey	0.00
						Too acid	0.88
		Too acid	0.32				
16C:							
Elioak	85	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Slope	0.63
						Too acid	0.88
		Too acid	0.32				

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
16D:							
Elioak	85	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Slope	0.00
		Organic matter content low	0.12	Slope	0.50	Too clayey	0.00
						Too acid	0.88
		Too acid	0.32				
17B:							
Elsinboro	90	Fair		Good		Fair	
		Organic matter content low	0.12			Too acid	0.88
		Too acid	0.50				
		Water erosion	0.99				
18C:							
Fauquier	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Too acid	0.54	Depth to bedrock	0.00	Slope	0.63
		Organic matter content low	0.88	Shrink-swell	0.87	Rock fragments	0.88
18D:							
Fauquier	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Too acid	0.54	Depth to bedrock	0.00	Too clayey	0.00
		Organic matter content low	0.88	Slope	0.50	Rock fragments	0.88
18E:							
Fauquier	85	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Too acid	0.54	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.88	Depth to bedrock	0.00	Rock fragments	0.88
19A:							
Galtsmill	85	Good		Good		Good	
20D:							
Glenelg	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
		Too acid	0.50				
		Water erosion	0.68				
21A:							
Hatboro	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
				Low strength	0.00		
		Too acid	0.88				
		Water erosion	0.99				
22B:							
Hayesville	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Too acid	0.20			Too acid	0.76
		Organic matter content low	0.88				

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
22C:							
Hayesville----------	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Too acid	0.20			Slope	0.63
		Organic matter content low	0.88			Too acid	0.76
22D:							
Hayesville----------	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Slope	0.00
		Too acid	0.20	Slope	0.50	Too clayey	0.00
		Organic matter content low	0.88			Too acid	0.76
22E:							
Hayesville----------	90	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Too acid	0.20	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.88			Too acid	0.76
23B:							
Hayesville----------	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Too acid	0.20			Too acid	0.76
		Organic matter content low	0.88				
23C:							
Hayesville----------	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Too acid	0.20			Slope	0.63
		Organic matter content low	0.88			Too acid	0.76
23D:							
Hayesville----------	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Slope	0.00
		Too acid	0.20	Slope	0.50	Too clayey	0.00
		Organic matter content low	0.88			Too acid	0.76
23E:							
Hayesville----------	90	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Too acid	0.20	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.88			Too acid	0.76
24C:							
Hayesville----------	85	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Too acid	0.20			Slope	0.63
		Organic matter content low	0.88			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
24D:							
Hayesville----------	85	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Slope	0.00
		Too acid	0.20	Slope	0.50	Too clayey	0.00
		Organic matter content low	0.88			Too acid	0.76
24E:							
Hayesville----------	85	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Too acid	0.20	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.88			Too acid	0.76
25C:							
Hazel---------------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Slope	0.63
		Droughty	0.18			Depth to bedrock	0.65
		Too acid	0.50				
25D:							
Hazel---------------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.50	Rock fragments	0.00
		Droughty	0.18			Depth to bedrock	0.65
		Too acid	0.50				
25E:							
Hazel---------------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.00	Rock fragments	0.00
		Droughty	0.18			Depth to bedrock	0.65
		Too acid	0.50				
26D:							
Hazel---------------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.50	Rock fragments	0.00
		Droughty	0.18			Depth to bedrock	0.65
		Too acid	0.50				
26E:							
Hazel---------------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.00	Rock fragments	0.00
		Droughty	0.18			Depth to bedrock	0.65
		Too acid	0.50				
27B:							
Jackland------------	85	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.08	Too clayey	0.00
		Organic matter content low	0.12	Wetness depth	0.14	Wetness depth	0.14
						Rock fragments	0.88
		Too acid	0.54				

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
27C:							
Jackland------------	85	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.08	Too clayey	0.00
		Organic matter content low	0.12	Wetness depth	0.14	Wetness depth	0.14
						Slope	0.63
		Too acid	0.54				
28B:							
Lew-----------------	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Stone content	0.68	Hard to reclaim (rock fragments)	0.00
				Shrink-swell	0.87		
		Too acid	0.54			Rock fragments	0.00
		Stone content	0.62			Too clayey	0.55
29B:							
Lew-----------------	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Stone content	0.68	Hard to reclaim (rock fragments)	0.00
				Shrink-swell	0.87		
		Too acid	0.54			Rock fragments	0.00
		Stone content	0.62			Too clayey	0.55
30C:							
Lew-----------------	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Stone content	0.50	Hard to reclaim (rock fragments)	0.00
				Shrink-swell	0.87		
		Stone content	0.50			Rock fragments	0.00
		Too acid	0.54			Too clayey	0.55
30D:							
Lew-----------------	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
				Stone content	0.50	Hard to reclaim (rock fragments)	0.00
		Stone content	0.50	Shrink-swell	0.87		
		Too acid	0.54			Rock fragments	0.00
30E:							
Lew-----------------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Stone content	0.50	Hard to reclaim (rock fragments)	0.00
		Stone content	0.50	Shrink-swell	0.87		
		Too acid	0.54			Rock fragments	0.00
31B:							
Littlejoe-----------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Depth to bedrock	0.01	Too acid	0.88
				Shrink-swell	0.87		
		Too acid	0.50				
31C:							
Littlejoe-----------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Depth to bedrock	0.01	Slope	0.63
				Shrink-swell	0.87	Too acid	0.88
		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
32B:							
Minnieville---------	85	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.89		
		Too acid	0.74				
32C:							
Minnieville---------	85	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.89	Slope	0.63
		Too acid	0.74				
32D:							
Minnieville---------	85	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Slope	0.00
		Organic matter content low	0.12	Slope	0.50	Too clayey	0.00
				Shrink-swell	0.89		
		Too acid	0.74				
32E:							
Minnieville---------	85	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Low strength	0.10	Too clayey	0.00
				Shrink-swell	0.89		
		Too acid	0.74				
33C:							
Myersville----------	55	Fair		Fair		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.29	Hard to reclaim (rock fragments)	0.00
		Too acid	0.54			Rock fragments	0.00
						Slope	0.63
Catoctin------------	35	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Slope	0.63
		Droughty	0.30			Depth to bedrock	0.93
		Too acid	0.84				
33D:							
Myersville----------	55	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.29	Hard to reclaim (rock fragments)	0.00
		Too acid	0.54				
						Rock fragments	0.00
Catoctin------------	35	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	0.30			Depth to bedrock	0.93
		Too acid	0.84				
33E:							
Myersville----------	55	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.29	Hard to reclaim (rock fragments)	0.00
		Too acid	0.54				
						Rock fragments	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
33E:							
Catoctin------------	35	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Droughty	0.30	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.84			Depth to bedrock	0.93
34C:							
Occoquan------------	85	Fair		Fair		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.01	Too acid	0.59
		Droughty	0.47			Slope	0.63
		Too acid	0.50				
34D:							
Occoquan------------	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.01	Slope	0.00
		Droughty	0.47	Slope	0.50	Too acid	0.59
		Too acid	0.50				
34E:							
Occoquan------------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Droughty	0.47	Depth to bedrock	0.01	Too acid	0.59
		Too acid	0.50				
35D:							
Occoquan------------	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.01	Slope	0.00
		Droughty	0.47	Slope	0.50	Too acid	0.59
		Too acid	0.50				
35E:							
Occoquan------------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Droughty	0.47	Depth to bedrock	0.01	Too acid	0.59
		Too acid	0.50				
36D:							
Peaks---------------	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.16	Slope	0.00	Rock fragments	0.00
		Too acid	0.54			Depth to bedrock	0.16
Rock outcrop--------	30	Not rated		Not rated		Not rated	
36E:							
Peaks---------------	60	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.16	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.54			Depth to bedrock	0.16
Rock outcrop--------	30	Not rated		Not rated		Not rated	

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
36F:							
Peaks	60	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.16	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.54			Depth to bedrock	0.16
Rock outcrop	30	Not rated		Not rated		Not rated	
37A:							
Pineywoods	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
				Depth to bedrock	0.01		
		Too acid	0.50	Low strength	0.10		
		Droughty	0.99				
38:							
Pits	100	Not rated		Not rated		Not rated	
39C:							
Saunook	85	Fair		Poor		Fair	
		Too acid	0.20	Low strength	0.00	Slope	0.63
						Rock fragments	0.88
39D:							
Saunook	85	Fair		Poor		Poor	
		Too acid	0.20	Low strength	0.00	Slope	0.00
				Slope	0.50	Rock fragments	0.88
40C:							
Saunook	85	Fair		Poor		Fair	
		Too acid	0.20	Low strength	0.00	Slope	0.63
						Rock fragments	0.88
40D:							
Saunook	85	Fair		Poor		Poor	
		Too acid	0.20	Low strength	0.00	Slope	0.00
				Slope	0.50	Rock fragments	0.88
40E:							
Saunook	85	Fair		Poor		Poor	
		Too acid	0.20	Slope	0.00	Slope	0.00
				Low strength	0.00	Rock fragments	0.88
41B:							
Sketerville	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Too acid	0.12	Wetness depth	0.53	Wetness depth	0.53
		Organic matter content low	0.12	Shrink-swell	0.87	Too acid	0.59
42C:							
Spriggs	85	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Droughty	0.02			Depth to bedrock	0.00
		Organic matter content low	0.12			Slope	0.63

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
42D:							
Spriggs-------------	85	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.02	Slope	0.50	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.00
42E:							
Spriggs-------------	85	Poor		Poor		Poor	
		Depth to bedrock	0.00	Slope	0.00	Slope	0.00
		Droughty	0.02	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.00
43A:							
Suches--------------	85	Fair		Poor		Good	
		Too acid	0.74	Low strength	0.00		
44C:							
Sylco---------------	55	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Too acid	0.59
						Slope	0.63
		Too acid	0.50				
Sylvatus------------	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	0.32
44D:							
Sylco---------------	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
						Too acid	0.59
		Too acid	0.50				
Sylvatus------------	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
44E:							
Sylco---------------	55	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Too acid	0.59
		Too acid	0.50				
Sylvatus------------	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

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
45E:							
Sylvatus	60	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	30	Not rated		Not rated		Not rated	
45F:							
Sylvatus	60	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	30	Not rated		Not rated		Not rated	
46B:							
Thurmont	85	Fair		Good		Poor	
		Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.00
		Too acid	0.32			Rock fragments	0.88
						Too acid	0.88
46C:							
Thurmont	85	Fair		Good		Poor	
		Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.00
		Too acid	0.32			Slope	0.63
						Rock fragments	0.88
46D:							
Thurmont	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
		Too acid	0.32			Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.88
47B:							
Thurmont	85	Fair		Good		Poor	
		Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.00
		Too acid	0.32			Rock fragments	0.88
						Too acid	0.88
47C:							
Thurmont	85	Fair		Good		Poor	
		Organic matter content low	0.12			Hard to reclaim (rock fragments)	0.00
		Too acid	0.32			Slope	0.63
						Rock fragments	0.88
47D:							
Thurmont	85	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
		Too acid	0.32			Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.88

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
48:							
Udorthents	85	Not rated		Not rated		Not rated	
49B:							
Unison	85	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.29
		Too clayey	0.50	Shrink-swell	0.87	Rock fragments	0.88
		Too acid	0.54			Too acid	0.98
49C:							
Unison	85	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.29
		Too clayey	0.50	Shrink-swell	0.87	Slope	0.63
		Too acid	0.54			Rock fragments	0.88
49D:							
Unison	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Low strength	0.00	Slope	0.00
				Slope	0.50	Too clayey	0.29
		Too clayey	0.50	Shrink-swell	0.87	Rock fragments	0.88
		Too acid	0.54				
50B:							
Warminster	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Depth to bedrock	0.92	Too acid	0.98
				Shrink-swell	0.96		
		Too acid	0.54				
50C:							
Warminster	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Depth to bedrock	0.92	Slope	0.63
				Shrink-swell	0.96	Too acid	0.98
		Too acid	0.54				
50D:							
Warminster	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.50	Too clayey	0.00
				Depth to bedrock	0.92	Too acid	0.98
		Too acid	0.54				
51A:							
Wingina	85	Fair		Fair		Good	
		Too acid	0.97	Low strength	0.22		
52B:							
Wintergreen	85	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	Too acid	0.59
						Rock fragments	0.88
		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
52C:							
Wintergreen---------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Too acid	0.59
						Slope	0.63
		Too acid	0.50				
52D:							
Wintergreen---------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.50	Too clayey	0.00
				Shrink-swell	0.87	Too acid	0.59
		Too acid	0.50				
53B:							
Wintergreen---------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Too acid	0.59
						Rock fragments	0.88
		Too acid	0.50				
53C:							
Wintergreen---------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.87	Too acid	0.59
						Slope	0.63
		Too acid	0.50				
53D:							
Wintergreen---------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.50	Too clayey	0.00
				Shrink-swell	0.87	Too acid	0.59
		Too acid	0.50				
54C:							
Wintergreen---------	85	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	Too acid	0.59
						Slope	0.63
		Too acid	0.50				
55A:							
Yogaville-----------	85	Fair		Poor		Poor	
		Too acid	0.97	Wetness depth	0.00	Wetness depth	0.00
				Low strength	0.00		
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
1D:							
Arcola--------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.74	Depth to water	1.00
		Seepage	0.70	Piping	0.15		
		Depth to bedrock	0.05				
1E:							
Arcola--------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.74	Depth to water	1.00
		Seepage	0.70	Piping	0.15		
		Depth to bedrock	0.05				
2A:							
Batteau-------------	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.76		
3B:							
Belvoir-------------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to cemented pan	0.96	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
		Seepage	0.70	Thin layer	0.96		
		Slope	0.32				
4B:							
Buffstat------------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.37	Depth to water	1.00
		Slope	0.32	Hard to pack	0.35		
		Depth to bedrock	0.01				
4C:							
Buffstat------------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.37	Depth to water	1.00
		Seepage	0.70	Hard to pack	0.35		
		Depth to bedrock	0.01				
4D:							
Buffstat------------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.37	Depth to water	1.00
		Seepage	0.70	Hard to pack	0.35		
		Depth to bedrock	0.01				
5C:							
Bugley--------------	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.12		
5D:							
Bugley--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.12		

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
5E:							
Bugley	85	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.12		
6E:							
Catoctin	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.66	Depth to water	1.00
		Slope	1.00	Seepage	0.38		
		Depth to bedrock	0.66				
Rock outcrop	30	Not rated		Not rated		Not rated	
7B:							
Chatuge	85	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
				Piping	0.88		
				Seepage	0.02		
8A:							
Codorus	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Ponding	1.00		
				Piping	0.60		
9B:							
Colleen	85	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Depth to water	1.00
		Seepage	0.05				
9C:							
Colleen	90	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.05				
9D:							
Colleen	90	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.05				
10A:							
Colvard	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
11A:							
Craigsville	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Large stones content	1.00	Depth to water	1.00
				Seepage	0.10		
12B:							
Delanco	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
		Slope	0.32			Cutbanks cave	0.10
				Piping	0.33		

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
12C:							
Delanco	85	Very limited		Very limited		Somewhat limited	
		Slope	1.00	Depth to saturated zone	1.00	Slow refill	0.30
		Seepage	0.70	Piping	0.33	Cutbanks cave	0.10
13C:							
Edneytown	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	0.99	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
13D:							
Edneytown	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	0.99	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
13E:							
Edneytown	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	0.99	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
14C:							
Edneytown	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	0.99	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
Peaks	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.96	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.66				
14D:							
Edneytown	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	0.99	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
Peaks	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.96	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.66				
14E:							
Edneytown	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	0.99	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
Peaks	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.96	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.66				
14F:							
Edneytown	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	0.99	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
Peaks	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.96	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.66				

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
15B:							
Elioak	85	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Depth to water	1.00
		Slope	0.32				
15C:							
Elioak	85	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.70				
15D:							
Elioak	85	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.70				
16C:							
Elioak	85	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.70				
16D:							
Elioak	85	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.70				
17B:							
Elsinboro	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.44	Depth to water	1.00
		Slope	0.32				
18C:							
Fauquier	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.56	Depth to water	1.00
		Seepage	0.70	Thin layer	0.46		
		Depth to bedrock	0.10				
18D:							
Fauquier	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.56	Depth to water	1.00
		Seepage	0.70	Thin layer	0.46		
		Depth to bedrock	0.10				
18E:							
Fauquier	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.56	Depth to water	1.00
		Seepage	0.70	Thin layer	0.46		
		Depth to bedrock	0.10				
19A:							
Galtsmill	85	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
20D:							
Glenelg	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.96	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
21A:							
Hatboro-------------	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Ponding	1.00		
				Piping	0.40		
22B:							
Hayesville----------	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	0.32				
22C:							
Hayesville----------	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
22D:							
Hayesville----------	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
22E:							
Hayesville----------	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
23B:							
Hayesville----------	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	0.32				
23C:							
Hayesville----------	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
23D:							
Hayesville----------	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
23E:							
Hayesville----------	90	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
24C:							
Hayesville----------	85	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
24D:							
Hayesville----------	85	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	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
24E:							
Hayesville----------	85	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
25C:							
Hazel---------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.83	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.83				
25D:							
Hazel---------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.83	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.83				
25E:							
Hazel---------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.83	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.83				
26D:							
Hazel---------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.83	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.83				
26E:							
Hazel---------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.83	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.83				
27B:							
Jackland------------	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
		Slope	0.32			Cutbanks cave	0.10
27C:							
Jackland------------	85	Very limited		Very limited		Somewhat limited	
		Slope	1.00	Depth to saturated zone	1.00	Slow refill	0.30
		Seepage	0.70			Cutbanks cave	0.10
28B:							
Lew-----------------	85	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Depth to water	1.00
		Slope	0.32				
29B:							
Lew-----------------	85	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Depth to water	1.00
		Slope	0.32				
30C:							
Lew-----------------	85	Very limited		Not limited		Very limited	
		Slope	1.00			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
30D:							
Lew-----------------	85	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.70				
30E:							
Lew-----------------	85	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	0.70				
31B:							
Littlejoe-----------	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.57	Hard to pack	0.50	Depth to water	1.00
		Slope	0.32	Thin layer	0.42		
		Depth to bedrock	0.01				
31C:							
Littlejoe-----------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.50	Depth to water	1.00
		Seepage	0.57	Thin layer	0.42		
		Depth to bedrock	0.01				
32B:							
Minnieville---------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Hard to pack	0.76	Depth to water	1.00
		Slope	0.32				
32C:							
Minnieville---------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.76	Depth to water	1.00
		Seepage	0.70				
32D:							
Minnieville---------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.76	Depth to water	1.00
		Seepage	0.70				
32E:							
Minnieville---------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.76	Depth to water	1.00
		Seepage	0.70				
33C:							
Myersville----------	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.19	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.01				
Catoctin------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.66	Depth to water	1.00
		Slope	1.00	Seepage	0.38		
		Depth to bedrock	0.66				
33D:							
Myersville----------	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.19	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.01				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
33D:							
Catoctin------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.66	Depth to water	1.00
		Slope	1.00	Seepage	0.38		
		Depth to bedrock	0.66				
33E:							
Myersville----------	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.19	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.01				
Catoctin------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.66	Depth to water	1.00
		Slope	1.00	Seepage	0.38		
		Depth to bedrock	0.66				
34C:							
Occoquan------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.42	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.01				
34D:							
Occoquan------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.42	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.01				
34E:							
Occoquan------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.42	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.01				
35D:							
Occoquan------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.42	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.01				
35E:							
Occoquan------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.42	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.01				
36D:							
Peaks---------------	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.96	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.66				
Rock outcrop--------	30	Not rated		Not rated		Not rated	
36E:							
Peaks---------------	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.96	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.66				

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
36E:							
Rock outcrop	30	Not rated		Not rated		Not rated	
36F:							
Peaks	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.96	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.66				
Rock outcrop	30	Not rated		Not rated		Not rated	
37A:							
Pineywoods	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.43	Depth to saturated zone	1.00	Slow refill	0.57
		Depth to bedrock	0.01	Thin layer	0.42	Cutbanks cave	0.10
38:							
Pits	100	Not rated		Not rated		Not rated	
39C:							
Saunook	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.49	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
39D:							
Saunook	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.49	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
40C:							
Saunook	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.49	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
40D:							
Saunook	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.49	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
40E:							
Saunook	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.49	Depth to water	1.00
		Slope	1.00	Seepage	0.04		
41B:							
Sketerville	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.32	Depth to saturated zone	0.99	Slow refill	0.95
		Seepage	0.05	Hard to pack	0.53	Cutbanks cave	0.10
						Depth to saturated zone	0.01
42C:							
Spriggs	85	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	0.99	Depth to water	1.00
		Seepage	0.70	Piping	0.38		
		Depth to bedrock	0.45				

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
42D:							
Spriggs-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	0.99	Depth to water	1.00
		Seepage	0.70	Piping	0.38		
		Depth to bedrock	0.45				
42E:							
Spriggs-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	0.99	Depth to water	1.00
		Seepage	0.70	Piping	0.38		
		Depth to bedrock	0.45				
43A:							
Suches--------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Piping	0.32	Depth to saturated zone	0.38
				Depth to saturated zone	0.24	Slow refill	0.30
				Seepage	0.03	Cutbanks cave	0.10
44C:							
Sylco---------------	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.74	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.56				
Sylvatus------------	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.25		
44D:							
Sylco---------------	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.74	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.56				
Sylvatus------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.25		
44E:							
Sylco---------------	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.74	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.56				
Sylvatus------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.25		
45E:							
Sylvatus------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.25		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
45F:							
Sylvatus------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.25		

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
45F:							
Rock outcrop--------	30	Not rated		Not rated		Not rated	
46B:							
Thurmont-----------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.81	Depth to water	1.00
		Slope	0.32			Slow refill	0.30
46C:							
Thurmont-----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.81	Depth to water	1.00
		Seepage	0.70			Slow refill	0.30
46D:							
Thurmont-----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.81	Depth to water	1.00
		Seepage	0.70			Slow refill	0.30
47B:							
Thurmont-----------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.81	Depth to water	1.00
		Slope	0.32			Slow refill	0.30
47C:							
Thurmont-----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.81	Depth to water	1.00
		Seepage	0.70			Slow refill	0.30
47D:							
Thurmont-----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.81	Depth to water	1.00
		Seepage	0.70			Slow refill	0.30
48:							
Udorthents----------	85	Not rated		Not rated		Not rated	
49B:							
Unison-------------	85	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	0.32				
49C:							
Unison-------------	85	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	1.00				
49D:							
Unison-------------	85	Very limited		Not limited		Very limited	
		Slope	1.00			Depth to water	1.00
		Seepage	1.00				
50B:							
Warminster----------	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Hard to pack	0.45	Depth to water	1.00
		Slope	0.32	Thin layer	0.02		
		Depth to bedrock	0.01				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
50C:							
Warminster----------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.45	Depth to water	1.00
		Seepage	0.70	Thin layer	0.02		
		Depth to bedrock	0.01				
50D:							
Warminster----------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.45	Depth to water	1.00
		Seepage	0.70	Thin layer	0.02		
		Depth to bedrock	0.01				
51A:							
Wingina-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.79	Cutbanks cave	1.00
				Seepage	0.11	Depth to saturated zone	0.81
						Slow refill	0.30
52B:							
Wintergreen---------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Hard to pack	0.46	Depth to water	1.00
		Slope	0.32				
52C:							
Wintergreen---------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.46	Depth to water	1.00
		Seepage	0.70				
52D:							
Wintergreen---------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.46	Depth to water	1.00
		Seepage	0.70				
53B:							
Wintergreen---------	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Hard to pack	0.59	Depth to water	1.00
		Slope	0.32				
53C:							
Wintergreen---------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.59	Depth to water	1.00
		Seepage	0.70				
53D:							
Wintergreen---------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.59	Depth to water	1.00
		Seepage	0.70				
54C:							
Wintergreen---------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.46	Depth to water	1.00
		Seepage	0.70				
55A:							
Yogaville-----------	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
				Ponding	1.00	Cutbanks cave	0.10
				Piping	0.17		

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
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 15.—Engineering Properties

