United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with United States Forest Service, Vermont Agency of Natural Resources, Vermont Agricultural Experiment Station, and Vermont Center for Geographic Information

Soil Survey of Washington County, Vermont

How To Use This Soil Survey

General Soil Map

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

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

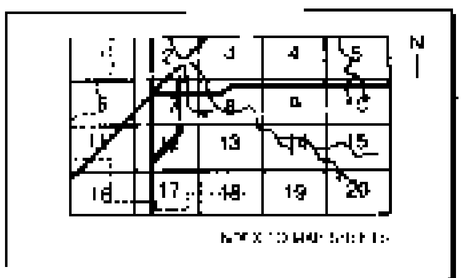
Detailed Soil Maps

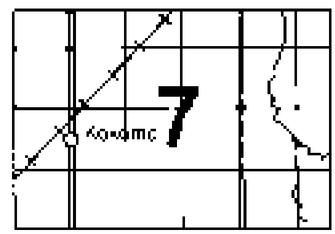
The detailed soil maps can be useful in planning the use and management of small areas.

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

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

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





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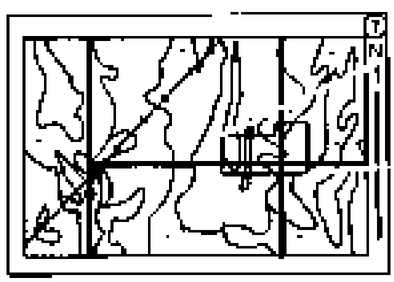

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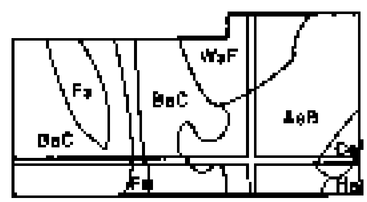

AREA OF INTEREST

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

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

Major fieldwork for this soil survey was completed in 1990. Soil names and descriptions were approved in 1996. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1990. This survey was made cooperatively by the Natural Resources Conservation Service and the United States Forest Service, Vermont Agency of Natural Resources, Vermont Agricultural Experiment Station, and the Vermont Center for Geographic