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
1D:												
Arcola----------	0-6	Gravelly silt loam	CL, SC, SC-SM	A-4, A-6	0	0-5	85-95	55-75	50-75	38-68	26-41	9-19
	6-34	Gravelly silty clay loam, gravelly silt loam, silt loam	CL, SC	A-6	0	0-5	85-95	50-85	45-80	35-75	27-44	12-25
	34-58	Bedrock			---	---	---	---	---	---	---	---
	58-62	Bedrock			---	---	---	---	---	---	---	---
1E:												
Arcola----------	0-6	Gravelly silt loam	CL, SC, SC-SM	A-4, A-6	0	0-5	85-95	55-75	50-75	38-68	26-41	9-19
	6-34	Gravelly silty clay loam, gravelly silt loam, silt loam	CL, SC	A-6	0	0-5	85-95	50-85	45-80	35-75	27-44	12-25
	34-58	Bedrock			---	---	---	---	---	---	---	---
	58-62	Bedrock			---	---	---	---	---	---	---	---
2A:												
Batteau---------	0-13	Loam	CL, CL-ML, ML	A-4, A-6	0	0	95-100	80-100	65-95	45-75	20-45	3-18
	13-72	Loam, clay loam, sandy loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	95-100	80-100	50-100	24-80	18-47	3-24
3B:												
Belvoir---------	0-4	Sandy loam	SC-SM, SM, SC	A-4, A-2	0	0	90-100	80-100	50-70	25-40	19-33	3-12
	4-25	Sandy clay loam, clay loam, loam	CL, SC	A-6	0	0	90-100	80-100	65-100	30-80	31-46	13-25
	25-40	Sandy clay loam, fine sandy loam, loam	SC, CL	A-2, A-4, A-6	0	0-5	90-100	80-100	55-90	30-75	24-40	9-21
	40-63	Clay, sandy clay loam, loam	CL, CL-ML	A-4, A-6	0	0-10	90-100	80-100	68-100	50-95	22-59	6-36
4B:												
Buffstat--------	0-4	Silt loam	CL, CL-ML	A-4, A-6	0	0-5	80-100	75-100	70-100	50-90	22-41	6-19
	4-42	Channery clay, clay, channery silty clay, channery silty clay loam, silty clay loam	CH, CL	A-7	0	0-5	70-100	55-100	50-100	45-95	43-59	25-36
	42-58	Bedrock			---	---	---	---	---	---	---	---
	58-62	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	
4C:												
Buffstat--------	0-4	Silt loam	CL, CL-ML	A-4, A-6	0	0-5	80-100	75-100	70-100	50-90	22-41	6-19
	4-42	Channery clay, clay, channery silty clay, channery silty clay loam, silty clay loam	CH, CL	A-7	0	0-5	70-100	55-100	50-100	45-95	43-59	25-36
	42-58	Bedrock			---	---	---	---	---	---	---	---
	58-62	Bedrock			---	---	---	---	---	---	---	---
4D:												
Buffstat--------	0-4	Silt loam	CL, CL-ML	A-4, A-6	0	0-5	80-100	75-100	70-100	50-90	22-41	6-19
	4-42	Channery clay, clay, channery silty clay, channery silty clay loam, silty clay loam	CH, CL	A-7	0	0-5	70-100	55-100	50-100	45-95	43-59	25-36
	42-58	Bedrock			---	---	---	---	---	---	---	---
	58-62	Bedrock			---	---	---	---	---	---	---	---
5C:												
Bugley----------	0-3	Channery silt loam	CL, GC, GM, ML	A-4, A-6	0-2	8-15	65-100	55-75	50-75	35-70	19-41	3-19
	3-13	Very channery silt loam, extremely channery clay loam	GC	A-1, A-2, A-4, A-6	0-2	10-35	25-60	15-45	14-45	10-40	20-44	6-25
	13-18	Bedrock			---	---	---	---	---	---	---	---
	18-22	Bedrock			---	---	---	---	---	---	---	---
5D:												
Bugley----------	0-3	Channery silt loam	CL, GC, GM, ML	A-4, A-6	0-2	8-15	65-100	55-75	50-75	35-70	19-41	3-19
	3-13	Very channery silt loam, extremely channery clay loam	GC	A-1, A-2, A-4, A-6	0-2	10-35	25-60	15-45	14-45	10-40	20-44	6-25
	13-18	Bedrock			---	---	---	---	---	---	---	---
	18-22	Bedrock			---	---	---	---	---	---	---	---
5E:												
Bugley----------	0-3	Channery silt loam	CL, GC, GM, ML	A-4, A-6	0-2	8-15	65-100	55-75	50-75	35-70	19-41	3-19
	3-13	Very channery silt loam, extremely channery clay loam	GC	A-1, A-2, A-4, A-6	0-2	10-35	25-60	15-45	14-45	10-40	20-44	6-25
	13-18	Bedrock			---	---	---	---	---	---	---	---
	18-22	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	
6E:												
Catoctin--------	0-5	Channery silt loam	CL, CL-ML, ML	A-4	0-5	0-15	65-85	55-75	50-75	38-68	17-35	2-13
	5-28	Channery silt loam, channery silty clay loam, flaggy silt loam, very channery silt loam	CL, SC	A-2, A-4, A-6	0-5	0-25	50-80	35-75	30-75	25-68	20-44	6-25
	28-36	Extremely channery silt loam, very channery silt loam	GC, SC	A-1, A-2, A-4	0-5	10-35	25-75	20-55	18-55	14-50	20-36	6-17
	36-40	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
7B:												
Chatuge---------	0-9	Loam	CL	A-6, A-4	0	0	100	95-100	81-95	57-75	22-39	6-17
	9-41	Clay loam, sandy clay loam, loam	CL	A-6	0	0	90-100	80-100	70-100	50-80	29-43	13-25
	41-62	Sandy loam, gravelly loamy sand, very gravelly coarse sand, gravelly coarse sand	SM	A-2-4, A-2, A-1	0	0-15	70-90	35-85	20-60	2-35	0-22	NP-6
8A:												
Codorus---------	0-3	Silt loam	CL	A-4, A-6	0	0	85-100	80-100	72-100	55-90	29-43	9-17
	3-50	Silty clay loam, loam, silt loam	CL	A-6	0	0	85-100	80-100	70-100	50-95	27-44	12-25
	50-72	Very gravelly loamy sand	GM, ML, SM	A-1, A-2, A-4	0	0	25-100	20-100	12-95	4-75	16-25	2-7
9B:												
Colleen---------	0-9	Gravelly loam	CL, GC, SC	A-4, A-6	0	0	55-80	50-75	45-70	30-55	21-41	6-19
	9-50	Gravelly clay, gravelly silty clay loam, gravelly clay loam	CH, CL	A-7	0	0	60-80	50-75	45-75	35-70	43-67	25-44
	50-72	Gravelly silty clay loam, gravelly clay loam, gravelly sandy loam	CL, GC, SC	A-2, A-4, A-6	0	0	60-80	50-75	30-75	15-60	22-46	6-25
9C:												
Colleen---------	0-9	Gravelly loam	CL, GC, SC	A-4, A-6	0	0	55-80	50-75	45-70	30-55	21-41	6-19
	9-50	Gravelly clay, gravelly silty clay loam, gravelly clay loam	CH, CL	A-7	0	0	60-80	50-75	45-75	35-70	43-67	25-44
	50-72	Gravelly silty clay loam, gravelly clay loam, gravelly sandy loam	CL, GC, SC	A-2, A-4, A-6	0	0	60-80	50-75	30-75	15-60	22-46	6-25

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	
9D:												
Colleen---------	0-9	Gravelly loam	CL, GC, SC	A-4, A-6	0	0	55-80	50-75	45-70	30-55	21-41	6-19
	9-50	Gravelly clay, gravelly silty clay loam, gravelly clay loam	CH, CL	A-7	0	0	60-80	50-75	45-75	35-70	43-67	25-44
	50-72	Gravelly silty clay loam, gravelly clay loam, gravelly sandy loam	CL, GC, SC	A-2, A-4, A-6	0	0	60-80	50-75	30-75	15-60	22-46	6-25
10A:												
Colvard---------	0-5	Fine sandy loam	SC, SC-SM	A-4	0	0-5	90-100	85-100	60-85	35-55	21-33	4-12
	5-56	Fine sandy loam, sandy loam, loam	SC, SC-SM	A-2, A-4	0	0-5	90-100	85-100	50-95	25-75	20-31	4-12
	56-62	Loamy sand, sand	SM, SP-SM	A-1, A-2	0	0-5	85-100	85-100	40-75	5-30	0-24	NP-7
11A:												
Craigsville-----	0-6	Very cobbly loam	CL-ML, GC, GC-GM, GM, SM	A-2, A-4	0	35-60	65-90	55-80	47-75	33-60	18-33	2-10
	6-21	Extremely cobbly sandy loam, cobbly loam, very gravelly sandy loam, gravelly sandy loam	SC-SM, GC, GM, SC, SM	A-1, A-2	0	25-60	40-80	25-70	12-50	5-30	17-28	2-10
	21-64	Extremely cobbly loamy sand, very gravelly sandy loam, very gravelly loamy sand, extremely gravelly loamy sand	SC-SM, GC-GM, GM	A-1	0	35-70	35-75	30-70	15-50	5-20	16-23	2-6
12B:												
Delanco---------	0-5	Loam	CL, ML	A-4, A-6	0	0	95-100	90-100	75-95	55-75	20-39	2-13
	5-45	Clay loam, silty clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	75-100	55-80	29-42	12-21
	45-65	Loam, silt loam, gravelly sandy loam	CL, ML, SC, SM	A-2, A-4, A-6	0	0	65-100	60-100	40-100	20-80	16-36	2-17
12C:												
Delanco---------	0-5	Loam	CL, ML	A-4, A-6	0	0	95-100	90-100	75-95	55-75	20-39	2-13
	5-45	Clay loam, silty clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	75-100	55-80	29-42	12-21
	45-65	Loam, silt loam, gravelly sandy loam	CL, ML, SC, SM	A-2, A-4, A-6	0	0	65-100	60-100	40-100	20-80	16-36	2-17

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
13C:												
Edneytown-------	0-7	Loam	CL-ML, ML, SC-SM	A-4	0-1	0-2	90-100	80-100	70-95	50-75	18-33	2-10
	7-34	Loam, clay loam, sandy clay loam, fine sandy loam	CL, SC	A-6	0	0	90-100	80-100	56-100	32-80	26-44	11-25
	34-67	Sandy loam, fine sandy loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	90-100	80-100	40-85	12-55	15-27	1-10
13D:												
Edneytown-------	0-7	Loam	CL-ML, ML, SC-SM	A-4	0-1	0-2	90-100	80-100	70-95	50-75	18-33	2-10
	7-34	Loam, clay loam, sandy clay loam, fine sandy loam	CL, SC	A-6	0	0	90-100	80-100	56-100	32-80	26-44	11-25
	34-67	Sandy loam, fine sandy loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	90-100	80-100	40-85	12-55	15-27	1-10
13E:												
Edneytown-------	0-7	Loam	CL-ML, ML, SC-SM	A-4	0-1	0-2	90-100	80-100	70-95	50-75	18-33	2-10
	7-34	Loam, clay loam, sandy clay loam, fine sandy loam	CL, SC	A-6	0	0	90-100	80-100	56-100	32-80	26-44	11-25
	34-67	Sandy loam, fine sandy loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	90-100	80-100	40-85	12-55	15-27	1-10
14C:												
Edneytown-------	0-7	Loam	CL-ML, ML, SC-SM	A-4	0-1	0-2	90-100	80-100	70-95	50-75	18-33	2-10
	7-34	Loam, clay loam, sandy clay loam, fine sandy loam	CL, SC	A-6	0	0	90-100	80-100	56-100	32-80	26-44	11-25
	34-67	Sandy loam, fine sandy loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	90-100	80-100	40-85	12-55	15-27	1-10
Peaks-----------	0-2	Very gravelly loam	GC-GM, GM, SM	A-2, A-4	0	5-45	30-60	15-50	15-50	10-40	17-34	1-10
	2-25	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC-GM, GM, SC-SM, SM	A-2, A-4	0	5-35	30-60	15-50	5-50	2-40	17-32	2-12
	25-36	Bedrock			---	---	---	---	---	---	---	---
	36-40	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	
14D:												
Edneytown-------	0-7	Loam	CL-ML, ML, SC-SM	A-4	0-1	0-2	90-100	80-100	70-95	50-75	18-33	2-10
	7-34	Loam, clay loam, sandy clay loam, fine sandy loam	CL, SC	A-6	0	0	90-100	80-100	56-100	32-80	26-44	11-25
	34-67	Sandy loam, fine sandy loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	90-100	80-100	40-85	12-55	15-27	1-10
Peaks-----------	0-2	Very gravelly loam	GC-GM, GM, SM	A-2, A-4	0	5-45	30-60	15-50	15-50	10-40	17-34	1-10
	2-25	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC-GM, GM, SC-SM, SM	A-2, A-4	0	5-35	30-60	15-50	5-50	2-40	17-32	2-12
	25-36	Bedrock			---	---	---	---	---	---	---	---
	36-40	Bedrock			---	---	---	---	---	---	---	---
14E:												
Edneytown-------	0-7	Loam	CL-ML, ML, SC-SM	A-4	0-1	0-2	90-100	80-100	70-95	50-75	18-33	2-10
	7-34	Loam, clay loam, sandy clay loam, fine sandy loam	CL, SC	A-6	0	0	90-100	80-100	56-100	32-80	26-44	11-25
	34-67	Sandy loam, fine sandy loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	90-100	80-100	40-85	12-55	15-27	1-10
Peaks-----------	0-2	Very gravelly loam	GC-GM, GM, SM	A-2, A-4	0	5-45	30-60	15-50	15-50	10-40	17-34	1-10
	2-25	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC-GM, GM, SC-SM, SM	A-2, A-4	0	5-35	30-60	15-50	5-50	2-40	17-32	2-12
	25-36	Bedrock			---	---	---	---	---	---	---	---
	36-40	Bedrock			---	---	---	---	---	---	---	---
14F:												
Edneytown-------	0-7	Loam	CL-ML, ML, SC-SM	A-4	0-1	0-2	90-100	80-100	70-95	50-75	18-33	2-10
	7-34	Loam, clay loam, sandy clay loam, fine sandy loam	CL, SC	A-6	0	0	90-100	80-100	56-100	32-80	26-44	11-25
	34-67	Sandy loam, fine sandy loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	90-100	80-100	40-85	12-55	15-27	1-10

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	
14F:												
Peaks-----------	0-2	Very gravelly loam	GC-GM, GM, SM	A-2, A-4	0	5-45	30-60	15-50	15-50	10-40	17-34	1-10
	2-25	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC-GM, GM, SC-SM, SM	A-2, A-4	0	5-35	30-60	15-50	5-50	2-40	17-32	2-12
	25-36	Bedrock			---	---	---	---	---	---	---	---
	36-40	Bedrock			---	---	---	---	---	---	---	---
15B:												
Elioak----------	0-8	Loam	CL, SC	A-4, A-6, A-7	0	0-5	90-100	80-100	68-95	48-75	27-43	9-18
	8-40	Clay, clay loam, silty clay, silty clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	56-100	32-95	37-66	21-43
	40-62	Loam, silt loam	SC, CL	A-2, A-4, A-6	0	0-5	90-100	80-100	56-100	32-90	24-38	9-19
15C:												
Elioak----------	0-8	Loam	CL, SC	A-4, A-6, A-7	0	0-5	90-100	80-100	68-95	48-75	27-43	9-18
	8-40	Clay, clay loam, silty clay, silty clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	56-100	32-95	37-66	21-43
	40-62	Loam, silt loam	SC, CL	A-2, A-4, A-6	0	0-5	90-100	80-100	56-100	32-90	24-38	9-19
15D:												
Elioak----------	0-8	Loam	CL, SC	A-4, A-6, A-7	0	0-5	90-100	80-100	68-95	48-75	27-43	9-18
	8-40	Clay, clay loam, silty clay, silty clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	56-100	32-95	37-66	21-43
	40-62	Loam, silt loam	SC, CL	A-2, A-4, A-6	0	0-5	90-100	80-100	56-100	32-90	24-38	9-19
16C:												
Elioak----------	0-6	Clay loam	CL	A-6, A-7	0	0-5	90-100	80-100	72-100	56-80	39-57	19-30
	6-40	Clay, clay loam, silty clay, silty clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	56-100	32-95	37-66	21-43
	40-62	Loam, silt loam	SC, CL	A-2, A-4, A-6	0	0-5	90-100	80-100	56-100	32-90	24-38	9-19
16D:												
Elioak----------	0-6	Clay loam	CL	A-6, A-7	0	0-5	90-100	80-100	72-100	56-80	39-57	19-30
	6-40	Clay, clay loam, silty clay, silty clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	56-100	32-95	37-66	21-43
	40-62	Loam, silt loam	SC, CL	A-2, A-4, A-6	0	0-5	90-100	80-100	56-100	32-90	24-38	9-19
17B:												
Elsinboro-------	0-11	Loam	CL, SC	A-4	---	0-5	90-100	80-100	68-95	48-75	21-35	4-12
	11-38	Clay loam, silty clay loam, silt loam, loam	CL	A-6	0	0-5	90-100	80-100	70-100	55-95	27-43	12-24
	38-72	Sandy clay loam, fine sandy loam, sandy loam, silt loam	CL, SC	A-2, A-4, A-6, A-7	0	0-5	85-100	80-100	48-90	24-55	18-43	4-24

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	
18C:												
Fauquier--------	0-6	Loam	CL, CL-ML, SC-SM	A-4, A-6	0	0-5	85-100	80-100	70-95	50-75	22-41	6-17
	6-40	Clay, silty clay loam, gravelly silty clay	CH, CL, SC	A-7	0	0-5	65-100	55-100	50-100	45-95	44-68	25-44
	40-50	Bedrock			---	---	---	---	---	---	---	---
	50-54	Bedrock			---	---	---	---	---	---	---	---
18D:												
Fauquier--------	0-6	Loam	CL, CL-ML, SC-SM	A-4, A-6	0	0-5	85-100	80-100	70-95	50-75	22-41	6-17
	6-40	Clay, silty clay loam, gravelly silty clay	CH, CL, SC	A-7	0	0-5	65-100	55-100	50-100	45-95	44-68	25-44
	40-50	Bedrock			---	---	---	---	---	---	---	---
	50-54	Bedrock			---	---	---	---	---	---	---	---
18E:												
Fauquier--------	0-6	Loam	CL, CL-ML, SC-SM	A-4, A-6	0	0-5	85-100	80-100	70-95	50-75	22-41	6-17
	6-40	Clay, silty clay loam, gravelly silty clay	CH, CL, SC	A-7	0	0-5	65-100	55-100	50-100	45-95	44-68	25-44
	40-50	Bedrock			---	---	---	---	---	---	---	---
	50-54	Bedrock			---	---	---	---	---	---	---	---
19A:												
Galtsmill-------	0-15	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	90-100	80-100	55-85	30-55	18-40	2-12
	15-72	Fine sandy loam, loam, silt loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	90-100	80-100	55-100	30-90	17-33	2-12
20D:												
Glenelg---------	0-9	Silt loam	CL	A-4, A-6	0	0	85-100	80-100	70-100	55-90	27-41	9-17
	9-27	Clay loam, silty clay loam, loam, silt loam	CL	A-6, A-7	0	0-10	85-100	80-100	70-100	50-90	29-42	13-22
	27-65	Loam, sandy loam, channery loam	GM, ML, SM, CL	A-2, A-4	0	0-15	60-100	55-100	35-95	15-75	16-32	2-13
21A:												
Hatboro---------	0-12	Loam	CL, ML	A-4, A-6	0	0	95-100	85-100	70-95	50-75	25-39	6-13
	12-50	Clay loam, silty clay loam, sandy clay loam, silt loam	CL, SC	A-4, A-6	0	0	85-100	80-100	65-100	30-80	24-44	9-25
	50-72	Sandy clay loam, sandy loam, silt loam	CL, SC, CL-ML	A-4, A-6	0	0	25-100	10-100	10-100	5-90	20-44	6-25

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	
22B:												
Hayesville------	0-6	Loam	CL, CL-ML	A-4, A-7	0	0-5	90-100	80-100	70-95	50-75	22-41	6-17
	6-40	Clay, clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-95	38-58	20-36
	40-57	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0-5	90-100	90-100	70-100	30-80	29-49	13-28
	57-62	Loam, fine sandy loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	5-15	90-100	90-100	55-95	25-75	16-36	2-17
22C:												
Hayesville------	0-6	Loam	CL, CL-ML	A-4, A-7	0	0-5	90-100	80-100	70-95	50-75	22-41	6-17
	6-40	Clay, clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-95	38-58	20-36
	40-57	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0-5	90-100	90-100	70-100	30-80	29-49	13-28
	57-62	Loam, fine sandy loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	5-15	90-100	90-100	55-95	25-75	16-36	2-17
22D:												
Hayesville------	0-6	Loam	CL, CL-ML	A-4, A-7	0	0-5	90-100	80-100	70-95	50-75	22-41	6-17
	6-40	Clay, clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-95	38-58	20-36
	40-57	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0-5	90-100	90-100	70-100	30-80	29-49	13-28
	57-62	Loam, fine sandy loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	5-15	90-100	90-100	55-95	25-75	16-36	2-17
22E:												
Hayesville------	0-6	Loam	CL, CL-ML	A-4, A-7	0	0-5	90-100	80-100	70-95	50-75	22-41	6-17
	6-40	Clay, clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-95	38-58	20-36
	40-57	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0-5	90-100	90-100	70-100	30-80	29-49	13-28
	57-62	Loam, fine sandy loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	5-15	90-100	90-100	55-95	25-75	16-36	2-17
23B:												
Hayesville------	0-6	Clay loam	CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-80	31-54	13-28
	6-40	Clay, clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-95	38-58	20-36
	40-57	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0-5	90-100	90-100	70-100	30-80	29-49	13-28
	57-62	Loam, fine sandy loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	5-15	90-100	90-100	55-95	25-75	16-36	2-17
23C:												
Hayesville------	0-6	Clay loam	CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-80	31-54	13-28
	6-40	Clay, clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-95	38-58	20-36
	40-57	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0-5	90-100	90-100	70-100	30-80	29-49	13-28
	57-62	Loam, fine sandy loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	5-15	90-100	90-100	55-95	25-75	16-36	2-17

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
23D:												
Hayesville------	0-6	Clay loam	CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-80	31-54	13-28
	6-40	Clay, clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-95	38-58	20-36
	40-57	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0-5	90-100	90-100	70-100	30-80	29-49	13-28
	57-62	Loam, fine sandy loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	5-15	90-100	90-100	55-95	25-75	16-36	2-17
23E:												
Hayesville------	0-6	Clay loam	CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-80	31-54	13-28
	6-40	Clay, clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-95	38-58	20-36
	40-57	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0-5	90-100	90-100	70-100	30-80	29-49	13-28
	57-62	Loam, fine sandy loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	5-15	90-100	90-100	55-95	25-75	16-36	2-17
24C:												
Hayesville------	0-6	Loam	CL, CL-ML	A-4, A-7	0	0-5	90-100	80-100	70-95	50-75	22-41	6-17
	6-40	Clay, clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-95	38-58	20-36
	40-57	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0-5	90-100	90-100	70-100	30-80	29-49	13-28
	57-62	Loam, fine sandy loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	5-15	90-100	90-100	55-95	25-75	16-36	2-17
24D:												
Hayesville------	0-6	Loam	CL, CL-ML	A-4, A-7	0	0-5	90-100	80-100	70-95	50-75	22-41	6-17
	6-40	Clay, clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-95	38-58	20-36
	40-57	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0-5	90-100	90-100	70-100	30-80	29-49	13-28
	57-62	Loam, fine sandy loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	5-15	90-100	90-100	55-95	25-75	16-36	2-17
24E:												
Hayesville------	0-6	Loam	CL, CL-ML	A-4, A-7	0	0-5	90-100	80-100	70-95	50-75	22-41	6-17
	6-40	Clay, clay loam	CH, CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-95	38-58	20-36
	40-57	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0-5	90-100	90-100	70-100	30-80	29-49	13-28
	57-62	Loam, fine sandy loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	5-15	90-100	90-100	55-95	25-75	16-36	2-17

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
25C:												
Hazel-----------	0-5	Channery loam	GM, ML, SM, GC	A-4	0-2	0-5	60-80	50-75	40-70	30-56	17-35	2-13
	5-19	Channery sandy loam, channery fine sandy loam, channery silt loam	SC	A-1, A-2, A-4	0-5	0-25	65-95	50-90	30-90	15-81	20-30	6-12
	19-31	Very channery sandy loam, channery loam, channery silt loam, channery fine sandy loam	GC	A-1, A-2, A-4	0-10	0-20	55-80	45-70	25-70	15-60	20-30	6-12
	31-35	Bedrock			---	---	---	---	---	---	---	---
25D:												
Hazel-----------	0-5	Channery loam	GM, ML, SM, GC	A-4	0-2	0-5	60-80	50-75	40-70	30-56	17-35	2-13
	5-19	Channery sandy loam, channery fine sandy loam, channery silt loam	SC	A-1, A-2, A-4	0-5	0-25	65-95	50-90	30-90	15-81	20-30	6-12
	19-31	Very channery sandy loam, channery loam, channery silt loam, channery fine sandy loam	GC	A-1, A-2, A-4	0-10	0-20	55-80	45-70	25-70	15-60	20-30	6-12
	31-35	Bedrock			---	---	---	---	---	---	---	---
25E:												
Hazel-----------	0-5	Channery loam	GM, ML, SM, GC	A-4	0-2	0-5	60-80	50-75	40-70	30-56	17-35	2-13
	5-19	Channery sandy loam, channery fine sandy loam, channery silt loam	SC	A-1, A-2, A-4	0-5	0-25	65-95	50-90	30-90	15-81	20-30	6-12
	19-31	Very channery sandy loam, channery loam, channery silt loam, channery fine sandy loam	GC	A-1, A-2, A-4	0-10	0-20	55-80	45-70	25-70	15-60	20-30	6-12
	31-35	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	
26D:												
Hazel-----------	0-5	Loam	SC-SM, CL-ML	A-4	0-2	0-5	85-100	80-100	70-95	50-75	17-33	2-12
	5-19	Channery sandy loam, channery fine sandy loam, channery silt loam	SC	A-1, A-2, A-4	0-5	0-25	65-95	50-90	30-90	15-81	20-30	6-12
	19-31	Very channery sandy loam, channery loam, channery silt loam, channery fine sandy loam	GC	A-1, A-2, A-4	0-10	0-20	55-80	45-70	25-70	15-60	20-30	6-12
	31-35	Bedrock			---	---	---	---	---	---	---	---
26E:												
Hazel-----------	0-5	Loam	SC-SM, CL-ML	A-4	0-2	0-5	85-100	80-100	70-95	50-75	17-33	2-12
	5-19	Channery sandy loam, channery fine sandy loam, channery silt loam	SC	A-1, A-2, A-4	0-5	0-25	65-95	50-90	30-90	15-81	20-30	6-12
	19-31	Very channery sandy loam, channery loam, channery silt loam, channery fine sandy loam	GC	A-1, A-2, A-4	0-10	0-20	55-80	45-70	25-70	15-60	20-30	6-12
	31-35	Bedrock			---	---	---	---	---	---	---	---
27B:												
Jackland--------	0-9	Gravelly silt loam	GC, CL	A-6	0	1-5	55-80	50-75	45-75	35-68	26-41	9-19
	9-30	Clay	CH	A-7	0	0	85-100	80-100	70-100	50-95	51-79	29-46
	30-61	Sandy clay loam, clay loam, sandy loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	1-5	60-100	50-100	30-100	15-80	20-49	6-28
27C:												
Jackland--------	0-9	Gravelly silt loam	GC, CL	A-6	0	1-5	55-80	50-75	45-75	35-68	26-41	9-19
	9-30	Clay	CH	A-7	0	0	85-100	80-100	70-100	50-95	51-79	29-46
	30-61	Sandy clay loam, clay loam, sandy loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	1-5	60-100	50-100	30-100	15-80	20-49	6-28
28B:												
Lew-------------	0-8	Silt loam	CL, CL-ML	A-4	2-7	5-10	90-100	80-100	80-100	60-90	22-41	6-17
	8-62	Very channery silty clay loam, very channery clay loam	GC	A-2, A-6, A-7	5-20	5-49	30-70	15-50	15-50	10-48	37-46	19-25

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	
29B:												
Lew-------------	0-8	Silt loam	CL, CL-ML	A-4	2-7	5-10	90-100	80-100	80-100	60-90	22-41	6-17
	8-62	Very channery silty clay loam, very channery clay loam	GC	A-2, A-6, A-7	5-20	5-49	30-70	15-50	15-50	10-48	37-46	19-25
30C:												
Lew-------------	0-8	Channery silt loam	GC-GM, SC	A-4	5-25	5-25	55-85	50-75	45-75	35-68	21-39	6-17
	8-62	Very channery silty clay loam, very channery clay loam	GC	A-2, A-6, A-7	5-20	5-49	30-70	15-50	15-50	10-48	37-46	19-25
30D:												
Lew-------------	0-8	Channery silt loam	GC-GM, SC	A-4	5-25	5-25	55-85	50-75	45-75	35-68	21-39	6-17
	8-62	Very channery silty clay loam, very channery clay loam	GC	A-2, A-6, A-7	5-20	5-49	30-70	15-50	15-50	10-48	37-46	19-25
30E:												
Lew-------------	0-8	Channery silt loam	GC-GM, SC	A-4	5-25	5-25	55-85	50-75	45-75	35-68	21-39	6-17
	8-62	Very channery silty clay loam, very channery clay loam	GC	A-2, A-6, A-7	5-20	5-49	30-70	15-50	15-50	10-48	37-46	19-25
31B:												
Littlejoe-------	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0-5	85-100	80-100	70-100	60-90	23-41	7-19
	8-41	Silty clay, clay, silty clay loam	CH, CL	A-7	0	0-5	85-100	80-100	75-100	70-95	43-67	25-44
	41-65	Bedrock			---	---	---	---	---	---	---	---
31C:												
Littlejoe-------	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0-5	85-100	80-100	70-100	60-90	23-41	7-19
	8-41	Silty clay, clay, silty clay loam	CH, CL	A-7	0	0-5	85-100	80-100	75-100	70-95	43-67	25-44
	41-65	Bedrock			---	---	---	---	---	---	---	---
32B:												
Minnieville-----	0-12	Loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	85-100	72-95	51-75	22-41	6-19
	12-49	Clay, silty clay, clay loam	CH, CL	A-7	0	0-5	95-100	85-100	75-100	60-95	43-76	25-51
	49-72	Clay, silty clay loam, clay loam	CL	A-6, A-7	0	0-5	95-100	80-100	70-100	55-95	39-76	21-51

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	
32C:												
Minnieville-----	0-12	Loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	85-100	72-95	51-75	22-41	6-19
	12-49	Clay, silty clay, clay loam	CH, CL	A-7	0	0-5	95-100	85-100	75-100	60-95	43-76	25-51
	49-72	Clay, silty clay loam, clay loam	CL	A-6, A-7	0	0-5	95-100	80-100	70-100	55-95	39-76	21-51
32D:												
Minnieville-----	0-12	Loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	85-100	72-95	51-75	22-41	6-19
	12-49	Clay, silty clay, clay loam	CH, CL	A-7	0	0-5	95-100	85-100	75-100	60-95	43-76	25-51
	49-72	Clay, silty clay loam, clay loam	CL	A-6, A-7	0	0-5	95-100	80-100	70-100	55-95	39-76	21-51
32E:												
Minnieville-----	0-12	Loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	85-100	72-95	51-75	22-41	6-19
	12-49	Clay, silty clay, clay loam	CH, CL	A-7	0	0-5	95-100	85-100	75-100	60-95	43-76	25-51
	49-72	Clay, silty clay loam, clay loam	CL	A-6, A-7	0	0-5	95-100	80-100	70-100	55-95	39-76	21-51
33C:												
Myersville------	0-11	Channery silt loam	CL, CL-ML, ML	A-4	0-10	0-15	60-90	50-75	45-75	35-70	17-35	2-13
	11-40	Channery clay loam, clay loam, silty clay loam	CL, GC	A-6	0-7	0-20	50-95	35-95	32-95	24-90	27-44	12-25
	40-47	Very channery silt loam, channery silt loam, very channery silty clay loam, silt loam	CL, CL-ML, GC	A-1, A-2, A-4	0-7	0-20	30-95	20-90	18-90	14-80	20-42	6-22
	47-62	Bedrock			---	---	---	---	---	---	---	---
Catoctin--------	0-5	Channery silt loam	CL, CL-ML, ML	A-4	0-5	0-15	65-85	55-75	50-75	38-68	17-35	2-13
	5-28	Channery silt loam, channery silty clay loam, flaggy silt loam, very channery silt loam	CL, SC	A-2, A-4, A-6	0-5	0-25	50-80	35-75	30-75	25-68	20-44	6-25
	28-36	Extremely channery silt loam, very channery silt loam	GC, SC	A-1, A-2, A-4	0-5	10-35	25-75	20-55	18-55	14-50	20-36	6-17
	36-40	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	
33D:												
Myersville------	0-11	Channery silt loam	CL, CL-ML, ML	A-4	0-10	0-15	60-90	50-75	45-75	35-70	17-35	2-13
	11-40	Channery clay loam, clay loam, silty clay loam	CL, GC	A-6	0-7	0-20	50-95	35-95	32-95	24-90	27-44	12-25
	40-47	Very channery silt loam, channery silt loam, very channery silty clay loam, silt loam	CL, CL-ML, GC	A-1, A-2, A-4	0-7	0-20	30-95	20-90	18-90	14-80	20-42	6-22
	47-62	Bedrock			---	---	---	---	---	---	---	---
Catoctin--------	0-5	Channery silt loam	CL, CL-ML, ML	A-4	0-5	0-15	65-85	55-75	50-75	38-68	17-35	2-13
	5-28	Channery silt loam, channery silty clay loam, flaggy silt loam, very channery silt loam	CL, SC	A-2, A-4, A-6	0-5	0-25	50-80	35-75	30-75	25-68	20-44	6-25
	28-36	Extremely channery silt loam, very channery silt loam	GC, SC	A-1, A-2, A-4	0-5	10-35	25-75	20-55	18-55	14-50	20-36	6-17
	36-40	Bedrock			---	---	---	---	---	---	---	---
33E:												
Myersville------	0-11	Channery silt loam	CL, CL-ML, ML	A-4	0-10	0-15	60-90	50-75	45-75	35-70	17-35	2-13
	11-40	Channery clay loam, clay loam, silty clay loam	CL, GC	A-6	0-7	0-20	50-95	35-95	32-95	24-90	27-44	12-25
	40-47	Very channery silt loam, channery silt loam, very channery silty clay loam, silt loam	CL, CL-ML, GC	A-1, A-2, A-4	0-7	0-20	30-95	20-90	18-90	14-80	20-42	6-22
	47-62	Bedrock			---	---	---	---	---	---	---	---
Catoctin--------	0-5	Channery silt loam	CL, CL-ML, ML	A-4	0-5	0-15	65-85	55-75	50-75	38-68	17-35	2-13
	5-28	Channery silt loam, channery silty clay loam, flaggy silt loam, very channery silt loam	CL, SC	A-2, A-4, A-6	0-5	0-25	50-80	35-75	30-75	25-68	20-44	6-25
	28-36	Extremely channery silt loam, very channery silt loam	GC, SC	A-1, A-2, A-4	0-5	10-35	25-75	20-55	18-55	14-50	20-36	6-17
	36-40	Bedrock			---	---	---	---	---	---	---	---
34C:												
Occoquan--------	0-4	Loam	CL, CL-ML, ML	A-4, A-6	0	0-5	80-100	75-100	65-95	45-75	20-43	3-18
	4-13	Sandy clay loam, sandy loam, loam	CL, SC	A-6	0	0-5	80-100	75-100	45-95	22-75	27-44	12-25
	13-41	Sandy loam, loam, loamy sand	CL, CL-ML, SC, SC-SM	A-2, A-4	0	0-10	80-100	75-100	40-95	10-75	16-38	2-19
	41-60	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	
34D:												
Occoquan--------	0-4	Loam	CL, CL-ML, ML	A-4, A-6	0	0-5	80-100	75-100	65-95	45-75	20-43	3-18
	4-13	Sandy clay loam, sandy loam, loam	CL, SC	A-6	0	0-5	80-100	75-100	45-95	22-75	27-44	12-25
	13-41	Sandy loam, loam, loamy sand	CL, CL-ML, SC, SC-SM	A-2, A-4	0	0-10	80-100	75-100	40-95	10-75	16-38	2-19
	41-60	Bedrock			---	---	---	---	---	---	---	---
34E:												
Occoquan--------	0-4	Loam	CL, CL-ML, ML	A-4, A-6	0	0-5	80-100	75-100	65-95	45-75	20-43	3-18
	4-13	Sandy clay loam, sandy loam, loam	CL, SC	A-6	0	0-5	80-100	75-100	45-95	22-75	27-44	12-25
	13-41	Sandy loam, loam, loamy sand	CL, CL-ML, SC, SC-SM	A-2, A-4	0	0-10	80-100	75-100	40-95	10-75	16-38	2-19
	41-60	Bedrock			---	---	---	---	---	---	---	---
35D:												
Occoquan--------	0-4	Loam	CL, CL-ML, ML	A-4, A-6	0	0-5	80-100	75-100	65-95	45-75	20-43	3-18
	4-13	Sandy clay loam, sandy loam, loam	CL, SC	A-6	0	0-5	80-100	75-100	45-95	22-75	27-44	12-25
	13-41	Sandy loam, loam, loamy sand	CL, CL-ML, SC, SC-SM	A-2, A-4	0	0-10	80-100	75-100	40-95	10-75	16-38	2-19
	41-60	Bedrock			---	---	---	---	---	---	---	---
35E:												
Occoquan--------	0-4	Loam	CL, CL-ML, ML	A-4, A-6	0	0-5	80-100	75-100	65-95	45-75	20-43	3-18
	4-13	Sandy clay loam, sandy loam, loam	CL, SC	A-6	0	0-5	80-100	75-100	45-95	22-75	27-44	12-25
	13-41	Sandy loam, loam, loamy sand	CL, CL-ML, SC, SC-SM	A-2, A-4	0	0-10	80-100	75-100	40-95	10-75	16-38	2-19
	41-60	Bedrock			---	---	---	---	---	---	---	---
36D:												
Peaks-----------	0-2	Very gravelly loam	GC-GM, GM, SM	A-2, A-4	0	5-45	30-60	15-50	15-50	10-40	17-34	1-10
	2-25	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC-GM, GM, SC-SM, SM	A-2, A-4	0	5-35	30-60	15-50	5-50	2-40	17-32	2-12
	25-36	Bedrock			---	---	---	---	---	---	---	---
	36-40	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	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	
36E:												
Peaks-----------	0-2	Very gravelly loam	GC-GM, GM, SM	A-2, A-4	0	5-45	30-60	15-50	15-50	10-40	17-34	1-10
	2-25	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC-GM, GM, SC-SM, SM	A-2, A-4	0	5-35	30-60	15-50	5-50	2-40	17-32	2-12
	25-36	Bedrock			---	---	---	---	---	---	---	---
	36-40	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
36F:												
Peaks-----------	0-2	Very gravelly loam	GC-GM, GM, SM	A-2, A-4	0	5-45	30-60	15-50	15-50	10-40	17-34	1-10
	2-25	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC-GM, GM, SC-SM, SM	A-2, A-4	0	5-35	30-60	15-50	5-50	2-40	17-32	2-12
	25-36	Bedrock			---	---	---	---	---	---	---	---
	36-40	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
37A:												
Pineywoods------	0-6	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	90-100	80-100	70-100	55-90	25-45	6-18
	6-22	Clay, silty clay, gravelly clay loam	CH, CL	A-7	0	0	90-100	50-100	45-100	35-95	43-67	25-44
	22-41	Loam, sandy loam, gravelly silty clay loam	CL, SC	A-2, A-4, A-6	0	0-2	90-100	50-100	30-95	15-75	22-46	6-25
	41-62	Bedrock			---	---	---	---	---	---	---	---
38:												
Pits------------	0-60	Bedrock			---	---	---	---	---	---	---	---
39C:												
Saunook---------	0-9	Loam	MH, ML	A-4, A-5, A-7	0	0-5	90-100	80-100	70-95	50-75	24-52	3-13
	9-52	Clay loam, sandy clay loam, loam	CL, SC	A-6, A-7, A-7-6	0	0-5	70-100	50-100	40-100	30-80	27-47	12-24
	52-61	Very cobbly sandy loam, cobbly fine sandy loam, cobbly sandy loam	GM, SM	A-1, A-1-b, A-2-4, A-4	0	15-70	60-80	55-80	30-75	15-55	18-32	3-13

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
39D:												
Saunook---------	0-9	Loam	MH, ML	A-4, A-5, A-7	0	0-5	90-100	80-100	70-95	50-75	24-52	3-13
	9-52	Clay loam, sandy clay loam, loam	CL, SC	A-6, A-7, A-7-6	0	0-5	70-100	50-100	40-100	30-80	27-47	12-24
	52-61	Very cobbly sandy loam, cobbly fine sandy loam, cobbly sandy loam	GM, SM	A-1, A-1-b, A-2-4, A-4	0	15-70	60-80	55-80	30-75	15-55	18-32	3-13
40C:												
Saunook---------	0-9	Loam	MH, ML	A-4, A-5, A-7	0	0-5	90-100	80-100	70-95	50-75	24-52	3-13
	9-52	Clay loam, sandy clay loam, loam	CL, SC	A-6, A-7, A-7-6	0	0-5	70-100	50-100	40-100	30-80	27-47	12-24
	52-61	Very cobbly sandy loam, cobbly fine sandy loam, cobbly sandy loam	GM, SM	A-1, A-1-b, A-2-4, A-4	0	15-70	60-80	55-80	30-75	15-55	18-32	3-13
40D:												
Saunook---------	0-9	Loam	MH, ML	A-4, A-5, A-7	0	0-5	90-100	80-100	70-95	50-75	24-52	3-13
	9-52	Clay loam, sandy clay loam, loam	CL, SC	A-6, A-7, A-7-6	0	0-5	70-100	50-100	40-100	30-80	27-47	12-24
	52-61	Very cobbly sandy loam, cobbly fine sandy loam, cobbly sandy loam	GM, SM	A-1, A-1-b, A-2-4, A-4	0	15-70	60-80	55-80	30-75	15-55	18-32	3-13
40E:												
Saunook---------	0-9	Loam	MH, ML	A-4, A-5, A-7	0	0-5	90-100	80-100	70-95	50-75	24-52	3-13
	9-52	Clay loam, sandy clay loam, loam	CL, SC	A-6, A-7, A-7-6	0	0-5	70-100	50-100	40-100	30-80	27-47	12-24
	52-61	Very cobbly sandy loam, cobbly fine sandy loam, cobbly sandy loam	GM, SM	A-1, A-1-b, A-2-4, A-4	0	15-70	60-80	55-80	30-75	15-55	18-32	3-13
41B:												
Sketerville-----	0-4	Silt loam	CL, CL-ML	A-4, A-6	0	0	90-100	80-100	70-100	55-95	22-43	6-18
	4-42	Clay, silty clay, gravelly clay loam	CH, CL	A-7	0	0	70-100	55-100	50-100	40-95	43-67	25-44
	42-70	Clay, loam, gravelly silty clay loam, sandy loam, silty clay loam	CH, CL, SC	A-7, A-2, A-4, A-6	0	0-2	70-100	55-100	30-100	15-95	22-63	6-40
	70-74	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	
42C:												
Spriggs---------	0-4	Loam	CL, CL-ML	A-4, A-6	0	0	90-100	85-100	70-95	50-75	21-41	6-19
	4-14	Gravelly loam, clay loam, loam, silty clay loam	CL, SC	A-6	0	0-2	60-100	50-100	30-95	15-75	31-46	13-25
	14-20	Gravelly loam, loam, sandy loam	CL, SC, SC-SM	A-2, A-4, A-6	0	0-10	75-100	50-95	30-90	15-70	24-38	9-19
	20-41	Bedrock			---	---	---	---	---	---	---	---
	41-45	Bedrock			---	---	---	---	---	---	---	---
42D:												
Spriggs---------	0-4	Loam	CL, CL-ML	A-4, A-6	0	0	90-100	85-100	70-95	50-75	21-41	6-19
	4-14	Gravelly loam, clay loam, loam, silty clay loam	CL, SC	A-6	0	0-2	60-100	50-100	30-95	15-75	31-46	13-25
	14-20	Gravelly loam, loam, sandy loam	CL, SC, SC-SM	A-2, A-4, A-6	0	0-10	75-100	50-95	30-90	15-70	24-38	9-19
	20-41	Bedrock			---	---	---	---	---	---	---	---
	41-45	Bedrock			---	---	---	---	---	---	---	---
42E:												
Spriggs---------	0-4	Loam	CL, CL-ML	A-4, A-6	0	0	90-100	85-100	70-95	50-75	21-41	6-19
	4-14	Gravelly loam, clay loam, loam, silty clay loam	CL, SC	A-6	0	0-2	60-100	50-100	30-95	15-75	31-46	13-25
	14-20	Gravelly loam, loam, sandy loam	CL, SC, SC-SM	A-2, A-4, A-6	0	0-10	75-100	50-95	30-90	15-70	24-38	9-19
	20-41	Bedrock			---	---	---	---	---	---	---	---
	41-45	Bedrock			---	---	---	---	---	---	---	---
43A:												
Suches----------	0-11	Loam	CL, CL-ML	A-6, A-4	0	0	90-100	80-100	70-95	50-75	25-43	6-17
	11-43	Clay loam, sandy clay loam, loam	SC, CL	A-6, A-7	0	0	90-100	80-100	65-100	30-80	26-50	10-27
	43-61	Sandy loam, loam, sandy clay loam, fine sandy loam	CL, CL-ML, SC	A-4, A-6, A-7	0	0	90-100	80-100	40-85	12-55	20-45	4-25
44C:												
Sylco-----------	0-3	Channery silt loam	SC, CL, GC, GC-GM	A-4, A-6	0-5	0-25	60-90	50-75	45-75	35-70	26-39	9-17
	3-34	Very channery silt loam, very flaggy silty clay loam	GC, GC-GM, SC, SC-SM	A-2, A-4, A-6	0-8	10-40	35-70	30-65	25-65	20-60	24-44	9-25
	34-38	Bedrock			---	---	---	---	---	---	---	---
	38-48	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	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
44C:												
Sylvatus--------	0-1	Very channery silt loam	GC, GC-GM, SC	A-2, A-4, A-6	0	0	35-85	30-50	25-50	20-45	21-41	6-19
	1-15	Extremely channery clay loam, very channery silty clay loam, very channery silt loam	GC, GC-GM, GP-GC, SC	A-2, A-4, A-6, A-7	0-10	5-20	15-65	10-60	10-60	8-55	20-44	6-25
	15-19	Bedrock			---	---	---	---	---	---	---	---
	19-23	Bedrock			---	---	---	---	---	---	---	---
44D:												
Sylco-----------	0-3	Channery silt loam	SC, CL, GC, GC-GM	A-4, A-6	0-5	0-25	60-90	50-75	45-75	35-70	26-39	9-17
	3-34	Very channery silt loam, very flaggy silty clay loam	GC, GC-GM, SC, SC-SM	A-2, A-4, A-6	0-8	10-40	35-70	30-65	25-65	20-60	24-44	9-25
	34-38	Bedrock			---	---	---	---	---	---	---	---
	38-48	Bedrock			---	---	---	---	---	---	---	---
Sylvatus--------	0-1	Very channery silt loam	GC, GC-GM, SC	A-2, A-4, A-6	0	0	35-85	30-50	25-50	20-45	21-41	6-19
	1-15	Extremely channery clay loam, very channery silty clay loam, very channery silt loam	GC, GC-GM, GP-GC, SC	A-2, A-4, A-6, A-7	0-10	5-20	15-65	10-60	10-60	8-55	20-44	6-25
	15-19	Bedrock			---	---	---	---	---	---	---	---
	19-23	Bedrock			---	---	---	---	---	---	---	---
44E:												
Sylco-----------	0-3	Channery silt loam	SC, CL, GC, GC-GM	A-4, A-6	0-5	0-25	60-90	50-75	45-75	35-70	26-39	9-17
	3-34	Very channery silt loam, very flaggy silty clay loam	GC, GC-GM, SC, SC-SM	A-2, A-4, A-6	0-8	10-40	35-70	30-65	25-65	20-60	24-44	9-25
	34-38	Bedrock			---	---	---	---	---	---	---	---
	38-48	Bedrock			---	---	---	---	---	---	---	---
Sylvatus--------	0-1	Very channery silt loam	GC, GC-GM, SC	A-2, A-4, A-6	0	0	35-85	30-50	25-50	20-45	21-41	6-19
	1-15	Extremely channery clay loam, very channery silty clay loam, very channery silt loam	GC, GC-GM, GP-GC, SC	A-2, A-4, A-6, A-7	0-10	5-20	15-65	10-60	10-60	8-55	20-44	6-25
	15-19	Bedrock			---	---	---	---	---	---	---	---
	19-23	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	
45E:												
Sylvatus--------	0-1	Very channery silt loam	GC, GC-GM, SC	A-2, A-4, A-6	0	0	35-85	30-50	25-50	20-45	21-41	6-19
	1-15	Extremely channery clay loam, very channery silty clay loam, very channery silt loam	GC, GC-GM, GP-GC, SC	A-2, A-4, A-6, A-7	0-10	5-20	15-65	10-60	10-60	8-55	20-44	6-25
	15-19	Bedrock			---	---	---	---	---	---	---	---
	19-23	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
45F:												
Sylvatus--------	0-1	Very channery silt loam	GC, GC-GM, SC	A-2, A-4, A-6	0	0	35-85	30-50	25-50	20-45	21-41	6-19
	1-15	Extremely channery clay loam, very channery silty clay loam, very channery silt loam	GC, GC-GM, GP-GC, SC	A-2, A-4, A-6, A-7	0-10	5-20	15-65	10-60	10-60	8-55	20-44	6-25
	15-19	Bedrock			---	---	---	---	---	---	---	---
	19-23	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
46B:												
Thurmont--------	0-5	Loam	CL, SC-SM	A-4, A-6	0	0-3	80-100	80-100	70-96	50-75	21-39	6-17
	5-24	Clay loam, loam, gravelly sandy clay loam	CL, SC	A-2, A-6, A-7	0	0-5	70-100	50-100	40-100	30-80	27-44	12-25
	24-40	Sandy loam, sandy clay loam, gravelly sandy clay loam	SC-SM, SC	A-2, A-6	0	0-5	65-100	50-100	30-90	15-55	20-40	6-21
	40-62	Very cobbly loam, gravelly sandy clay loam, cobbly sandy loam	SC, SC-SM	A-1, A-2, A-4	0	0-70	70-100	50-100	30-100	15-80	20-32	6-13
46C:												
Thurmont--------	0-5	Loam	CL, SC-SM	A-4, A-6	0	0-3	80-100	80-100	70-96	50-75	21-39	6-17
	5-24	Clay loam, loam, gravelly sandy clay loam	CL, SC	A-2, A-6, A-7	0	0-5	70-100	50-100	40-100	30-80	27-44	12-25
	24-40	Sandy loam, sandy clay loam, gravelly sandy clay loam	SC-SM, SC	A-2, A-6	0	0-5	65-100	50-100	30-90	15-55	20-40	6-21
	40-62	Very cobbly loam, gravelly sandy clay loam, cobbly sandy loam	SC, SC-SM	A-1, A-2, A-4	0	0-70	70-100	50-100	30-100	15-80	20-32	6-13

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
46D:												
Thurmont--------	0-5	Loam	CL, SC-SM	A-4, A-6	0	0-3	80-100	80-100	70-96	50-75	21-39	6-17
	5-24	Clay loam, loam, gravelly sandy clay loam	CL, SC	A-2, A-6, A-7	0	0-5	70-100	50-100	40-100	30-80	27-44	12-25
	24-40	Sandy loam, sandy clay loam, gravelly sandy clay loam	SC-SM, SC	A-2, A-6	0	0-5	65-100	50-100	30-90	15-55	20-40	6-21
	40-62	Very cobbly loam, gravelly sandy clay loam, cobbly sandy loam	SC, SC-SM	A-1, A-2, A-4	0	0-70	70-100	50-100	30-100	15-80	20-32	6-13
47B:												
Thurmont--------	0-5	Loam	CL, SC-SM	A-4, A-6	0	0-3	80-100	80-100	70-96	50-75	21-39	6-17
	5-24	Clay loam, loam, gravelly sandy clay loam	CL, SC	A-2, A-6, A-7	0	0-5	70-100	50-100	40-100	30-80	27-44	12-25
	24-40	Sandy loam, sandy clay loam, gravelly sandy clay loam	SC-SM, SC	A-2, A-6	0	0-5	65-100	50-100	30-90	15-55	20-40	6-21
	40-62	Very cobbly loam, gravelly sandy clay loam, cobbly sandy loam	SC, SC-SM	A-1, A-2, A-4	0	0-70	70-100	50-100	30-100	15-80	20-32	6-13
47C:												
Thurmont--------	0-5	Loam	CL, SC-SM	A-4, A-6	0	0-3	80-100	80-100	70-96	50-75	21-39	6-17
	5-24	Clay loam, loam, gravelly sandy clay loam	CL, SC	A-2, A-6, A-7	0	0-5	70-100	50-100	40-100	30-80	27-44	12-25
	24-40	Sandy loam, sandy clay loam, gravelly sandy clay loam	SC-SM, SC	A-2, A-6	0	0-5	65-100	50-100	30-90	15-55	20-40	6-21
	40-62	Very cobbly loam, gravelly sandy clay loam, cobbly sandy loam	SC, SC-SM	A-1, A-2, A-4	0	0-70	70-100	50-100	30-100	15-80	20-32	6-13
47D:												
Thurmont--------	0-5	Loam	CL, SC-SM	A-4, A-6	0	0-3	80-100	80-100	70-96	50-75	21-39	6-17
	5-24	Clay loam, loam, gravelly sandy clay loam	CL, SC	A-2, A-6, A-7	0	0-5	70-100	50-100	40-100	30-80	27-44	12-25
	24-40	Sandy loam, sandy clay loam, gravelly sandy clay loam	SC-SM, SC	A-2, A-6	0	0-5	65-100	50-100	30-90	15-55	20-40	6-21
	40-62	Very cobbly loam, gravelly sandy clay loam, cobbly sandy loam	SC, SC-SM	A-1, A-2, A-4	0	0-70	70-100	50-100	30-100	15-80	20-32	6-13

Table 15.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
48. Udorthents												
49B: Unison----------	0-3	Loam	CL, CL-ML	A-4, A-6	0	0-25	90-100	80-100	70-95	50-75	22-41	6-17
	3-44	Silty clay loam, clay, gravelly silty clay, clay loam	CH, CL	A-6, A-7	0	0-25	70-100	50-100	50-100	40-95	39-67	21-44
	44-62	Silty clay, clay, very gravelly loam, cobbly clay loam, cobbly loam	CL, GC-GM	A-2, A-6, A-7	0	0-45	30-100	20-100	20-100	10-95	35-59	17-36
49C: Unison----------	0-3	Loam	CL, CL-ML	A-4, A-6	0	0-25	90-100	80-100	70-95	50-75	22-41	6-17
	3-44	Silty clay loam, clay, gravelly silty clay, clay loam	CH, CL	A-6, A-7	0	0-25	70-100	50-100	50-100	40-95	39-67	21-44
	44-62	Silty clay, clay, very gravelly loam, cobbly clay loam, cobbly loam	CL, GC-GM	A-2, A-6, A-7	0	0-45	30-100	20-100	20-100	10-95	35-59	17-36
49D: Unison----------	0-3	Loam	CL, CL-ML	A-4, A-6	0	0-25	90-100	80-100	70-95	50-75	22-41	6-17
	3-44	Silty clay loam, clay, gravelly silty clay, clay loam	CH, CL	A-6, A-7	0	0-25	70-100	50-100	50-100	40-95	39-67	21-44
	44-62	Silty clay, clay, very gravelly loam, cobbly clay loam, cobbly loam	CL, GC-GM	A-2, A-6, A-7	0	0-45	30-100	20-100	20-100	10-95	35-59	17-36
50B: Warminster------	0-8	Clay loam	CL	A-6, A-7	0	0	95-100	80-100	70-100	55-80	39-49	19-25
	8-38	Clay, silty clay, silty clay loam	CH, CL	A-7	0	0	95-100	80-100	75-100	70-95	43-67	25-44
	38-45	Clay, silty clay, gravelly silty clay loam	CH, CL, SC	A-7	0	0	90-98	50-97	50-97	40-95	43-67	25-44
	45-55	Clay loam, very gravelly silt loam, gravelly silty clay loam	CL, GC, SC	A-6	0	0-5	60-97	50-95	45-95	35-75	29-44	13-25
	55-59	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	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
50C:												
Warminster------	0-8	Clay loam	CL	A-6, A-7	0	0	95-100	80-100	70-100	55-80	39-49	19-25
	8-38	Clay, silty clay, silty clay loam	CH, CL	A-7	0	0	95-100	80-100	75-100	70-95	43-67	25-44
	38-45	Clay, silty clay, gravelly silty clay loam	CH, CL, SC	A-7	0	0	90-98	50-97	50-97	40-95	43-67	25-44
	45-55	Clay loam, very gravelly silt loam, gravelly silty clay loam	CL, GC, SC	A-6	0	0-5	60-97	50-95	45-95	35-75	29-44	13-25
	55-59	Bedrock			---	---	---	---	---	---	---	---
50D:												
Warminster------	0-8	Clay loam	CL	A-6, A-7	0	0	95-100	80-100	70-100	55-80	39-49	19-25
	8-38	Clay, silty clay, silty clay loam	CH, CL	A-7	0	0	95-100	80-100	75-100	70-95	43-67	25-44
	38-45	Clay, silty clay, gravelly silty clay loam	CH, CL, SC	A-7	0	0	90-98	50-97	50-97	40-95	43-67	25-44
	45-55	Clay loam, very gravelly silt loam, gravelly silty clay loam	CL, GC, SC	A-6	0	0-5	60-97	50-95	45-95	35-75	29-44	13-25
	55-59	Bedrock			---	---	---	---	---	---	---	---
51A:												
Wingina---------	0-23	Loam	SC-SM, CL, ML	A-7, A-4, A-6	0	0	95-100	75-100	60-95	40-75	22-45	6-18
	23-65	Loam, fine sandy loam, silt loam, sandy loam	SC, CL	A-7, A-4, A-6	0	0	95-100	75-100	60-95	45-70	26-41	9-19
	65-72	Loamy sand, sand, fine sandy loam, sandy loam	SP-SM, SC, SC-SM	A-2	0	0	95-100	75-100	55-90	10-30	17-35	2-13
52B:												
Wintergreen-----	0-7	Loam	CL, CL-ML, SC-SM	A-4, A-6	0	0-5	90-100	80-100	70-95	50-75	22-39	6-17
	7-62	Clay, gravelly clay, very cobbly sandy clay, clay loam	CH, CL, SC	A-2, A-7	0	0-45	70-100	50-100	40-100	20-95	43-63	25-40
52C:												
Wintergreen-----	0-7	Loam	CL, CL-ML, SC-SM	A-4, A-6	0	0-5	90-100	80-100	70-95	50-75	22-39	6-17
	7-62	Clay, gravelly clay, very cobbly sandy clay, clay loam	CH, CL, SC	A-2, A-7	0	0-45	70-100	50-100	40-100	20-95	43-63	25-40

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	
52D:												
Wintergreen-----	0-7	Loam	CL, CL-ML, SC-SM	A-4, A-6	0	0-5	90-100	80-100	70-95	50-75	22-39	6-17
	7-62	Clay, gravelly clay, very cobbly sandy clay, clay loam	CH, CL, SC	A-2, A-7	0	0-45	70-100	50-100	40-100	20-95	43-63	25-40
53B:												
Wintergreen-----	0-7	Clay loam	CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-80	36-50	18-28
	7-62	Clay, gravelly clay, very cobbly sandy clay, clay loam	CH, CL, SC	A-2, A-7	0	0-45	70-100	50-100	40-100	20-95	43-63	25-40
53C:												
Wintergreen-----	0-7	Clay loam	CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-80	36-50	18-28
	7-62	Clay, gravelly clay, very cobbly sandy clay, clay loam	CL, SC, CH	A-2, A-7	0	0-45	70-100	50-100	40-100	20-95	43-63	25-40
53D:												
Wintergreen-----	0-7	Clay loam	CL	A-6, A-7	0	0-5	90-100	80-100	70-100	55-80	36-50	18-28
	7-62	Clay, gravelly clay, very cobbly sandy clay, clay loam	CH, CL, SC	A-2, A-7	0	0-45	70-100	50-100	40-100	20-95	43-63	25-40
54C:												
Wintergreen-----	0-7	Loam	CL, CL-ML, SC-SM	A-4, A-6	0	0-5	90-100	80-100	70-95	50-75	22-39	6-17
	7-62	Clay, gravelly clay, very cobbly sandy clay, clay loam	CH, CL, SC	A-2, A-7	0	0-45	70-100	50-100	40-100	20-95	43-63	25-40
55A:												
Yogaville-------	0-20	Loam	CL, CL-ML, ML	A-4, A-6	0	0	85-100	80-100	65-95	45-75	22-45	6-18
	20-72	Clay loam, loam, silt loam	CL	A-7, A-6	0	0	85-100	80-100	65-100	45-80	28-47	12-24
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	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	g/cc	um/sec	In/in	Pct	Pct					
1D:												
Arcola---------------	0-6	15-27	1.20-1.50	4.00-14.00	0.10-0.14	0.0-2.9	0.5-2.0	.24	.37	2	6	38
	6-34	18-35	1.30-1.50	4.00-14.00	0.08-0.18	0.0-2.9	0.0-0.5	.24	.28			
	34-58	---	---	0.42-1.40	---	---	---	---	---			
	58-62	---	---	0.00-1.40	---	---	---	---	---			
1E:												
Arcola---------------	0-6	15-27	1.20-1.50	4.00-14.00	0.10-0.14	0.0-2.9	0.5-2.0	.24	.37	2	6	38
	6-34	18-35	1.30-1.50	4.00-14.00	0.08-0.18	0.0-2.9	0.0-0.5	.24	.28			
	34-58	---	---	0.42-1.40	---	---	---	---	---			
	58-62	---	---	0.00-1.40	---	---	---	---	---			
2A:												
Batteau--------------	0-13	7-27	1.20-1.50	4.00-14.00	0.14-0.22	0.0-2.9	1.0-4.0	.32	.32	5	5	56
	13-72	7-35	1.20-1.50	4.00-14.00	0.10-0.19	0.0-2.9	0.0-2.0	.28	.28			
3B:												
Belvoir--------------	0-4	7-18	1.30-1.60	4.00-42.00	0.10-0.14	0.0-2.9	0.5-2.0	.24	.24	4	3	86
	4-25	20-35	1.35-1.65	4.00-14.00	0.13-0.18	3.0-5.9	0.0-0.5	.37	.37			
	25-40	15-30	1.70-1.90	0.42-1.40	0.07-0.11	0.0-2.9	0.0-0.5	.28	.28			
	40-63	10-50	1.25-1.55	0.01-14.00	0.10-0.15	3.0-5.9	0.0-0.5	.28	.28			
4B:												
Buffstat-------------	0-4	10-27	1.25-1.55	4.00-14.00	0.14-0.20	0.0-2.9	1.0-2.0	.37	.37	4	5	56
	4-42	35-50	1.30-1.60	4.00-14.00	0.12-0.19	3.0-5.9	0.0-0.5	.28	.32			
	42-58	---	---	0.01-0.42	---	---	---	---	---			
	58-62	---	---	0.01-0.42	---	---	---	---	---			
4C:												
Buffstat-------------	0-4	10-27	1.25-1.55	4.00-14.00	0.14-0.20	0.0-2.9	1.0-2.0	.37	.37	4	5	56
	4-42	35-50	1.30-1.60	4.00-14.00	0.12-0.19	3.0-5.9	0.0-0.5	.28	.32			
	42-58	---	---	0.01-0.42	---	---	---	---	---			
	58-62	---	---	0.01-0.42	---	---	---	---	---			
4D:												
Buffstat-------------	0-4	10-27	1.25-1.55	4.00-14.00	0.14-0.20	0.0-2.9	1.0-2.0	.37	.37	4	5	56
	4-42	35-50	1.30-1.60	4.00-14.00	0.12-0.19	3.0-5.9	0.0-0.5	.28	.32			
	42-58	---	---	0.01-0.42	---	---	---	---	---			
	58-62	---	---	0.01-0.42	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
5C:												
Bugley---------------	0-3	7-27	1.25-1.55	14.00-42.00	0.10-0.16	0.0-2.9	0.5-2.0	.20	.24	1	5	48
	3-13	10-35	1.35-1.65	14.00-42.00	0.07-0.14	0.0-2.9	0.0-0.5	.28	.37			
	13-18	---	---	0.00-14.00	---	---	---	---	---			
	18-22	---	---	0.00-0.07	---	---	---	---	---			
5D:												
Bugley---------------	0-3	7-27	1.25-1.55	14.00-42.00	0.10-0.16	0.0-2.9	0.5-2.0	.20	.24	1	5	48
	3-13	10-35	1.35-1.65	14.00-42.00	0.07-0.14	0.0-2.9	0.0-0.5	.28	.37			
	13-18	---	---	0.00-14.00	---	---	---	---	---			
	18-22	---	---	0.00-0.07	---	---	---	---	---			
5E:												
Bugley---------------	0-3	7-27	1.25-1.55	14.00-42.00	0.10-0.16	0.0-2.9	0.5-2.0	.20	.24	1	5	48
	3-13	10-35	1.35-1.65	14.00-42.00	0.07-0.14	0.0-2.9	0.0-0.5	.28	.37			
	13-18	---	---	0.00-14.00	---	---	---	---	---			
	18-22	---	---	0.00-0.07	---	---	---	---	---			
6E:												
Catoctin-------------	0-5	5-20	1.20-1.50	14.00-42.00	0.08-0.14	0.0-2.9	0.5-2.0	.20	.32	2	5	48
	5-28	10-35	1.20-1.50	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.17	.24			
	28-36	10-25	1.20-1.50	14.00-42.00	0.04-0.15	0.0-2.9	0.0-0.5	.17	.28			
	36-40	---	---	0.00-0.07	---	---	---	---	---			
Rock outcrop.												
7B:												
Chatuge--------------	0-9	10-25	1.40-1.70	4.00-14.00	0.12-0.20	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	9-41	20-35	1.40-1.65	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.32	.32			
	41-62	2-10	1.55-1.75	42.00-141.00	0.03-0.08	0.0-2.9	0.0-0.5	.28	.28			
8A:												
Codorus--------------	0-3	15-25	1.20-1.40	4.00-14.00	0.14-0.20	0.0-2.9	2.0-4.0	.37	.37	5	6	48
	3-50	18-35	1.20-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.37	.37			
	50-72	5-12	1.20-1.50	14.00-141.00	0.04-0.08	0.0-2.9	0.0-0.5	.24	.28			
9B:												
Colleen--------------	0-9	10-27	1.35-1.45	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.37	5	5	48
	9-50	35-60	1.45-1.55	0.42-1.40	0.10-0.15	3.0-5.9	0.0-0.5	.32	.37			
	50-72	10-35	1.45-1.55	1.40-4.00	0.10-0.15	3.0-5.9	0.0-0.5	.28	.32			
9C:												
Colleen--------------	0-9	10-27	1.35-1.45	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.37	5	5	48
	9-50	35-60	1.45-1.55	0.42-1.40	0.10-0.15	3.0-5.9	0.0-0.5	.32	.37			
	50-72	10-35	1.45-1.55	1.40-4.00	0.10-0.15	3.0-5.9	0.0-0.5	.28	.32			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
9D:												
Colleen--------------	0-9	10-27	1.35-1.45	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.37	5	5	48
	9-50	35-60	1.45-1.55	0.42-1.40	0.10-0.15	3.0-5.9	0.0-0.5	.32	.37			
	50-72	10-35	1.45-1.55	1.40-4.00	0.10-0.15	3.0-5.9	0.0-0.5	.28	.32			
10A:												
Colvard--------------	0-5	8-18	1.45-1.65	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.15	.24	5	3	86
	5-56	8-18	1.45-1.65	14.00-42.00	0.09-0.12	0.0-2.9	0.5-1.0	.10	.10			
	56-62	1-12	1.60-1.75	42.00-141.00	0.06-0.10	0.0-2.9	0.0-0.2	.10	.15			
11A:												
Craigsville----------	0-6	5-15	1.20-1.40	14.00-141.00	0.06-0.12	0.0-2.9	1.0-3.0	.10	.24	3	5	38
	6-21	5-15	1.30-1.60	14.00-141.00	0.06-0.15	0.0-2.9	0.5-1.0	.17	.28			
	21-64	5-10	1.35-1.55	42.00-141.00	0.04-0.09	0.0-2.9	0.0-0.5	.17	.28			
12B:												
Delanco--------------	0-5	5-20	1.10-1.30	4.00-14.00	0.15-0.19	0.0-2.9	2.0-4.0	.24	.24	5	5	56
	5-45	18-30	1.40-1.60	1.40-4.00	0.18-0.22	3.0-5.9	0.0-0.5	.32	.32			
	45-65	5-25	1.50-1.70	4.00-14.00	0.10-0.22	0.0-2.9	0.0-0.5	.28	.32			
12C:												
Delanco--------------	0-5	5-20	1.10-1.30	4.00-14.00	0.15-0.19	0.0-2.9	2.0-4.0	.24	.24	5	5	56
	5-45	18-30	1.40-1.60	1.40-4.00	0.18-0.22	3.0-5.9	0.0-0.5	.32	.32			
	45-65	5-25	1.50-1.70	4.00-14.00	0.10-0.22	0.0-2.9	0.0-0.5	.28	.32			
13C:												
Edneytown------------	0-7	5-15	1.40-1.60	14.00-42.00	0.11-0.17	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	7-34	17-35	1.30-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.24	.24			
	34-67	4-15	1.30-1.50	14.00-42.00	0.06-0.12	0.0-2.9	0.0-0.5	.17	.17			
13D:												
Edneytown------------	0-7	5-15	1.40-1.60	14.00-42.00	0.11-0.17	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	7-34	17-35	1.30-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.24	.24			
	34-67	4-15	1.30-1.50	14.00-42.00	0.06-0.12	0.0-2.9	0.0-0.5	.17	.17			
13E:												
Edneytown------------	0-7	5-15	1.40-1.60	14.00-42.00	0.11-0.17	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	7-34	17-35	1.30-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.24	.24			
	34-67	4-15	1.30-1.50	14.00-42.00	0.06-0.12	0.0-2.9	0.0-0.5	.17	.17			
14C:												
Edneytown------------	0-7	5-15	1.40-1.60	14.00-42.00	0.11-0.17	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	7-34	17-35	1.30-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.24	.24			
	34-67	4-15	1.30-1.50	14.00-42.00	0.06-0.12	0.0-2.9	0.0-0.5	.17	.17			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
14C:												
Peaks----------------	0-2	4-16	1.20-1.40	42.00-141.00	0.08-0.12	0.0-2.9	1.0-3.0	.15	.24	2	5	38
	2-25	5-18	1.20-1.40	42.00-141.00	0.06-0.10	0.0-2.9	0.5-1.5	.10	.17			
	25-36	---	---	0.00-14.00	---	---	---	---	---			
	36-40	---	---	0.00-0.07	---	---	---	---	---			
14D:												
Edneytown------------	0-7	5-15	1.40-1.60	14.00-42.00	0.11-0.17	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	7-34	17-35	1.30-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.24	.24			
	34-67	4-15	1.30-1.50	14.00-42.00	0.06-0.12	0.0-2.9	0.0-0.5	.17	.17			
Peaks----------------	0-2	4-16	1.20-1.40	42.00-141.00	0.08-0.12	0.0-2.9	1.0-3.0	.15	.24	2	5	38
	2-25	5-18	1.20-1.40	42.00-141.00	0.06-0.10	0.0-2.9	0.5-1.5	.10	.17			
	25-36	---	---	0.00-14.00	---	---	---	---	---			
	36-40	---	---	0.00-0.07	---	---	---	---	---			
14E:												
Edneytown------------	0-7	5-15	1.40-1.60	14.00-42.00	0.11-0.17	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	7-34	17-35	1.30-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.24	.24			
	34-67	4-15	1.30-1.50	14.00-42.00	0.06-0.12	0.0-2.9	0.0-0.5	.17	.17			
Peaks----------------	0-2	4-16	1.20-1.40	42.00-141.00	0.08-0.12	0.0-2.9	1.0-3.0	.15	.24	2	5	38
	2-25	5-18	1.20-1.40	42.00-141.00	0.06-0.10	0.0-2.9	0.5-1.5	.10	.17			
	25-36	---	---	0.00-14.00	---	---	---	---	---			
	36-40	---	---	0.00-0.07	---	---	---	---	---			
14F:												
Edneytown------------	0-7	5-15	1.40-1.60	14.00-42.00	0.11-0.17	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	7-34	17-35	1.30-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.24	.24			
	34-67	4-15	1.30-1.50	14.00-42.00	0.06-0.12	0.0-2.9	0.0-0.5	.17	.17			
Peaks----------------	0-2	4-16	1.20-1.40	42.00-141.00	0.08-0.12	0.0-2.9	1.0-3.0	.15	.24	2	5	38
	2-25	5-18	1.20-1.40	42.00-141.00	0.06-0.10	0.0-2.9	0.5-1.5	.10	.17			
	25-36	---	---	0.00-14.00	---	---	---	---	---			
	36-40	---	---	0.00-0.07	---	---	---	---	---			
15B:												
Elioak---------------	0-8	15-27	1.25-1.40	4.00-14.00	0.12-0.24	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	8-40	30-60	1.30-1.60	1.40-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.37	.37			
	40-62	15-27	1.25-1.40	4.00-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.49	.55			
15C:												
Elioak---------------	0-8	15-27	1.25-1.40	4.00-14.00	0.12-0.24	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	8-40	30-60	1.30-1.60	1.40-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.37	.37			
	40-62	15-27	1.25-1.40	4.00-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.49	.55			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
15D:												
Elioak---------------	0-8	15-27	1.25-1.40	4.00-14.00	0.12-0.24	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	8-40	30-60	1.30-1.60	1.40-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.37	.37			
	40-62	15-27	1.25-1.40	4.00-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.49	.55			
16C:												
Elioak---------------	0-6	28-42	1.30-1.50	1.40-14.00	0.08-0.12	3.0-5.9	1.0-3.0	.28	.28	5	4	86
	6-40	30-60	1.30-1.60	1.40-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.37	.37			
	40-62	15-27	1.25-1.40	4.00-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.49	.55			
16D:												
Elioak---------------	0-6	28-42	1.30-1.50	1.40-14.00	0.08-0.12	3.0-5.9	1.0-3.0	.28	.28	5	4	86
	6-40	30-60	1.30-1.60	1.40-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.37	.37			
	40-62	15-27	1.25-1.40	4.00-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.49	.55			
17B:												
Elsinboro------------	0-11	8-18	1.25-1.40	4.00-14.00	0.10-0.18	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	11-38	18-34	1.30-1.50	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	38-72	8-34	1.35-1.55	4.00-42.00	0.06-0.14	0.0-2.9	0.0-0.5	.17	.20			
18C:												
Fauquier-------------	0-6	10-25	1.25-1.55	4.00-42.00	0.15-0.21	0.0-2.9	1.0-3.0	.28	.32	3	5	56
	6-40	35-60	1.35-1.65	4.00-14.00	0.12-0.18	3.0-5.9	0.5-1.0	.28	.28			
	40-50	---	---	0.01-0.42	---	---	---	---	---			
	50-54	---	---	0.00-0.07	---	---	---	---	---			
18D:												
Fauquier-------------	0-6	10-25	1.25-1.55	4.00-42.00	0.15-0.21	0.0-2.9	1.0-3.0	.28	.32	3	5	56
	6-40	35-60	1.35-1.65	4.00-14.00	0.12-0.18	3.0-5.9	0.5-1.0	.28	.28			
	40-50	---	---	0.01-0.42	---	---	---	---	---			
	50-54	---	---	0.00-0.07	---	---	---	---	---			
18E:												
Fauquier-------------	0-6	10-25	1.25-1.55	4.00-42.00	0.15-0.21	0.0-2.9	1.0-3.0	.28	.32	3	5	56
	6-40	35-60	1.35-1.65	4.00-14.00	0.12-0.18	3.0-5.9	0.5-1.0	.28	.28			
	40-50	---	---	0.01-0.42	---	---	---	---	---			
	50-54	---	---	0.00-0.07	---	---	---	---	---			
19A:												
Galtsmill------------	0-15	5-18	1.20-1.50	14.00-42.00	0.12-0.20	0.0-2.9	1.0-5.0	.17	.17	5	3	86
	15-72	5-18	1.20-1.50	14.00-42.00	0.12-0.20	0.0-2.9	0.5-2.0	.28	.28			
20D:												
Glenelg--------------	0-9	15-25	1.10-1.40	4.00-14.00	0.14-0.24	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	9-27	20-32	1.20-1.60	4.00-14.00	0.14-0.20	0.0-2.9	0.0-0.5	.43	.49			
	27-65	5-20	1.20-1.40	4.00-14.00	0.10-0.20	0.0-2.9	0.0-0.5	.49	.55			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
21A:												
Hatboro--------------	0-12	10-20	1.20-1.40	4.00-14.00	0.16-0.22	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	12-50	15-35	1.20-1.40	4.00-14.00	0.16-0.20	0.0-2.9	0.0-0.5	.20	.20			
	50-72	10-35	1.20-1.50	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.20	.20			
22B:												
Hayesville-----------	0-6	10-25	1.35-1.60	14.00-42.00	0.12-0.20	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	6-40	30-50	1.20-1.35	4.00-14.00	0.15-0.20	0.0-2.9	0.5-1.0	.24	.24			
	40-57	20-40	1.30-1.40	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.20	.20			
	57-62	5-25	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.17	.17			
22C:												
Hayesville-----------	0-6	10-25	1.35-1.60	14.00-42.00	0.12-0.20	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	6-40	30-50	1.20-1.35	4.00-14.00	0.15-0.20	0.0-2.9	0.5-1.0	.24	.24			
	40-57	20-40	1.30-1.40	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.20	.20			
	57-62	5-25	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.17	.17			
22D:												
Hayesville-----------	0-6	10-25	1.35-1.60	14.00-42.00	0.12-0.20	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	6-40	30-50	1.20-1.35	4.00-14.00	0.15-0.20	0.0-2.9	0.5-1.0	.24	.24			
	40-57	20-40	1.30-1.40	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.20	.20			
	57-62	5-25	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.17	.17			
22E:												
Hayesville-----------	0-6	10-25	1.35-1.60	14.00-42.00	0.12-0.20	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	6-40	30-50	1.20-1.35	4.00-14.00	0.15-0.20	0.0-2.9	0.5-1.0	.24	.24			
	40-57	20-40	1.30-1.40	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.20	.20			
	57-62	5-25	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.17	.17			
23B:												
Hayesville-----------	0-6	20-40	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	1.0-3.0	.24	.24	5	6	48
	6-40	30-50	1.20-1.35	4.00-14.00	0.15-0.20	0.0-2.9	0.5-1.0	.24	.24			
	40-57	20-40	1.30-1.40	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.20	.20			
	57-62	5-25	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.17	.17			
23C:												
Hayesville-----------	0-6	20-40	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	1.0-3.0	.24	.24	5	6	48
	6-40	30-50	1.20-1.35	4.00-14.00	0.15-0.20	0.0-2.9	0.5-1.0	.24	.24			
	40-57	20-40	1.30-1.40	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.20	.20			
	57-62	5-25	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.17	.17			
23D:												
Hayesville-----------	0-6	20-40	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	1.0-3.0	.24	.24	5	6	48
	6-40	30-50	1.20-1.35	4.00-14.00	0.15-0.20	0.0-2.9	0.5-1.0	.24	.24			
	40-57	20-40	1.30-1.40	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.20	.20			
	57-62	5-25	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.17	.17			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
23E:												
Hayesville-----------	0-6	20-40	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	1.0-3.0	.24	.24	5	6	48
	6-40	30-50	1.20-1.35	4.00-14.00	0.15-0.20	0.0-2.9	0.5-1.0	.24	.24			
	40-57	20-40	1.30-1.40	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.20	.20			
	57-62	5-25	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.17	.17			
24C:												
Hayesville-----------	0-6	10-25	1.35-1.60	14.00-42.00	0.12-0.20	0.0-2.9	1.0-3.0	.20	.20	4	5	56
	6-40	30-50	1.20-1.35	4.00-14.00	0.15-0.20	0.0-2.9	0.5-1.0	.24	.24			
	40-57	20-40	1.30-1.40	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.20	.20			
	57-62	5-25	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.17	.17			
24D:												
Hayesville-----------	0-6	10-25	1.35-1.60	14.00-42.00	0.12-0.20	0.0-2.9	1.0-3.0	.20	.20	4	5	56
	6-40	30-50	1.20-1.35	4.00-14.00	0.15-0.20	0.0-2.9	0.5-1.0	.24	.24			
	40-57	20-40	1.30-1.40	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.20	.20			
	57-62	5-25	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.17	.17			
24E:												
Hayesville-----------	0-6	10-25	1.35-1.60	14.00-42.00	0.12-0.20	0.0-2.9	1.0-3.0	.20	.20	4	5	56
	6-40	30-50	1.20-1.35	4.00-14.00	0.15-0.20	0.0-2.9	0.5-1.0	.24	.24			
	40-57	20-40	1.30-1.40	4.00-14.00	0.12-0.20	0.0-2.9	0.0-0.5	.20	.20			
	57-62	5-25	1.45-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.17	.17			
25C:												
Hazel----------------	0-5	5-20	1.20-1.50	14.00-42.00	0.12-0.16	0.0-2.9	0.5-2.0	.24	.32	2	5	48
	5-19	10-18	1.20-1.50	14.00-42.00	0.08-0.18	0.0-2.9	0.0-0.5	.24	.28			
	19-31	10-18	1.30-1.55	14.00-42.00	0.08-0.14	0.0-2.9	0.0-0.5	.24	.32			
	31-35	---	---	1.40-42.00	---	---	---	---	---			
25D:												
Hazel----------------	0-5	5-20	1.20-1.50	14.00-42.00	0.12-0.16	0.0-2.9	0.5-2.0	.24	.32	2	5	48
	5-19	10-18	1.20-1.50	14.00-42.00	0.08-0.18	0.0-2.9	0.0-0.5	.24	.28			
	19-31	10-18	1.30-1.55	14.00-42.00	0.08-0.14	0.0-2.9	0.0-0.5	.24	.32			
	31-35	---	---	1.40-42.00	---	---	---	---	---			
25E:												
Hazel----------------	0-5	5-20	1.20-1.50	14.00-42.00	0.12-0.16	0.0-2.9	0.5-2.0	.24	.32	2	5	48
	5-19	10-18	1.20-1.50	14.00-42.00	0.08-0.18	0.0-2.9	0.0-0.5	.24	.28			
	19-31	10-18	1.30-1.55	14.00-42.00	0.08-0.14	0.0-2.9	0.0-0.5	.24	.32			
	31-35	---	---	1.40-42.00	---	---	---	---	---			
26D:												
Hazel----------------	0-5	5-18	1.20-1.50	14.00-42.00	0.11-0.16	0.0-2.9	0.5-2.0	.24	.32	2	5	56
	5-19	10-18	1.20-1.50	14.00-42.00	0.08-0.18	0.0-2.9	0.0-0.5	.24	.28			
	19-31	10-18	1.30-1.55	14.00-42.00	0.08-0.14	0.0-2.9	0.0-0.5	.24	.32			
	31-35	---	---	1.40-42.00	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
26E:												
Hazel----------------	0-5	5-18	1.20-1.50	14.00-42.00	0.11-0.16	0.0-2.9	0.5-2.0	.24	.32	2	5	56
	5-19	10-18	1.20-1.50	14.00-42.00	0.08-0.18	0.0-2.9	0.0-0.5	.24	.28			
	19-31	10-18	1.30-1.55	14.00-42.00	0.08-0.14	0.0-2.9	0.0-0.5	.24	.32			
	31-35	---	---	1.40-42.00	---	---	---	---	---			
27B:												
Jackland-------------	0-9	15-27	1.00-1.30	4.00-14.00	0.16-0.22	0.0-2.9	0.5-2.0	.24	.32	3	6	38
	9-30	40-60	1.20-1.50	0.01-0.42	0.08-0.12	9.0-25.0	0.0-0.5	.10	.10			
	30-61	10-40	1.30-1.60	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.15	.15			
27C:												
Jackland-------------	0-9	15-27	1.00-1.30	4.00-14.00	0.16-0.22	0.0-2.9	0.5-2.0	.24	.32	3	6	38
	9-30	40-60	1.20-1.50	0.01-0.42	0.08-0.12	9.0-25.0	0.0-0.5	.10	.10			
	30-61	10-40	1.30-1.60	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.15	.15			
28B:												
Lew------------------	0-8	10-25	1.00-1.20	4.00-42.00	0.17-0.20	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	8-62	28-35	1.20-1.50	4.00-14.00	0.11-0.16	3.0-5.9	0.0-0.5	.15	.24			
29B:												
Lew------------------	0-8	10-25	1.00-1.20	4.00-42.00	0.17-0.20	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	8-62	28-35	1.20-1.50	4.00-14.00	0.11-0.16	3.0-5.9	0.0-0.5	.15	.24			
30C:												
Lew------------------	0-8	10-25	1.00-1.20	4.00-42.00	0.08-0.12	0.0-2.9	0.5-2.0	.10	.37	4	5	48
	8-62	28-35	1.20-1.50	4.00-14.00	0.11-0.16	3.0-5.9	0.0-0.5	.15	.24			
30D:												
Lew------------------	0-8	10-25	1.00-1.20	4.00-42.00	0.08-0.12	0.0-2.9	0.5-2.0	.10	.37	4	5	48
	8-62	28-35	1.20-1.50	4.00-14.00	0.11-0.16	3.0-5.9	0.0-0.5	.15	.24			
30E:												
Lew------------------	0-8	10-25	1.00-1.20	4.00-42.00	0.08-0.12	0.0-2.9	0.5-2.0	.10	.37	4	5	48
	8-62	28-35	1.20-1.50	4.00-14.00	0.11-0.16	3.0-5.9	0.0-0.5	.15	.24			
31B:												
Littlejoe------------	0-8	12-27	1.10-1.40	4.00-14.00	0.16-0.20	0.0-2.9	0.5-2.0	.37	.37	4	5	56
	8-41	35-60	1.40-1.60	1.40-14.00	0.10-0.19	3.0-5.9	0.0-0.5	.28	.28			
	41-65	---	---	0.00-14.00	---	---	0.0-0.0	---	---			
31C:												
Littlejoe------------	0-8	12-27	1.10-1.40	4.00-14.00	0.16-0.20	0.0-2.9	0.5-2.0	.37	.37	4	5	56
	8-41	35-60	1.40-1.60	1.40-14.00	0.10-0.19	3.0-5.9	0.0-0.5	.28	.28			
	41-65	---	---	0.00-14.00	---	---	0.0-0.0	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
32B:												
Minnieville----------	0-12	10-27	1.25-1.35	4.00-14.00	0.18-0.22	0.0-2.9	1.0-2.0	.37	.37	5	5	56
	12-49	35-70	1.25-1.45	4.00-14.00	0.10-0.14	3.0-5.9	0.0-0.5	.24	.24			
	49-72	30-70	1.25-1.45	4.00-14.00	0.10-0.12	3.0-5.9	0.0-0.5	.24	.24			
32C:												
Minnieville----------	0-12	10-27	1.25-1.35	4.00-14.00	0.18-0.22	0.0-2.9	1.0-2.0	.37	.37	5	5	56
	12-49	35-70	1.25-1.45	4.00-14.00	0.10-0.14	3.0-5.9	0.0-0.5	.24	.24			
	49-72	30-70	1.25-1.45	4.00-14.00	0.10-0.12	3.0-5.9	0.0-0.5	.24	.24			
32D:												
Minnieville----------	0-12	10-27	1.25-1.35	4.00-14.00	0.18-0.22	0.0-2.9	1.0-2.0	.37	.37	5	5	56
	12-49	35-70	1.25-1.45	4.00-14.00	0.10-0.14	3.0-5.9	0.0-0.5	.24	.24			
	49-72	30-70	1.25-1.45	4.00-14.00	0.10-0.12	3.0-5.9	0.0-0.5	.24	.24			
32E:												
Minnieville----------	0-12	10-27	1.25-1.35	4.00-14.00	0.18-0.22	0.0-2.9	1.0-2.0	.37	.37	5	5	56
	12-49	35-70	1.25-1.45	4.00-14.00	0.10-0.14	3.0-5.9	0.0-0.5	.24	.24			
	49-72	30-70	1.25-1.45	4.00-14.00	0.10-0.12	3.0-5.9	0.0-0.5	.24	.24			
33C:												
Myersville-----------	0-11	5-20	1.20-1.50	14.00-42.00	0.11-0.16	0.0-2.9	0.5-2.0	.28	.37	4	5	48
	11-40	18-35	1.20-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.32	.37			
	40-47	10-32	1.20-1.50	4.00-14.00	0.08-0.16	0.0-2.9	0.0-0.5	.32	.43			
	47-62	---	---	0.00-14.00	---	---	---	---	---			
Catoctin-------------	0-5	5-20	1.20-1.50	14.00-42.00	0.08-0.14	0.0-2.9	0.5-2.0	.20	.32	2	5	48
	5-28	10-35	1.20-1.50	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.17	.24			
	28-36	10-25	1.20-1.50	14.00-42.00	0.04-0.15	0.0-2.9	0.0-0.5	.17	.28			
	36-40	---	---	0.00-0.07	---	---	---	---	---			
33D:												
Myersville-----------	0-11	5-20	1.20-1.50	14.00-42.00	0.11-0.16	0.0-2.9	0.5-2.0	.28	.37	4	5	48
	11-40	18-35	1.20-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.32	.37			
	40-47	10-32	1.20-1.50	4.00-14.00	0.08-0.16	0.0-2.9	0.0-0.5	.32	.43			
	47-62	---	---	0.00-14.00	---	---	---	---	---			
Catoctin-------------	0-5	5-20	1.20-1.50	14.00-42.00	0.08-0.14	0.0-2.9	0.5-2.0	.20	.32	2	5	48
	5-28	10-35	1.20-1.50	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.17	.24			
	28-36	10-25	1.20-1.50	14.00-42.00	0.04-0.15	0.0-2.9	0.0-0.5	.17	.28			
	36-40	---	---	0.00-0.07	---	---	---	---	---			
33E:												
Myersville-----------	0-11	5-20	1.20-1.50	14.00-42.00	0.11-0.16	0.0-2.9	0.5-2.0	.28	.37	4	5	48
	11-40	18-35	1.20-1.50	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.32	.37			
	40-47	10-32	1.20-1.50	4.00-14.00	0.08-0.16	0.0-2.9	0.0-0.5	.32	.43			
	47-62	---	---	0.00-14.00	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
33E:												
Catoctin-------------	0-5	5-20	1.20-1.50	14.00-42.00	0.08-0.14	0.0-2.9	0.5-2.0	.20	.32	2	5	48
	5-28	10-35	1.20-1.50	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.17	.24			
	28-36	10-25	1.20-1.50	14.00-42.00	0.04-0.15	0.0-2.9	0.0-0.5	.17	.28			
	36-40	---	---	0.00-0.07	---	---	---	---	---			
34C:												
Occoquan-------------	0-4	7-27	1.10-1.40	4.00-14.00	0.18-0.22	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	4-13	18-35	1.30-1.60	4.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.32	.32			
	13-41	5-27	1.20-1.50	14.00-42.00	0.07-0.10	0.0-2.9	0.0-0.5	.24	.28			
	41-60	---	---	0.01-0.42	---	---	---	---	---			
34D:												
Occoquan-------------	0-4	7-27	1.10-1.40	4.00-14.00	0.18-0.22	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	4-13	18-35	1.30-1.60	4.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.32	.32			
	13-41	5-27	1.20-1.50	14.00-42.00	0.07-0.10	0.0-2.9	0.0-0.5	.24	.28			
	41-60	---	---	0.01-0.42	---	---	---	---	---			
34E:												
Occoquan-------------	0-4	7-27	1.10-1.40	4.00-14.00	0.18-0.22	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	4-13	18-35	1.30-1.60	4.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.32	.32			
	13-41	5-27	1.20-1.50	14.00-42.00	0.07-0.10	0.0-2.9	0.0-0.5	.24	.28			
	41-60	---	---	0.01-0.42	---	---	---	---	---			
35D:												
Occoquan-------------	0-4	7-27	1.10-1.40	4.00-14.00	0.18-0.22	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	4-13	18-35	1.30-1.60	4.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.32	.32			
	13-41	5-27	1.20-1.50	14.00-42.00	0.07-0.10	0.0-2.9	0.0-0.5	.24	.28			
	41-60	---	---	0.01-0.42	---	---	---	---	---			
35E:												
Occoquan-------------	0-4	7-27	1.10-1.40	4.00-14.00	0.18-0.22	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	4-13	18-35	1.30-1.60	4.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.32	.32			
	13-41	5-27	1.20-1.50	14.00-42.00	0.07-0.10	0.0-2.9	0.0-0.5	.24	.28			
	41-60	---	---	0.01-0.42	---	---	---	---	---			
36D:												
Peaks----------------	0-2	4-16	1.20-1.40	42.00-141.00	0.08-0.12	0.0-2.9	1.0-3.0	.15	.24	2	5	38
	2-25	5-18	1.20-1.40	42.00-141.00	0.06-0.10	0.0-2.9	0.5-1.5	.10	.17			
	25-36	---	---	0.00-14.00	---	---	---	---	---			
	36-40	---	---	0.00-0.07	---	---	---	---	---			
Rock outcrop.												

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
36E:												
Peaks----------------	0-2	4-16	1.20-1.40	42.00-141.00	0.08-0.12	0.0-2.9	1.0-3.0	.15	.24	2	5	38
	2-25	5-18	1.20-1.40	42.00-141.00	0.06-0.10	0.0-2.9	0.5-1.5	.10	.17			
	25-36	---	---	0.00-14.00	---	---	---	---	---			
	36-40	---	---	0.00-0.07	---	---	---	---	---			
Rock outcrop.												
36F:												
Peaks----------------	0-2	4-16	1.20-1.40	42.00-141.00	0.08-0.12	0.0-2.9	1.0-3.0	.15	.24	2	5	38
	2-25	5-18	1.20-1.40	42.00-141.00	0.06-0.10	0.0-2.9	0.5-1.5	.10	.17			
	25-36	---	---	0.00-14.00	---	---	---	---	---			
	36-40	---	---	0.00-0.07	---	---	---	---	---			
Rock outcrop.												
37A:												
Pineywoods-----------	0-6	10-27	1.35-1.45	4.00-14.00	0.15-0.22	0.0-2.9	2.0-4.0	.37	.37	4	5	56
	6-22	35-60	1.45-1.55	0.42-1.40	0.10-0.15	3.0-5.9	0.0-0.5	.32	.32			
	22-41	10-35	1.45-1.55	1.40-4.00	0.10-0.15	3.0-5.9	0.0-0.5	.28	.32			
	41-62	---	---	0.00-14.00	---	---	---	---	---			
38.												
Pits												
39C:												
Saunook--------------	0-9	7-20	1.35-1.60	14.00-42.00	0.14-0.20	0.0-2.9	3.0-10	.24	.20	5	5	56
	9-52	18-35	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	0.2-2.0	.24	.24			
	52-61	7-20	1.35-1.60	14.00-42.00	0.07-0.12	0.0-2.9	0.0-0.5	.15	.24			
39D:												
Saunook--------------	0-9	7-20	1.35-1.60	14.00-42.00	0.14-0.20	0.0-2.9	3.0-10	.24	.20	5	5	56
	9-52	18-35	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	0.2-2.0	.24	.24			
	52-61	7-20	1.35-1.60	14.00-42.00	0.07-0.12	0.0-2.9	0.0-0.5	.15	.24			
40C:												
Saunook--------------	0-9	7-20	1.35-1.60	14.00-42.00	0.14-0.20	0.0-2.9	3.0-10	.24	.20	5	5	56
	9-52	18-35	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	0.2-2.0	.24	.24			
	52-61	7-20	1.35-1.60	14.00-42.00	0.07-0.12	0.0-2.9	0.0-0.5	.15	.24			
40D:												
Saunook--------------	0-9	7-20	1.35-1.60	14.00-42.00	0.14-0.20	0.0-2.9	3.0-10	.24	.20	5	5	56
	9-52	18-35	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	0.2-2.0	.24	.24			
	52-61	7-20	1.35-1.60	14.00-42.00	0.07-0.12	0.0-2.9	0.0-0.5	.15	.24			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
40E:												
Saunook--------------	0-9	7-20	1.35-1.60	14.00-42.00	0.14-0.20	0.0-2.9	3.0-10	.24	.20	5	5	56
	9-52	18-35	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	0.2-2.0	.24	.24			
	52-61	7-20	1.35-1.60	14.00-42.00	0.07-0.12	0.0-2.9	0.0-0.5	.15	.24			
41B:												
Sketerville----------	0-4	10-27	1.35-1.45	4.00-14.00	0.15-0.22	0.0-2.9	1.0-3.0	.37	.37	5	5	56
	4-42	35-60	1.45-1.55	0.42-1.40	0.10-0.15	3.0-5.9	0.0-0.5	.32	.32			
	42-70	10-55	1.45-1.55	1.40-4.00	0.10-0.15	3.0-5.9	0.0-0.5	.28	.32			
	70-74	---	---	0.00-0.07	---	---	---	---	---			
42C:												
Spriggs--------------	0-4	10-27	1.30-1.40	4.00-14.00	0.18-0.24	0.0-2.9	0.5-2.0	.20	.37	3	5	56
	4-14	20-35	1.33-1.40	4.00-14.00	0.12-0.20	3.0-5.9	0.0-0.5	.37	.37			
	14-20	15-27	1.40-1.50	4.00-14.00	0.08-0.18	0.0-2.9	0.0-0.5	.24	.28			
	20-41	---	---	0.00-14.00	---	---	---	---	---			
	41-45	---	---	0.00-0.07	---	---	---	---	---			
42D:												
Spriggs--------------	0-4	10-27	1.30-1.40	4.00-14.00	0.18-0.24	0.0-2.9	0.5-2.0	.20	.37	3	5	56
	4-14	20-35	1.33-1.40	4.00-14.00	0.12-0.20	3.0-5.9	0.0-0.5	.37	.37			
	14-20	15-27	1.40-1.50	4.00-14.00	0.08-0.18	0.0-2.9	0.0-0.5	.24	.28			
	20-41	---	---	0.00-14.00	---	---	---	---	---			
	41-45	---	---	0.00-0.07	---	---	---	---	---			
42E:												
Spriggs--------------	0-4	10-27	1.30-1.40	4.00-14.00	0.18-0.24	0.0-2.9	0.5-2.0	.20	.37	3	5	56
	4-14	20-35	1.33-1.40	4.00-14.00	0.12-0.20	3.0-5.9	0.0-0.5	.37	.37			
	14-20	15-27	1.40-1.50	4.00-14.00	0.08-0.18	0.0-2.9	0.0-0.5	.24	.28			
	20-41	---	---	0.00-14.00	---	---	---	---	---			
	41-45	---	---	0.00-0.07	---	---	---	---	---			
43A:												
Suches---------------	0-11	10-25	1.30-1.50	4.00-14.00	0.11-0.18	0.0-2.9	2.0-4.0	.24	.24	5	5	56
	11-43	16-38	1.45-1.65	4.00-14.00	0.12-0.20	0.0-2.9	0.5-2.0	.28	.28			
	43-61	8-35	1.55-1.70	4.00-14.00	0.11-0.20	0.0-2.9	0.5-1.0	.28	.28			
44C:												
Sylco----------------	0-3	15-25	1.00-1.20	4.00-14.00	0.10-0.15	0.0-2.9	0.5-2.0	.10	.37	2	6	38
	3-34	15-35	1.20-1.50	4.00-14.00	0.05-0.10	0.0-2.9	0.0-0.5	.15	.32			
	34-38	---	---	0.00-1.40	---	---	---	---	---			
	38-48	---	---	0.00-0.42	---	---	---	---	---			
Sylvatus-------------	0-1	10-27	1.20-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.32	1	5	38
	1-15	10-35	1.20-1.60	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.10	.20			
	15-19	---	---	0.00-1.40	---	---	---	---	---			
	19-23	---	---	0.00-0.42	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
44D:												
Sylco----------------	0-3	15-25	1.00-1.20	4.00-14.00	0.10-0.15	0.0-2.9	0.5-2.0	.10	.37	2	6	38
	3-34	15-35	1.20-1.50	4.00-14.00	0.05-0.10	0.0-2.9	0.0-0.5	.15	.32			
	34-38	---	---	0.00-1.40	---	---	---	---	---			
	38-48	---	---	0.00-0.42	---	---	---	---	---			
Sylvatus-------------	0-1	10-27	1.20-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.32	1	5	38
	1-15	10-35	1.20-1.60	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.10	.20			
	15-19	---	---	0.00-1.40	---	---	---	---	---			
	19-23	---	---	0.00-0.42	---	---	---	---	---			
44E:												
Sylco----------------	0-3	15-25	1.00-1.20	4.00-14.00	0.10-0.15	0.0-2.9	0.5-2.0	.10	.37	2	6	38
	3-34	15-35	1.20-1.50	4.00-14.00	0.05-0.10	0.0-2.9	0.0-0.5	.15	.32			
	34-38	---	---	0.00-1.40	---	---	---	---	---			
	38-48	---	---	0.00-0.42	---	---	---	---	---			
Sylvatus-------------	0-1	10-27	1.20-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.32	1	5	38
	1-15	10-35	1.20-1.60	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.10	.20			
	15-19	---	---	0.00-1.40	---	---	---	---	---			
	19-23	---	---	0.00-0.42	---	---	---	---	---			
45E:												
Sylvatus-------------	0-1	10-27	1.20-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.32	1	5	38
	1-15	10-35	1.20-1.60	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.10	.20			
	15-19	---	---	0.00-1.40	---	---	---	---	---			
	19-23	---	---	0.00-0.42	---	---	---	---	---			
Rock outcrop.												
45F:												
Sylvatus-------------	0-1	10-27	1.20-1.40	4.00-14.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.32	1	5	38
	1-15	10-35	1.20-1.60	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.10	.20			
	15-19	---	---	0.00-1.40	---	---	---	---	---			
	19-23	---	---	0.00-0.42	---	---	---	---	---			
Rock outcrop.												
46B:												
Thurmont-------------	0-5	10-25	1.20-1.40	14.00-42.00	0.10-0.15	0.0-2.9	0.5-2.0	.32	.32	4	5	56
	5-24	18-35	1.30-1.50	4.00-14.00	0.13-0.19	0.0-2.9	0.0-0.5	.20	.20			
	24-40	10-30	1.30-1.50	4.00-14.00	0.07-0.12	0.0-2.9	0.0-0.5	.20	.20			
	40-62	10-20	1.20-1.40	4.00-14.00	0.04-0.08	0.0-2.9	0.0-0.5	.20	.24			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
46C:												
Thurmont-------------	0-5	10-25	1.20-1.40	14.00-42.00	0.10-0.15	0.0-2.9	0.5-2.0	.32	.32	4	5	56
	5-24	18-35	1.30-1.50	4.00-14.00	0.13-0.19	0.0-2.9	0.0-0.5	.20	.20			
	24-40	10-30	1.30-1.50	4.00-14.00	0.07-0.12	0.0-2.9	0.0-0.5	.20	.20			
	40-62	10-20	1.20-1.40	4.00-14.00	0.04-0.08	0.0-2.9	0.0-0.5	.20	.24			
46D:												
Thurmont-------------	0-5	10-25	1.20-1.40	14.00-42.00	0.10-0.15	0.0-2.9	0.5-2.0	.32	.32	4	5	56
	5-24	18-35	1.30-1.50	4.00-14.00	0.13-0.19	0.0-2.9	0.0-0.5	.20	.20			
	24-40	10-30	1.30-1.50	4.00-14.00	0.07-0.12	0.0-2.9	0.0-0.5	.20	.20			
	40-62	10-20	1.20-1.40	4.00-14.00	0.04-0.08	0.0-2.9	0.0-0.5	.20	.24			
47B:												
Thurmont-------------	0-5	10-25	1.20-1.40	14.00-42.00	0.10-0.15	0.0-2.9	0.5-2.0	.32	.32	4	5	56
	5-24	18-35	1.30-1.50	4.00-14.00	0.13-0.19	0.0-2.9	0.0-0.5	.20	.20			
	24-40	10-30	1.30-1.50	4.00-14.00	0.07-0.12	0.0-2.9	0.0-0.5	.20	.20			
	40-62	10-20	1.20-1.40	4.00-14.00	0.04-0.08	0.0-2.9	0.0-0.5	.20	.24			
47C:												
Thurmont-------------	0-5	10-25	1.20-1.40	14.00-42.00	0.10-0.15	0.0-2.9	0.5-2.0	.32	.32	4	5	56
	5-24	18-35	1.30-1.50	4.00-14.00	0.13-0.19	0.0-2.9	0.0-0.5	.20	.20			
	24-40	10-30	1.30-1.50	4.00-14.00	0.07-0.12	0.0-2.9	0.0-0.5	.20	.20			
	40-62	10-20	1.20-1.40	4.00-14.00	0.04-0.08	0.0-2.9	0.0-0.5	.20	.24			
47D:												
Thurmont-------------	0-5	10-25	1.20-1.40	14.00-42.00	0.10-0.15	0.0-2.9	0.5-2.0	.32	.32	4	5	56
	5-24	18-35	1.30-1.50	4.00-14.00	0.13-0.19	0.0-2.9	0.0-0.5	.20	.20			
	24-40	10-30	1.30-1.50	4.00-14.00	0.07-0.12	0.0-2.9	0.0-0.5	.20	.20			
	40-62	10-20	1.20-1.40	4.00-14.00	0.04-0.08	0.0-2.9	0.0-0.5	.20	.24			
48.												
Udorthents												
49B:												
Unison---------------	0-3	10-25	1.35-1.65	4.00-42.00	0.14-0.20	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	3-44	30-60	1.30-1.60	4.00-14.00	0.12-0.18	3.0-5.9	0.0-0.5	.24	.28			
	44-62	25-50	1.30-1.60	4.00-42.00	0.08-0.16	3.0-5.9	0.0-0.5	.28	.37			
49C:												
Unison---------------	0-3	10-25	1.35-1.65	4.00-42.00	0.14-0.20	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	3-44	30-60	1.30-1.60	4.00-14.00	0.12-0.18	3.0-5.9	0.0-0.5	.24	.28			
	44-62	25-50	1.30-1.60	4.00-42.00	0.08-0.16	3.0-5.9	0.0-0.5	.28	.37			
49D:												
Unison---------------	0-3	10-25	1.35-1.65	4.00-42.00	0.14-0.20	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	3-44	30-60	1.30-1.60	4.00-14.00	0.12-0.18	3.0-5.9	0.0-0.5	.24	.28			
	44-62	25-50	1.30-1.60	4.00-42.00	0.08-0.16	3.0-5.9	0.0-0.5	.28	.37			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
50B:												
Warminster-----------	0-8	27-35	1.20-1.50	4.00-14.00	0.18-0.22	3.0-5.9	1.0-2.0	.24	.24	4	6	48
	8-38	35-60	1.30-1.60	4.00-14.00	0.12-0.19	3.0-5.9	0.0-0.5	.20	.20			
	38-45	35-60	1.30-1.60	4.00-14.00	0.10-0.17	3.0-5.9	0.0-0.5	.17	.20			
	45-55	20-35	1.30-1.60	1.40-4.00	0.06-0.12	0.0-2.9	0.0-0.5	.24	.28			
	55-59	---	---	0.00-1.40	---	---	---	---	---			
50C:												
Warminster-----------	0-8	27-35	1.20-1.50	4.00-14.00	0.18-0.22	3.0-5.9	1.0-2.0	.24	.24	4	6	48
	8-38	35-60	1.30-1.60	4.00-14.00	0.12-0.19	3.0-5.9	0.0-0.5	.20	.20			
	38-45	35-60	1.30-1.60	4.00-14.00	0.10-0.17	3.0-5.9	0.0-0.5	.17	.20			
	45-55	20-35	1.30-1.60	1.40-4.00	0.06-0.12	0.0-2.9	0.0-0.5	.24	.28			
	55-59	---	---	0.00-1.40	---	---	---	---	---			
50D:												
Warminster-----------	0-8	27-35	1.20-1.50	4.00-14.00	0.18-0.22	3.0-5.9	1.0-2.0	.24	.24	4	6	48
	8-38	35-60	1.30-1.60	4.00-14.00	0.12-0.19	3.0-5.9	0.0-0.5	.20	.20			
	38-45	35-60	1.30-1.60	4.00-14.00	0.10-0.17	3.0-5.9	0.0-0.5	.17	.20			
	45-55	20-35	1.30-1.60	1.40-4.00	0.06-0.12	0.0-2.9	0.0-0.5	.24	.28			
	55-59	---	---	0.00-1.40	---	---	---	---	---			
51A:												
Wingina--------------	0-23	10-27	1.20-1.40	4.00-14.00	0.14-0.21	0.0-2.9	1.0-4.0	.28	.28	5	5	56
	23-65	15-27	1.20-1.40	4.00-14.00	0.10-0.22	0.0-2.9	0.5-2.0	.28	.28			
	65-72	5-20	1.20-1.40	4.00-14.00	0.04-0.16	0.0-2.9	0.5-2.0	.28	.28			
52B:												
Wintergreen----------	0-7	10-25	1.20-1.50	4.00-42.00	0.14-0.19	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	7-62	35-55	1.20-1.50	4.00-14.00	0.12-0.17	3.0-5.9	0.0-0.5	.24	.28			
52C:												
Wintergreen----------	0-7	10-25	1.20-1.50	4.00-42.00	0.14-0.19	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	7-62	35-55	1.20-1.50	4.00-14.00	0.12-0.17	3.0-5.9	0.0-0.5	.24	.28			
52D:												
Wintergreen----------	0-7	10-25	1.20-1.50	4.00-42.00	0.14-0.19	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	7-62	35-55	1.20-1.50	4.00-14.00	0.12-0.17	3.0-5.9	0.0-0.5	.24	.28			
53B:												
Wintergreen----------	0-7	27-40	1.20-1.50	4.00-14.00	0.14-0.19	0.0-2.9	0.5-1.0	.32	.32	5	6	48
	7-62	35-55	1.20-1.50	4.00-14.00	0.12-0.17	3.0-5.9	0.0-0.5	.24	.28			
53C:												
Wintergreen----------	0-7	27-40	1.20-1.50	4.00-14.00	0.14-0.19	0.0-2.9	0.5-1.0	.32	.32	5	6	48
	7-62	35-55	1.20-1.50	4.00-14.00	0.12-0.17	3.0-5.9	0.0-0.5	.24	.28			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	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	g/cc	um/sec	In/in	Pct	Pct					
53D:												
Wintergreen----------	0-7	27-40	1.20-1.50	4.00-14.00	0.14-0.19	0.0-2.9	0.5-1.0	.32	.32	5	6	48
	7-62	35-55	1.20-1.50	4.00-14.00	0.12-0.17	3.0-5.9	0.0-0.5	.24	.28			
54C:												
Wintergreen----------	0-7	10-25	1.20-1.50	4.00-42.00	0.14-0.19	0.0-2.9	1.0-2.0	.32	.32	4	5	56
	7-62	35-55	1.20-1.50	4.00-14.00	0.12-0.17	3.0-5.9	0.0-0.5	.24	.28			
55A:												
Yogaville------------	0-20	10-27	1.20-1.40	4.00-14.00	0.14-0.22	0.0-2.9	1.0-4.0	.28	.28	5	5	56
	20-72	18-35	1.20-1.40	4.00-14.00	0.10-0.22	0.0-2.9	0.5-2.0	.20	.20			
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
1D:				
Arcola---------------	0-6	6.4-14	4.8-10	4.5-5.5
	6-34	6.3-13	4.7-10	4.5-5.5
	34-58	---	---	---
	58-62	---	---	---
1E:				
Arcola---------------	0-6	6.4-14	4.8-10	4.5-5.5
	6-34	6.3-13	4.7-10	4.5-5.5
	34-58	---	---	---
	58-62	---	---	---
2A:				
Batteau--------------	0-13	4.7-18	3.5-14	5.6-7.3
	13-72	2.5-17	1.8-13	5.6-7.3
3B:				
Belvoir--------------	0-4	3.6-11	2.7-8.1	4.5-5.5
	4-25	7.0-13	5.2-10	4.5-5.5
	25-40	5.2-12	3.9-8.7	4.5-5.5
	40-63	3.5-17	2.6-13	4.5-5.5
4B:				
Buffstat-------------	0-4	5.8-14	4.3-10	4.5-6.5
	4-42	12-19	9.2-14	4.5-5.5
	42-58	---	---	---
	58-62	---	---	---
4C:				
Buffstat-------------	0-4	5.8-14	4.3-10	4.5-6.5
	4-42	12-19	9.2-14	4.5-5.5
	42-58	---	---	---
	58-62	---	---	---
4D:				
Buffstat-------------	0-4	5.8-14	4.3-10	4.5-6.5
	4-42	12-19	9.2-14	4.5-5.5
	42-58	---	---	---
	58-62	---	---	---
5C:				
Bugley---------------	0-3	3.6-14	2.7-10	3.6-5.5
	3-13	3.5-12	2.6-9.2	3.6-5.5
	13-18	---	---	---
	18-22	---	---	---
5D:				
Bugley---------------	0-3	3.6-14	2.7-10	3.6-5.5
	3-13	3.5-12	2.6-9.2	3.6-5.5
	13-18	---	---	---
	18-22	---	---	---
5E:				
Bugley---------------	0-3	3.6-14	2.7-10	3.6-5.5
	3-13	3.5-12	2.6-9.2	3.6-5.5
	13-18	---	---	---
	18-22	---	---	---

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
6E:				
Catoctin	0-5	2.9-12	2.2-8.6	5.1-6.5
	5-28	3.5-13	2.6-10	5.1-6.5
	28-36	3.5-9.9	2.6-7.4	5.6-7.3
	36-40	---	---	---
Rock outcrop.				
7B:				
Chatuge	0-9	5.8-13	4.3-9.9	4.5-6.0
	9-41	7.0-13	5.2-10	4.5-6.0
	41-62	0.7-4.6	0.5-3.5	4.5-6.0
8A:				
Codorus	0-3	9.8-18	7.3-13	4.5-6.0
	3-50	6.3-13	4.7-10	5.1-6.5
	50-72	1.8-5.3	1.3-4.0	5.1-6.5
9B:				
Colleen	0-9	4.6-14	3.5-10	4.5-6.5
	9-50	12-22	9.2-17	3.6-5.5
	50-72	3.5-13	2.6-10	4.5-6.0
9C:				
Colleen	0-9	4.6-14	3.5-10	4.5-6.5
	9-50	12-22	9.2-17	3.6-5.5
	50-72	3.5-13	2.6-10	4.5-6.0
9D:				
Colleen	0-9	4.6-14	3.5-10	4.5-6.5
	9-50	12-22	9.2-17	3.6-5.5
	50-72	3.5-13	2.6-10	4.5-6.0
10A:				
Colvard	0-5	5.0-11	3.8-8.1	5.1-7.8
	5-56	3.9-8.6	2.9-6.4	5.1-7.8
	56-62	0.3-4.7	0.3-3.5	5.1-7.8
11A:				
Craigsville	0-6	4.0-12	3.0-9.0	4.5-5.5
	6-21	2.9-7.5	2.2-5.6	4.5-5.5
	21-64	1.8-4.6	1.3-3.5	4.5-5.5
12B:				
Delanco	0-5	6.2-16	4.7-12	3.6-5.5
	5-45	6.3-12	4.7-8.7	3.6-5.5
	45-65	1.8-8.8	1.3-7.4	3.6-5.5
12C:				
Delanco	0-5	6.2-16	4.7-12	3.6-5.5
	5-45	6.3-12	4.7-8.7	3.6-5.5
	45-65	1.8-8.8	1.3-7.4	3.6-5.5
13C:				
Edneytown	0-7	3.5-10	2.6-7.9	4.5-6.0
	7-34	5.0-9.9	3.8-7.4	4.5-5.5
	34-67	1.0-4.9	0.8-3.7	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
13D:				
Edneytown-----------	0-7	3.5-10	2.6-7.9	4.5-6.0
	7-34	5.0-9.9	3.8-7.4	4.5-5.5
	34-67	1.0-4.9	0.8-3.7	4.5-5.5
13E:				
Edneytown-----------	0-7	3.5-10	2.6-7.9	4.5-6.0
	7-34	5.0-9.9	3.8-7.4	4.5-5.5
	34-67	1.0-4.9	0.8-3.7	4.5-5.5
14C:				
Edneytown-----------	0-7	3.5-10	2.6-7.9	4.5-6.0
	7-34	5.0-9.9	3.8-7.4	4.5-5.5
	34-67	1.0-4.9	0.8-3.7	4.5-5.5
Peaks---------------	0-2	3.2-11	2.4-8.1	4.5-6.0
	2-25	2.4-7.9	1.8-5.9	4.5-6.0
	25-36	---	---	---
	36-40	---	---	---
14D:				
Edneytown-----------	0-7	3.5-10	2.6-7.9	4.5-6.0
	7-34	5.0-9.9	3.8-7.4	4.5-5.5
	34-67	1.0-4.9	0.8-3.7	4.5-5.5
Peaks---------------	0-2	3.2-11	2.4-8.1	4.5-6.0
	2-25	2.4-7.9	1.8-5.9	4.5-6.0
	25-36	---	---	---
	36-40	---	---	---
14E:				
Edneytown-----------	0-7	3.5-10	2.6-7.9	4.5-6.0
	7-34	5.0-9.9	3.8-7.4	4.5-5.5
	34-67	1.0-4.9	0.8-3.7	4.5-5.5
Peaks---------------	0-2	3.2-11	2.4-8.1	4.5-6.0
	2-25	2.4-7.9	1.8-5.9	4.5-6.0
	25-36	---	---	---
	36-40	---	---	---
14F:				
Edneytown-----------	0-7	3.5-10	2.6-7.9	4.5-6.0
	7-34	5.0-9.9	3.8-7.4	4.5-5.5
	34-67	1.0-4.9	0.8-3.7	4.5-5.5
Peaks---------------	0-2	3.2-11	2.4-8.1	4.5-6.0
	2-25	2.4-7.9	1.8-5.9	4.5-6.0
	25-36	---	---	---
	36-40	---	---	---
15B:				
Elioak--------------	0-8	3.8-9.4	2.8-7.1	4.5-6.0
	8-40	3.0-7.1	2.2-5.3	4.5-5.5
	40-62	1.5-3.8	1.1-2.9	4.5-6.0
15C:				
Elioak--------------	0-8	3.8-9.4	2.8-7.1	4.5-6.0
	8-40	3.0-7.1	2.2-5.3	4.5-5.5
	40-62	1.5-3.8	1.1-2.9	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
15D:				
Elioak	0-8	3.8-9.4	2.8-7.1	4.5-6.0
	8-40	3.0-7.1	2.2-5.3	4.5-5.5
	40-62	1.5-3.8	1.1-2.9	4.5-6.0
16C:				
Elioak	0-6	5.0-11	3.8-8.2	4.5-5.5
	6-40	3.0-7.1	2.2-5.3	4.5-5.5
	40-62	1.5-3.8	1.1-2.9	4.5-6.0
16D:				
Elioak	0-6	5.0-11	3.8-8.2	4.5-5.5
	6-40	3.0-7.1	2.2-5.3	4.5-5.5
	40-62	1.5-3.8	1.1-2.9	4.5-6.0
17B:				
Elsinboro	0-11	5.0-13	3.8-9.8	4.5-5.5
	11-38	6.3-13	4.7-9.8	4.5-5.5
	38-72	2.8-13	2.1-9.8	4.5-5.5
18C:				
Fauquier	0-6	5.8-16	4.3-12	5.1-6.0
	6-40	13-23	10-17	4.5-6.0
	40-50	---	---	---
	50-54	---	---	---
18D:				
Fauquier	0-6	5.8-16	4.3-12	5.1-6.0
	6-40	13-23	10-17	4.5-6.0
	40-50	---	---	---
	50-54	---	---	---
18E:				
Fauquier	0-6	5.8-16	4.3-12	5.1-6.0
	6-40	13-23	10-17	4.5-6.0
	40-50	---	---	---
	50-54	---	---	---
19A:				
Galtsmill	0-15	4.0-18	3.0-13	5.1-7.3
	15-72	2.9-11	2.2-8.1	5.1-7.3
20D:				
Glenelg	0-9	7.5-16	5.6-12	4.5-5.5
	9-27	7.0-12	5.2-9.7	4.5-6.5
	27-65	1.8-8.1	1.3-6.1	4.5-6.5
21A:				
Hatboro	0-12	8.0-16	6.0-12	4.5-7.3
	12-50	5.2-13	3.9-10	4.5-7.3
	50-72	3.5-13	2.6-10	5.6-6.5
22B:				
Hayesville	0-6	3.2-9.2	2.4-6.9	3.6-6.5
	6-40	4.1-8.2	3.1-6.4	3.6-6.0
	40-57	2.0-6.1	1.5-4.8	3.6-6.0
	57-62	0.5-3.6	0.4-2.7	3.6-6.0

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
22C:				
Hayesville-----------	0-6	3.2-9.2	2.4-6.9	3.6-6.5
	6-40	4.1-8.2	3.1-6.4	3.6-6.0
	40-57	2.0-6.1	1.5-4.8	3.6-6.0
	57-62	0.5-3.6	0.4-2.7	3.6-6.0
22D:				
Hayesville-----------	0-6	3.2-9.2	2.4-6.9	3.6-6.5
	6-40	4.1-8.2	3.1-6.4	3.6-6.0
	40-57	2.0-6.1	1.5-4.8	3.6-6.0
	57-62	0.5-3.6	0.4-2.7	3.6-6.0
22E:				
Hayesville-----------	0-6	3.2-9.2	2.4-6.9	3.6-6.5
	6-40	4.1-8.2	3.1-6.4	3.6-6.0
	40-57	2.0-6.1	1.5-4.8	3.6-6.0
	57-62	0.5-3.6	0.4-2.7	3.6-6.0
23B:				
Hayesville-----------	0-6	4.2-11	3.2-8.1	3.6-6.5
	6-40	4.1-8.2	3.1-6.4	3.6-6.0
	40-57	2.0-6.1	1.5-4.8	3.6-6.0
	57-62	0.5-3.6	0.4-2.7	3.6-6.0
23C:				
Hayesville-----------	0-6	4.2-11	3.2-8.1	3.6-6.5
	6-40	4.1-8.2	3.1-6.4	3.6-6.0
	40-57	2.0-6.1	1.5-4.8	3.6-6.0
	57-62	0.5-3.6	0.4-2.7	3.6-6.0
23D:				
Hayesville-----------	0-6	4.2-11	3.2-8.1	3.6-6.5
	6-40	4.1-8.2	3.1-6.4	3.6-6.0
	40-57	2.0-6.1	1.5-4.8	3.6-6.0
	57-62	0.5-3.6	0.4-2.7	3.6-6.0
23E:				
Hayesville-----------	0-6	4.2-11	3.2-8.1	3.6-6.5
	6-40	4.1-8.2	3.1-6.4	3.6-6.0
	40-57	2.0-6.1	1.5-4.8	3.6-6.0
	57-62	0.5-3.6	0.4-2.7	3.6-6.0
24C:				
Hayesville-----------	0-6	3.2-9.2	2.4-6.9	3.6-6.5
	6-40	4.1-8.2	3.1-6.4	3.6-6.0
	40-57	2.0-6.1	1.5-4.8	3.6-6.0
	57-62	0.5-3.6	0.4-2.7	3.6-6.0
24D:				
Hayesville-----------	0-6	3.2-9.2	2.4-6.9	3.6-6.5
	6-40	4.1-8.2	3.1-6.4	3.6-6.0
	40-57	2.0-6.1	1.5-4.8	3.6-6.0
	57-62	0.5-3.6	0.4-2.7	3.6-6.0
24E:				
Hayesville-----------	0-6	3.2-9.2	2.4-6.9	3.6-6.5
	6-40	4.1-8.2	3.1-6.4	3.6-6.0
	40-57	2.0-6.1	1.5-4.8	3.6-6.0
	57-62	0.5-3.6	0.4-2.7	3.6-6.0

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
25C:				
Hazel----------------	0-5	2.9-12	2.2-8.6	4.5-5.5
	5-19	3.5-7.4	2.6-5.6	4.5-5.5
	19-31	3.5-7.4	2.6-5.6	4.5-5.5
	31-35	---	---	---
25D:				
Hazel----------------	0-5	2.9-12	2.2-8.6	4.5-5.5
	5-19	3.5-7.4	2.6-5.6	4.5-5.5
	19-31	3.5-7.4	2.6-5.6	4.5-5.5
	31-35	---	---	---
25E:				
Hazel----------------	0-5	2.9-12	2.2-8.6	4.5-5.5
	5-19	3.5-7.4	2.6-5.6	4.5-5.5
	19-31	3.5-7.4	2.6-5.6	4.5-5.5
	31-35	---	---	---
26D:				
Hazel----------------	0-5	2.9-11	2.2-8.1	4.5-5.5
	5-19	3.5-7.4	2.6-5.6	4.5-5.5
	19-31	3.5-7.4	2.6-5.6	4.5-5.5
	31-35	---	---	---
26E:				
Hazel----------------	0-5	2.9-11	2.2-8.1	4.5-5.5
	5-19	3.5-7.4	2.6-5.6	4.5-5.5
	19-31	3.5-7.4	2.6-5.6	4.5-5.5
	31-35	---	---	---
27B:				
Jackland-------------	0-9	8.6-18	6.5-14	4.5-6.0
	9-30	20-31	15-23	4.5-7.8
	30-61	5.0-21	3.8-16	4.5-7.8
27C:				
Jackland-------------	0-9	8.6-18	6.5-14	4.5-6.0
	9-30	20-31	15-23	4.5-7.8
	30-61	5.0-21	3.8-16	4.5-7.8
28B:				
Lew------------------	0-8	5.8-16	4.3-12	4.5-6.0
	8-62	9.8-13	7.4-10	4.5-6.0
29B:				
Lew------------------	0-8	5.8-16	4.3-12	4.5-6.0
	8-62	9.8-13	7.4-10	4.5-6.0
30C:				
Lew------------------	0-8	4.6-13	3.5-9.9	4.5-6.0
	8-62	9.8-13	7.4-10	4.5-6.0
30D:				
Lew------------------	0-8	4.6-13	3.5-9.9	4.5-6.0
	8-62	9.8-13	7.4-10	4.5-6.0
30E:				
Lew------------------	0-8	4.6-13	3.5-9.9	4.5-6.0
	8-62	9.8-13	7.4-10	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
31B:				
Littlejoe------------	0-8	4.1-11	3.1-8.4	4.5-5.5
	8-41	6.6-15	6.6-11	4.5-5.5
	41-65	---	---	---
31C:				
Littlejoe------------	0-8	4.1-11	3.1-8.4	4.5-5.5
	8-41	6.6-15	6.6-11	4.5-5.5
	41-65	---	---	---
32B:				
Minnieville----------	0-12	3.2-7.2	2.4-5.4	5.1-6.0
	12-49	3.5-8.1	2.6-6.1	5.1-6.0
	49-72	3.0-8.1	2.2-6.1	5.1-6.0
32C:				
Minnieville----------	0-12	3.2-7.2	2.4-5.4	5.1-6.0
	12-49	3.5-8.1	2.6-6.1	5.1-6.0
	49-72	3.0-8.1	2.2-6.1	5.1-6.0
32D:				
Minnieville----------	0-12	3.2-7.2	2.4-5.4	5.1-6.0
	12-49	3.5-8.1	2.6-6.1	5.1-6.0
	49-72	3.0-8.1	2.2-6.1	5.1-6.0
32E:				
Minnieville----------	0-12	3.2-7.2	2.4-5.4	5.1-6.0
	12-49	3.5-8.1	2.6-6.1	5.1-6.0
	49-72	3.0-8.1	2.2-6.1	5.1-6.0
33C:				
Myersville-----------	0-11	2.9-12	2.2-8.6	4.5-6.0
	11-40	6.3-13	4.7-10	4.5-6.0
	40-47	3.5-12	2.6-9.2	4.5-6.0
	47-62	---	---	---
Catoctin-------------	0-5	2.9-12	2.2-8.6	5.1-6.5
	5-28	3.5-13	2.6-10	5.1-6.5
	28-36	3.5-9.9	2.6-7.4	5.6-7.3
	36-40	---	---	---
33D:				
Myersville-----------	0-11	2.9-12	2.2-8.6	4.5-6.0
	11-40	6.3-13	4.7-10	4.5-6.0
	40-47	3.5-12	2.6-9.2	4.5-6.0
	47-62	---	---	---
Catoctin-------------	0-5	2.9-12	2.2-8.6	5.1-6.5
	5-28	3.5-13	2.6-10	5.1-6.5
	28-36	3.5-9.9	2.6-7.4	5.6-7.3
	36-40	---	---	---
33E:				
Myersville-----------	0-11	2.9-12	2.2-8.6	4.5-6.0
	11-40	6.3-13	4.7-10	4.5-6.0
	40-47	3.5-12	2.6-9.2	4.5-6.0
	47-62	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
33E:				
Catoctin-------------	0-5	2.9-12	2.2-8.6	5.1-6.5
	5-28	3.5-13	2.6-10	5.1-6.5
	28-36	3.5-9.9	2.6-7.4	5.6-7.3
	36-40	---	---	---
34C:				
Occoquan-------------	0-4	4.7-16	3.5-12	3.6-5.5
	4-13	6.3-13	4.7-10	3.6-5.5
	13-41	1.8-11	1.3-7.9	3.6-5.5
	41-60	---	---	---
34D:				
Occoquan-------------	0-4	4.7-16	3.5-12	3.6-5.5
	4-13	6.3-13	4.7-10	3.6-5.5
	13-41	1.8-11	1.3-7.9	3.6-5.5
	41-60	---	---	---
34E:				
Occoquan-------------	0-4	4.7-16	3.5-12	3.6-5.5
	4-13	6.3-13	4.7-10	3.6-5.5
	13-41	1.8-11	1.3-7.9	3.6-5.5
	41-60	---	---	---
35D:				
Occoquan-------------	0-4	4.7-16	3.5-12	3.6-5.5
	4-13	6.3-13	4.7-10	3.6-5.5
	13-41	1.8-11	1.3-7.9	3.6-5.5
	41-60	---	---	---
35E:				
Occoquan-------------	0-4	4.7-16	3.5-12	3.6-5.5
	4-13	6.3-13	4.7-10	3.6-5.5
	13-41	1.8-11	1.3-7.9	3.6-5.5
	41-60	---	---	---
36D:				
Peaks----------------	0-2	3.2-11	2.4-8.1	4.5-6.0
	2-25	2.4-7.9	1.8-5.9	4.5-6.0
	25-36	---	---	---
	36-40	---	---	---
Rock outcrop.				
36E:				
Peaks----------------	0-2	3.2-11	2.4-8.1	4.5-6.0
	2-25	2.4-7.9	1.8-5.9	4.5-6.0
	25-36	---	---	---
	36-40	---	---	---
Rock outcrop.				
36F:				
Peaks----------------	0-2	3.2-11	2.4-8.1	4.5-6.0
	2-25	2.4-7.9	1.8-5.9	4.5-6.0
	25-36	---	---	---
	36-40	---	---	---
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
37A:				
Pineywoods-----------	0-6	5.5-12	4.1-8.8	3.6-6.5
	6-22	3.5-7.1	2.6-5.3	4.5-5.5
	22-41	1.0-4.6	0.8-3.5	5.1-6.5
	41-62	---	---	---
38.				
Pits				
39C:				
Saunook--------------	0-9	9.2-30	6.9-22	3.6-6.0
	9-52	6.8-17	5.1-13	4.5-6.5
	52-61	2.5-8.1	1.8-6.1	4.5-6.5
39D:				
Saunook--------------	0-9	9.2-30	6.9-22	3.6-6.0
	9-52	6.8-17	5.1-13	4.5-6.5
	52-61	2.5-8.1	1.8-6.1	4.5-6.5
40C:				
Saunook--------------	0-9	9.2-30	6.9-22	3.6-6.0
	9-52	6.8-17	5.1-13	4.5-6.5
	52-61	2.5-8.1	1.8-6.1	4.5-6.5
40D:				
Saunook--------------	0-9	9.2-30	6.9-22	3.6-6.0
	9-52	6.8-17	5.1-13	4.5-6.5
	52-61	2.5-8.1	1.8-6.1	4.5-6.5
40E:				
Saunook--------------	0-9	9.2-30	6.9-22	3.6-6.0
	9-52	6.8-17	5.1-13	4.5-6.5
	52-61	2.5-8.1	1.8-6.1	4.5-6.5
41B:				
Sketerville----------	0-4	3.2-9.4	2.4-7.1	3.6-6.5
	4-42	3.5-7.1	2.6-5.3	3.6-5.5
	42-70	1.0-6.6	0.8-5.0	4.5-6.0
	70-74	---	---	---
42C:				
Spriggs--------------	0-4	6.1-18	4.6-14	4.5-6.0
	4-14	10-19	7.5-14	4.5-6.0
	14-20	7.5-15	5.6-11	4.5-6.0
	20-41	---	---	---
	41-45	---	---	---
42D:				
Spriggs--------------	0-4	6.1-18	4.6-14	4.5-6.0
	4-14	10-19	7.5-14	4.5-6.0
	14-20	7.5-15	5.6-11	4.5-6.0
	20-41	---	---	---
	41-45	---	---	---
42E:				
Spriggs--------------	0-4	6.1-18	4.6-14	4.5-6.0
	4-14	10-19	7.5-14	4.5-6.0
	14-20	7.5-15	5.6-11	4.5-6.0
	20-41	---	---	---
	41-45	---	---	---

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
43A:				
Suches	0-11	8.0-18	6.0-13	5.1-6.0
	11-43	7.4-18	5.6-13	5.1-6.0
	43-61	3.9-14	2.9-11	4.5-6.0
44C:				
Sylco	0-3	6.4-13	4.8-9.9	3.6-5.5
	3-34	5.2-13	3.9-10	3.6-5.5
	34-38	---	---	---
	38-48	---	---	---
Sylvatus	0-1	4.6-14	3.5-10	3.6-5.0
	1-15	3.5-13	2.6-10	3.6-5.0
	15-19	---	---	---
	19-23	---	---	---
44D:				
Sylco	0-3	6.4-13	4.8-9.9	3.6-5.5
	3-34	5.2-13	3.9-10	3.6-5.5
	34-38	---	---	---
	38-48	---	---	---
Sylvatus	0-1	4.6-14	3.5-10	3.6-5.0
	1-15	3.5-13	2.6-10	3.6-5.0
	15-19	---	---	---
	19-23	---	---	---
44E:				
Sylco	0-3	6.4-13	4.8-9.9	3.6-5.5
	3-34	5.2-13	3.9-10	3.6-5.5
	34-38	---	---	---
	38-48	---	---	---
Sylvatus	0-1	4.6-14	3.5-10	3.6-5.0
	1-15	3.5-13	2.6-10	3.6-5.0
	15-19	---	---	---
	19-23	---	---	---
45E:				
Sylvatus	0-1	4.6-14	3.5-10	3.6-5.0
	1-15	3.5-13	2.6-10	3.6-5.0
	15-19	---	---	---
	19-23	---	---	---
Rock outcrop.				
45F:				
Sylvatus	0-1	4.6-14	3.5-10	3.6-5.0
	1-15	3.5-13	2.6-10	3.6-5.0
	15-19	---	---	---
	19-23	---	---	---
Rock outcrop.				
46B:				
Thurmont	0-5	4.6-13	3.5-9.9	4.5-5.5
	5-24	6.3-13	4.7-10	4.5-5.5
	24-40	6.3-12	4.7-8.7	4.5-5.5
	40-62	3.5-8.1	2.6-6.1	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
46C:				
Thurmont-------------	0-5	4.6-13	3.5-9.9	4.5-5.5
	5-24	6.3-13	4.7-10	4.5-5.5
	24-40	6.3-12	4.7-8.7	4.5-5.5
	40-62	3.5-8.1	2.6-6.1	4.5-5.5
46D:				
Thurmont-------------	0-5	4.6-13	3.5-9.9	4.5-5.5
	5-24	6.3-13	4.7-10	4.5-5.5
	24-40	6.3-12	4.7-8.7	4.5-5.5
	40-62	3.5-8.1	2.6-6.1	4.5-5.5
47B:				
Thurmont-------------	0-5	4.6-13	3.5-9.9	4.5-5.5
	5-24	6.3-13	4.7-10	4.5-5.5
	24-40	6.3-12	4.7-8.7	4.5-5.5
	40-62	3.5-8.1	2.6-6.1	4.5-5.5
47C:				
Thurmont-------------	0-5	4.6-13	3.5-9.9	4.5-5.5
	5-24	6.3-13	4.7-10	4.5-5.5
	24-40	6.3-12	4.7-8.7	4.5-5.5
	40-62	3.5-8.1	2.6-6.1	4.5-5.5
47D:				
Thurmont-------------	0-5	4.6-13	3.5-9.9	4.5-5.5
	5-24	6.3-13	4.7-10	4.5-5.5
	24-40	6.3-12	4.7-8.7	4.5-5.5
	40-62	3.5-8.1	2.6-6.1	4.5-5.5
48.				
Udorthents				
49B:				
Unison---------------	0-3	4.8-13	3.6-9.8	4.5-6.0
	3-44	7.5-19	5.6-14	4.5-6.0
	44-62	7.5-14	5.6-10	4.5-6.0
49C:				
Unison---------------	0-3	4.8-13	3.6-9.8	4.5-6.0
	3-44	7.5-19	5.6-14	4.5-6.0
	44-62	7.5-14	5.6-10	4.5-6.0
49D:				
Unison---------------	0-3	4.8-13	3.6-9.8	4.5-6.0
	3-44	7.5-19	5.6-14	4.5-6.0
	44-62	7.5-14	5.6-10	4.5-6.0
50B:				
Warminster-----------	0-8	9.0-13	6.8-9.9	4.5-6.0
	8-38	8.8-16	6.6-12	4.5-6.0
	38-45	8.8-16	6.6-12	4.5-6.0
	45-55	5.0-9.9	3.8-7.4	4.5-6.0
	55-59	---	---	---

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:				
Warminster-----------	0-8	9.0-13	6.8-9.9	4.5-6.0
	8-38	8.8-16	6.6-12	4.5-6.0
	38-45	8.8-16	6.6-12	4.5-6.0
	45-55	5.0-9.9	3.8-7.4	4.5-6.0
	55-59	---	---	---
50D:				
Warminster-----------	0-8	9.0-13	6.8-9.9	4.5-6.0
	8-38	8.8-16	6.6-12	4.5-6.0
	38-45	8.8-16	6.6-12	4.5-6.0
	45-55	5.0-9.9	3.8-7.4	4.5-6.0
	55-59	---	---	---
51A:				
Wingina--------------	0-23	5.8-18	4.3-14	5.1-7.3
	23-65	6.4-14	4.8-10	5.1-7.3
	65-72	2.9-12	2.2-8.6	5.1-7.3
52B:				
Wintergreen----------	0-7	4.8-11	3.6-8.1	3.6-5.5
	7-62	8.8-15	6.6-11	3.6-5.5
52C:				
Wintergreen----------	0-7	4.8-11	3.6-8.1	3.6-5.5
	7-62	8.8-15	6.6-11	3.6-5.5
52D:				
Wintergreen----------	0-7	4.8-11	3.6-8.1	3.6-5.5
	7-62	8.8-15	6.6-11	3.6-5.5
53B:				
Wintergreen----------	0-7	7.9-12	5.9-9.2	3.6-5.5
	7-62	8.8-15	6.6-11	3.6-5.5
53C:				
Wintergreen----------	0-7	7.9-12	5.9-9.2	3.6-5.5
	7-62	8.8-15	6.6-11	3.6-5.5
53D:				
Wintergreen----------	0-7	7.9-12	5.9-9.2	3.6-5.5
	7-62	8.8-15	6.6-11	3.6-5.5
54C:				
Wintergreen----------	0-7	4.8-11	3.6-8.1	3.6-5.5
	7-62	8.8-15	6.6-11	3.6-5.5
55A:				
Yogaville------------	0-20	5.8-18	4.3-14	5.1-7.3
	20-72	7.4-17	5.6-13	5.1-7.3
W.				
Water				

Table 18.—Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
1D:										
Arcola	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
1E:										
Arcola	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
2A:										
Batteau	C	Low								
			January	1.0-2.5	>6.0	---	---	None	Brief	Occasional
			February	1.0-2.5	>6.0	---	---	None	Brief	Occasional
			March	1.0-2.5	>6.0	---	---	None	Brief	Occasional
			November	1.0-2.5	>6.0	---	---	None	Brief	Occasional
			December	1.0-2.5	>6.0	---	---	None	Brief	Occasional

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				
3B:										
Belvoir	C	Very high								
			January	1.0-2.0	>6.0	---	---	None	---	None
			February	1.0-2.0	>6.0	---	---	None	---	None
			March	1.0-2.0	>6.0	---	---	None	---	None
			April	1.0-2.0	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	1.0-2.0	>6.0	---	---	None	---	None
4B:										
Buffstat	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
4C:										
Buffstat	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
4D:										
Buffstat------------------	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
5C:										
Bugley--------------------	C/D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
5D:										
Bugley--------------------	C/D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
5E:										
Bugley	C/D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
6E:										
Catoctin	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Rock outcrop	D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
7B:										
Chatuge-------------------	D	Very high								
			January	1.0-2.0	>6.0	---	---	None	---	None
			February	1.0-2.0	>6.0	---	---	None	---	None
			March	1.0-2.0	>6.0	---	---	None	---	None
			April	1.0-2.0	>6.0	---	---	None	---	None
			May	1.0-2.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	1.0-2.0	>6.0	---	---	None	---	None
8A:										
Codorus-------------------	C	Negligible								
			January	1.0-2.0	>6.0	0.1-0.3	Very brief	Occasional	Very brief	Occasional
			February	1.0-2.0	>6.0	0.1-0.3	Very brief	Occasional	Very brief	Occasional
			March	1.0-2.0	>6.0	0.1-0.3	Very brief	Occasional	Very brief	Occasional
			April	1.0-2.0	>6.0	0.1-0.3	Very brief	Occasional	Very brief	Occasional
			November	1.0-2.0	>6.0	---	---	None	---	---
			December	1.0-2.0	>6.0	0.1-0.3	Very brief	Occasional	Very brief	Occasional
9B:										
Colleen-------------------	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
9C:										
Colleen-------------------	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
9D:										
Colleen-------------------	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
10A:										
Colvard-------------------	B	Very low								
			January	4.0-6.6	>6.0	---	---	None	Very brief	Occasional
			February	4.0-6.6	>6.0	---	---	None	Very brief	Occasional
			March	4.0-6.6	>6.0	---	---	None	Very brief	Occasional
			April	4.0-6.6	>6.0	---	---	None	Very brief	Occasional
			May	---	---	---	---	None	Very brief	Occasional
			June	---	---	---	---	None	Very brief	Occasional
			July	---	---	---	---	None	Very brief	Occasional
			August	---	---	---	---	None	Very brief	Occasional
			September	---	---	---	---	None	Very brief	Occasional
			October	---	---	---	---	None	Very brief	Occasional
			November	---	---	---	---	None	Very brief	Occasional
			December	4.0-6.6	>6.0	---	---	None	Very brief	Occasional

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				
11A:										
Craigsville	B	Very low								
			January	---	---	---	---	None	Very brief	Frequent
			February	---	---	---	---	None	Very brief	Frequent
			March	---	---	---	---	None	Very brief	Frequent
			April	---	---	---	---	None	Very brief	Frequent
			May	---	---	---	---	None	Very brief	Frequent
			November	---	---	---	---	None	Very brief	Frequent
			December	---	---	---	---	None	Very brief	Frequent
12B:										
Delanco	C	Medium								
			January	1.0-2.5	>6.0	---	---	None	---	None
			February	1.0-2.5	>6.0	---	---	None	---	None
			March	1.0-2.5	>6.0	---	---	None	---	None
			April	1.0-2.5	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	1.0-2.5	>6.0	---	---	None	---	None
12C:										
Delanco	C	Medium								
			January	1.0-2.5	>6.0	---	---	None	---	None
			February	1.0-2.5	>6.0	---	---	None	---	None
			March	1.0-2.5	>6.0	---	---	None	---	None
			April	1.0-2.5	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	1.0-2.5	>6.0	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
13C:										
Edneytown----------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
13D:										
Edneytown----------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
13E:										
Edneytown----------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
14C:										
Edneytown	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Peaks	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
14D:										
Edneytown	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
14D:										
Peaks	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
14E:										
Edneytown	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Peaks	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
14F:										
Edneytown	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Peaks	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
15B:										
Elioak	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
15C:										
Elioak-------------------	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
15D:										
Elioak-------------------	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
16C:										
Elioak-------------------	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
16D:										
Elioak	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
17B:										
Elsinboro	B	Medium								
			January	5.0	>6.0	---	---	None	---	Rare
			February	5.0	>6.0	---	---	None	---	Rare
			March	5.0	>6.0	---	---	None	---	Rare
			April	5.0	>6.0	---	---	None	---	Rare
			May	---	---	---	---	None	---	Rare
			June	---	---	---	---	None	---	Rare
			July	---	---	---	---	None	---	Rare
			August	---	---	---	---	None	---	Rare
			September	---	---	---	---	None	---	Rare
			October	---	---	---	---	None	---	Rare
			November	---	---	---	---	None	---	Rare
			December	5.0	>6.0	---	---	None	---	Rare
18C:										
Fauquier	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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:										
Fauquier------------------	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
18E:										
Fauquier------------------	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
19A:										
Galtsmill-----------------	B	Very low								
			January	---	---	---	---	None	Very brief	Occasional
			February	---	---	---	---	None	Very brief	Occasional
			March	---	---	---	---	None	Very brief	Occasional
			November	---	---	---	---	None	Very brief	Occasional
			December	---	---	---	---	None	Very brief	Occasional

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				
20D:										
Glenelg-------------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
21A:										
Hatboro-------------------	D	Negligible								
			January	0.0-0.5	>6.0	0.1-0.3	Very brief	Frequent	Very brief	Frequent
			February	0.0-0.5	>6.0	0.1-0.3	Very brief	Frequent	Very brief	Frequent
			March	0.0-0.5	>6.0	0.1-0.3	Very brief	Frequent	Very brief	Frequent
			April	0.0-0.5	>6.0	0.1-0.3	Very brief	Frequent	Very brief	Frequent
			May	0.0-0.5	>6.0	0.1-0.3	Very brief	Frequent	Very brief	Frequent
			October	0.0-0.5	>6.0	---	---	None	---	---
			November	0.0-0.5	>6.0	0.1-0.3	Very brief	Frequent	Very brief	Frequent
			December	0.0-0.5	>6.0	0.1-0.3	Very brief	Frequent	Very brief	Frequent
22B:										
Hayesville----------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
22C:										
Hayesville----------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
22D:										
Hayesville----------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
22E:										
Hayesville----------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
23B:										
Hayesville----------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
23C:										
Hayesville----------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
23D:										
Hayesville----------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
23E:										
Hayesville	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
24C:										
Hayesville	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
24D:										
Hayesville	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
24E:										
Hayesville	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
25C:										
Hazel	C	Low								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
25D:										
Hazel	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
25E:										
Hazel---------------------	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
26D:										
Hazel---------------------	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
26E:										
Hazel---------------------	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
27B:										
Jackland------------------	D	Very high								
			January	1.0-2.0	>6.0	---	---	None	---	None
			February	1.0-2.0	>6.0	---	---	None	---	None
			March	1.0-2.0	>6.0	---	---	None	---	None
			April	1.0-2.0	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
27C:										
Jackland------------------	D	Very high								
			January	1.0-2.0	>6.0	---	---	None	---	None
			February	1.0-2.0	>6.0	---	---	None	---	None
			March	1.0-2.0	>6.0	---	---	None	---	None
			April	1.0-2.0	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
28B:										
Lew-----------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
29B:										
Lew------------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
30C:										
Lew------------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
30D:										
Lew------------------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
30E:										
Lew	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
31B:										
Littlejoe	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
31C:										
Littlejoe	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
32B:										
Minnieville---------------	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
32C:										
Minnieville---------------	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
32D:										
Minnieville---------------	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
32E:										
Minnieville	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
33C:										
Myersville	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Catoctin	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
33D:										
Myersville----------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Catoctin------------------	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
33E:										
Myersville----------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
33E:										
Catoctin	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
34C:										
Occoquan	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
34D:										
Occoquan	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
34E:										
Occoquan------------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
35D:										
Occoquan------------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
35E:										
Occoquan------------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
36D:										
Peaks	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Rock outcrop	D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
36E:										
Peaks	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
36E:										
Rock outcrop	D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
36F:										
Peaks	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Rock outcrop	D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
37A:										
Pineywoods----------------	D	Very high								
			January	0.0-1.0	>6.0	---	---	None	---	None
			February	0.0-1.0	>6.0	---	---	None	---	None
			March	0.0-1.0	>6.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	0.0-1.0	>6.0	---	---	None	---	None
			December	0.0-1.0	>6.0	---	---	None	---	None
38.										
Pits										
39C:										
Saunook-------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
39D:										
Saunook-------------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
40C:										
Saunook-------------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
40D:										
Saunook-------------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
40E:										
Saunook-------------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
41B:										
Sketerville---------------	C	Medium								
			January	1.5-2.5	>6.0	---	---	None	---	None
			February	1.5-2.5	>6.0	---	---	None	---	None
			March	1.5-2.5	>6.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.5-2.5	>6.0	---	---	None	---	None
			December	1.5-2.5	>6.0	---	---	None	---	None
42C:										
Spriggs-------------------	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
42D:										
Spriggs-------------------	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
42E:										
Spriggs-------------------	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
43A:										
Suches--------------------	B	Low								
			January	2.5-4.0	>6.0	---	---	None	Brief	Frequent
			February	2.5-4.0	>6.0	---	---	None	Brief	Frequent
			March	2.5-4.0	>6.0	---	---	None	Brief	Frequent
			April	2.5-4.0	>6.0	---	---	None	Brief	Frequent
			May	2.5-4.0	>6.0	---	---	None	Brief	Frequent
			December	2.5-4.0	>6.0	---	---	None	Brief	Frequent

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				
44C:										
Sylco	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Sylvatus	D	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
44D:										
Sylco	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
44D:										
Sylvatus------------------	D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
44E:										
Sylco---------------------	C	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Sylvatus------------------	D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
45E:										
Sylvatus------------------	D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Rock outcrop--------------	D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
45F:										
Sylvatus------------------	D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
45F:										
Rock outcrop	D	Very high								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
46B:										
Thurmont	B	Medium								
			January	4.0-6.6	>6.0	---	---	None	---	None
			February	4.0-6.6	>6.0	---	---	None	---	None
			March	4.0-6.6	>6.0	---	---	None	---	None
			April	4.0-6.6	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
46C:										
Thurmont	B	Medium								
			January	4.0-6.6	>6.0	---	---	None	---	None
			February	4.0-6.6	>6.0	---	---	None	---	None
			March	4.0-6.6	>6.0	---	---	None	---	None
			April	4.0-6.6	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
46D:										
Thurmont	B	High								
			January	4.0-6.6	>6.0	---	---	None	---	None
			February	4.0-6.6	>6.0	---	---	None	---	None
			March	4.0-6.6	>6.0	---	---	None	---	None
			April	4.0-6.6	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
47B:										
Thurmont	B	Medium								
			January	4.0-6.6	>6.0	---	---	None	---	None
			February	4.0-6.6	>6.0	---	---	None	---	None
			March	4.0-6.6	>6.0	---	---	None	---	None
			April	4.0-6.6	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
47C:										
Thurmont	B	Medium								
			January	4.0-6.6	>6.0	---	---	None	---	None
			February	4.0-6.6	>6.0	---	---	None	---	None
			March	4.0-6.6	>6.0	---	---	None	---	None
			April	4.0-6.6	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
47D:										
Thurmont	B	High								
			January	4.0-6.6	>6.0	---	---	None	---	None
			February	4.0-6.6	>6.0	---	---	None	---	None
			March	4.0-6.6	>6.0	---	---	None	---	None
			April	4.0-6.6	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
48.										
Udorthents										
49B:										
Unison	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
49C:										
Unison	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
49D:										
Unison-------------------	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
50B:										
Warminster---------------	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
50C:										
Warminster---------------	C	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
50D:										
Warminster----------------	C	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
51A:										
Wingina-------------------	B	Low								
			January	4.0	>6.0	---	---	None	Very brief	Occasional
			February	4.0	>6.0	---	---	None	Very brief	Occasional
			March	4.0	>6.0	---	---	None	Very brief	Occasional
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	4.0	>6.0	---	---	None	Very brief	Occasional
52B:										
Wintergreen---------------	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
52C:										
Wintergreen	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
52D:										
Wintergreen	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
53B:										
Wintergreen	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
53C:										
Wintergreen	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
53D:										
Wintergreen	B	High								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
54C:										
Wintergreen	B	Medium								
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	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				
55A:										
Yogaville	D	Negligible								
			January	0.0-1.0	>6.0	0.1-0.3	Very brief	Occasional	Brief	Occasional
			February	0.0-1.0	>6.0	0.1-0.3	Very brief	Occasional	Brief	Occasional
			March	0.0-1.0	>6.0	0.1-0.3	Very brief	Occasional	Brief	Occasional
			April	0.0-1.0	>6.0	0.1-0.3	Very brief	Occasional	Brief	Occasional
			May	0.0-1.0	>6.0	0.1-0.3	Very brief	Occasional	Brief	Occasional
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	0.0-1.0	>6.0	0.1-0.3	Very brief	Occasional	Brief	Occasional
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: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In				
1D:						
Arcola	Paralithic bedrock	20-40	Strongly cemented	Moderate	Moderate	Moderate
	Lithic bedrock	40-60	Indurated			
1E:						
Arcola	Paralithic bedrock	20-40	Strongly cemented	Moderate	Moderate	Moderate
	Lithic bedrock	40-60	Indurated			
2A:						
Batteau	---	---	---	High	Moderate	Low
3B:						
Belvoir	Fragipan	16-30	Very strongly cemented	High	High	High
4B:						
Buffstat	Paralithic bedrock	40-60	Strongly cemented	Moderate	Moderate	High
	Lithic bedrock	40-60	Indurated			
4C:						
Buffstat	Paralithic bedrock	40-60	Strongly cemented	Moderate	Moderate	High
	Lithic bedrock	40-60	Indurated			
4D:						
Buffstat	Paralithic bedrock	40-60	Strongly cemented	Moderate	Moderate	High
	Lithic bedrock	40-60	Indurated			
5C:						
Bugley	Paralithic bedrock	10-20	Strongly cemented	Moderate	Low	High
	Lithic bedrock	10-20	Indurated			
5D:						
Bugley	Paralithic bedrock	10-20	Strongly cemented	Moderate	Low	High
	Lithic bedrock	10-20	Indurated			
5E:						
Bugley	Paralithic bedrock	10-20	Strongly cemented	Moderate	Low	High
	Lithic bedrock	10-20	Indurated			
6E:						
Catoctin	Lithic bedrock	20-40	Indurated	Low	High	Moderate
Rock outcrop	Lithic bedrock	0-0	---	---	---	---
7B:						
Chatuge	---	---	---	---	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				
8A:						
Codorus-------------	---	---	---	High	High	Moderate
9B:						
Colleen-------------	---	---	---	Moderate	High	High
9C:						
Colleen-------------	---	---	---	Moderate	High	High
9D:						
Colleen-------------	---	---	---	Moderate	High	High
10A:						
Colvard-------------	---	---	---	Moderate	Low	Moderate
11A:						
Craigsville---------	---	---	---	Moderate	Moderate	Moderate
12B:						
Delanco-------------	---	---	---	High	High	High
12C:						
Delanco-------------	---	---	---	High	High	High
13C:						
Edneytown-----------	---	---	---	Moderate	Moderate	Moderate
13D:						
Edneytown-----------	---	---	---	Moderate	Moderate	Moderate
13E:						
Edneytown-----------	---	---	---	Moderate	Moderate	Moderate
14C:						
Edneytown-----------	---	---	---	Moderate	Moderate	Moderate
Peaks---------------	Paralithic bedrock	20-40	Strongly cemented	Low	Low	High
	Lithic bedrock	20-40	Indurated			
14D:						
Edneytown-----------	---	---	---	Moderate	Moderate	Moderate
Peaks---------------	Paralithic bedrock	20-40	Strongly cemented	Low	Low	High
	Lithic bedrock	20-40	Indurated			
14E:						
Edneytown-----------	---	---	---	Moderate	Moderate	Moderate
Peaks---------------	Paralithic bedrock	20-40	Strongly cemented	Low	Low	High
	Lithic bedrock	20-40	Indurated			
14F:						
Edneytown-----------	---	---	---	Moderate	Moderate	Moderate
Peaks---------------	Paralithic bedrock	20-40	Strongly cemented	Low	Low	High
	Lithic bedrock	20-40	Indurated			

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				
15B:						
Elioak	---	---	---	Moderate	High	Moderate
15C:						
Elioak	---	---	---	Moderate	High	Moderate
15D:						
Elioak	---	---	---	Moderate	High	Moderate
16C:						
Elioak	---	---	---	Moderate	High	Moderate
16D:						
Elioak	---	---	---	Moderate	High	Moderate
17B:						
Elsinboro	---	---	---	Moderate	Moderate	High
18C:						
Fauquier	Lithic bedrock	40-60	Indurated	Moderate	High	High
	Paralithic bedrock	40-60	Very strongly cemented			
18D:						
Fauquier	Paralithic bedrock	40-60	Very strongly cemented	Moderate	High	High
	Lithic bedrock	40-60	Indurated			
18E:						
Fauquier	Paralithic bedrock	40-60	Very strongly cemented	Moderate	High	High
	Lithic bedrock	40-60	Indurated			
19A:						
Galtsmill	---	---	---	Moderate	Low	Low
20D:						
Glenelg	---	---	---	Moderate	Low	High
21A:						
Hatboro	---	---	---	High	High	Moderate
22B:						
Hayesville	---	---	---	Moderate	Moderate	Moderate
22C:						
Hayesville	---	---	---	Moderate	Moderate	Moderate
22D:						
Hayesville	---	---	---	Moderate	Moderate	Moderate
22E:						
Hayesville	---	---	---	Moderate	Moderate	Moderate
23B:						
Hayesville	---	---	---	Moderate	Moderate	Moderate
23C:						
Hayesville	---	---	---	Moderate	Moderate	Moderate

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
23D:						
Hayesville----------	---	---	---	Moderate	Moderate	Moderate
23E:						
Hayesville----------	---	---	---	Moderate	Moderate	Moderate
24C:						
Hayesville----------	---	---	---	Moderate	Moderate	Moderate
24D:						
Hayesville----------	---	---	---	Moderate	Moderate	Moderate
24E:						
Hayesville----------	---	---	---	Moderate	Moderate	Moderate
25C:						
Hazel---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
25D:						
Hazel---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
25E:						
Hazel---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
26D:						
Hazel---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
26E:						
Hazel---------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
27B:						
Jackland------------	---	---	---	High	High	Low
27C:						
Jackland------------	---	---	---	High	High	Low
28B:						
Lew-----------------	---	---	---	Moderate	Moderate	High
29B:						
Lew-----------------	---	---	---	Moderate	Moderate	High
30C:						
Lew-----------------	---	---	---	Moderate	Moderate	High
30D:						
Lew-----------------	---	---	---	Moderate	Moderate	High
30E:						
Lew-----------------	---	---	---	Moderate	Moderate	High
31B:						
Littlejoe-----------	Paralithic bedrock	40-60	Strongly cemented	Moderate	High	High
31C:						
Littlejoe-----------	Paralithic bedrock	40-60	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				
32B:						
Minnieville	---	---	---	Moderate	High	Moderate
32C:						
Minnieville	---	---	---	Moderate	High	Moderate
32D:						
Minnieville	---	---	---	Moderate	High	Moderate
32E:						
Minnieville	---	---	---	Moderate	High	Moderate
33C:						
Myersville	Paralithic bedrock	40-60	Strongly cemented	Moderate	Moderate	Moderate
Catoctin	Lithic bedrock	20-40	Indurated	Low	High	Moderate
33D:						
Myersville	Paralithic bedrock	40-60	Strongly cemented	Moderate	Moderate	Moderate
Catoctin	Lithic bedrock	20-40	Indurated	Low	High	Moderate
33E:						
Myersville	Paralithic bedrock	40-60	Strongly cemented	Moderate	Moderate	Moderate
Catoctin	Lithic bedrock	20-40	Indurated	Low	High	Moderate
34C:						
Occoquan	Paralithic bedrock	40-60	Strongly cemented	Moderate	Moderate	High
34D:						
Occoquan	Paralithic bedrock	40-60	Strongly cemented	Moderate	Moderate	High
34E:						
Occoquan	Paralithic bedrock	40-60	Strongly cemented	Moderate	Moderate	High
35D:						
Occoquan	Paralithic bedrock	40-60	Strongly cemented	Moderate	Moderate	High
35E:						
Occoquan	Paralithic bedrock	40-60	Strongly cemented	Moderate	Moderate	High
36D:						
Peaks	Paralithic bedrock	20-40	Strongly cemented	Low	Low	High
	Lithic bedrock	20-40	Indurated			
Rock outcrop	Lithic bedrock	0-0	---	---	---	---

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				
36E:						
Peaks	Paralithic bedrock	20-40	Strongly cemented	Low	Low	High
	Lithic bedrock	20-40	Indurated			
Rock outcrop	Lithic bedrock	0-0	---	---	---	---
36F:						
Peaks	Paralithic bedrock	20-40	Strongly cemented	Low	Low	High
	Lithic bedrock	20-40	Indurated			
Rock outcrop	Lithic bedrock	0-0	---	---	---	---
37A:						
Pineywoods	Paralithic bedrock	40-60	Moderately cemented	High	High	High
38:						
Pits	Lithic bedrock	0-0	---	---	---	---
39C:						
Saunook	---	---	---	Moderate	Low	High
39D:						
Saunook	---	---	---	Moderate	Low	High
40C:						
Saunook	---	---	---	Moderate	Low	High
40D:						
Saunook	---	---	---	Moderate	Low	High
40E:						
Saunook	---	---	---	Moderate	Low	High
41B:						
Sketerville	---	---	---	Moderate	High	High
42C:						
Spriggs	Paralithic bedrock	20-40	Strongly cemented	Moderate	Low	Moderate
	Lithic bedrock	40-60	Indurated			
42D:						
Spriggs	Paralithic bedrock	20-40	Strongly cemented	Moderate	Low	Moderate
	Lithic bedrock	40-60	Indurated			
42E:						
Spriggs	Paralithic bedrock	20-40	Strongly cemented	Moderate	Low	Moderate
	Lithic bedrock	40-60	Indurated			
43A:						
Suches	---	---	---	---	High	Moderate

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				
44C:						
Sylco	Paralithic bedrock	20-40	Strongly cemented	Moderate	Low	Moderate
	Lithic bedrock	20-40	Indurated			
Sylvatus	Paralithic bedrock	10-20	Strongly cemented	Moderate	Moderate	Moderate
	Lithic bedrock	10-20	Indurated			
44D:						
Sylco	Paralithic bedrock	20-40	Strongly cemented	Moderate	Low	Moderate
	Lithic bedrock	20-40	Indurated			
Sylvatus	Paralithic bedrock	10-20	Strongly cemented	Moderate	Moderate	Moderate
	Lithic bedrock	10-20	Indurated			
44E:						
Sylco	Paralithic bedrock	20-40	Strongly cemented	Moderate	Low	Moderate
	Lithic bedrock	20-40	Indurated			
Sylvatus	Paralithic bedrock	10-20	Strongly cemented	Moderate	Moderate	Moderate
	Lithic bedrock	10-20	Indurated			
45E:						
Sylvatus	Paralithic bedrock	10-20	Strongly cemented	Moderate	Moderate	Moderate
	Lithic bedrock	10-20	Indurated			
Rock outcrop	Lithic bedrock	0-0	---	---	---	---
45F:						
Sylvatus	Paralithic bedrock	10-20	Strongly cemented	Moderate	Moderate	Moderate
	Lithic bedrock	10-20	Indurated			
Rock outcrop	Lithic bedrock	0-0	---	---	---	---
46B:						
Thurmont	---	---	---	Moderate	Moderate	High
46C:						
Thurmont	---	---	---	Moderate	Moderate	High
46D:						
Thurmont	---	---	---	Moderate	Moderate	High
47B:						
Thurmont	---	---	---	Moderate	Moderate	High
47C:						
Thurmont	---	---	---	Moderate	Moderate	High
47D:						
Thurmont	---	---	---	Moderate	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				
48. Udorthents						
49B: Unison	---	---	---	Moderate	High	Moderate
49C: Unison	---	---	---	Moderate	High	Moderate
49D: Unison	---	---	---	Moderate	High	Moderate
50B: Warminster	Paralithic bedrock	40-60	Strongly cemented	Moderate	High	Moderate
50C: Warminster	Paralithic bedrock	40-60	Strongly cemented	Moderate	High	Moderate
50D: Warminster	Paralithic bedrock	40-60	Strongly cemented	Moderate	High	Moderate
51A: Wingina	---	---	---	---	Low	Moderate
52B: Wintergreen	---	---	---	Moderate	High	Moderate
52C: Wintergreen	---	---	---	Moderate	High	Moderate
52D: Wintergreen	---	---	---	Moderate	High	Moderate
53B: Wintergreen	---	---	---	Moderate	High	Moderate
53C: Wintergreen	---	---	---	Moderate	High	Moderate
53D: Wintergreen	---	---	---	Moderate	High	Moderate
54C: Wintergreen	---	---	---	Moderate	High	Moderate
55A: Yogaville	---	---	---	High	Low	Moderate
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
Arcola	Fine-loamy, mixed, active, mesic Typic Hapludults
Batteau	Fine-loamy, mixed, active, thermic Fluvaquentic Hapludolls
Belvoir	Fine-loamy, mixed, semiactive, mesic Aquic Fragiudults
Buffstat	Fine, mixed, semiactive, mesic Typic Hapludults
Bugley	Loamy-skeletal, mixed, semiactive, mesic Lithic Dystrudepts
Catoctin	Loamy-skeletal, mixed, superactive, mesic Ruptic-Alfic Eutrudepts
Chatuge	Fine-loamy, mixed, semiactive, mesic Typic Endoaquults
Codorus	Fine-loamy, mixed, active, mesic Fluvaquentic Dystrudepts
Colleen	Fine, kaolinitic, mesic Typic Hapludults
Colvard	Coarse-loamy, mixed, active, nonacid, mesic Typic Udifluvents
Craigsville	Loamy-skeletal, mixed, superactive, mesic Fluventic Dystrudepts
Delanco	Fine-loamy, mixed, semiactive, mesic Aquic Hapludults
Edneytown	Fine-loamy, mixed, active, mesic Typic Hapludults
Elioak	Fine, kaolinitic, mesic Typic Hapludults
Elsinboro	Fine-loamy, mixed, semiactive, mesic Typic Hapludults
Fauquier	Fine, mixed, active, mesic Ultic Hapludalfs
Galtsmill	Coarse-loamy, mixed, active, thermic Fluventic Hapludolls
Glenelg	Fine-loamy, mixed, semiactive, mesic Typic Hapludults
Hatboro	Fine-loamy, mixed, active, nonacid, mesic Fluvaquentic Endoaquepts
*Hayesville	Fine, kaolinitic, mesic Typic Hapludults
Hazel	Coarse-loamy, mixed, active, mesic Typic Dystrudepts
Jackland	Fine, smectitic, mesic Aquic Hapludalfs
Lew	Loamy-skeletal, mixed, active, mesic Ultic Hapludalfs
Littlejoe	Fine, mixed, subactive, mesic Typic Hapludults
Minnieville	Fine, kaolinitic, mesic Typic Hapludults
Myersville	Fine-loamy, mixed, active, mesic Ultic Hapludalfs
Occoquan	Fine-loamy, mixed, semiactive, mesic Inceptic Hapludults
Peaks	Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
Pineywoods	Clayey over loamy, kaolinitic, mesic Kandic Albaquults
Saunook	Fine-loamy, mixed, superactive, mesic Humic Hapludults
Sketerville	Fine, kaolinitic, mesic Aquultic Hapludalfs
Spriggs	Fine-loamy, mixed, active, mesic Ultic Hapludalfs
Suches	Fine-loamy, mixed, semiactive, mesic Fluventic Dystrudepts
Sylco	Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
Sylvatus	Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts
Thurmont	Fine-loamy, mixed, active, mesic Oxyaquic Hapludults
Udorthents	Udorthents
Unison	Fine, mixed, semiactive, mesic Typic Hapludults
Warminster	Fine, mixed, semiactive, mesic Typic Hapludults
Wingina	Fine-loamy, mixed, active, thermic Fluventic Hapludolls
Wintergreen	Fine, mixed, subactive, mesic Typic Paleudults
Yogaville	Fine-loamy, mixed, active, mesic Fluvaquentic Endoaquolls

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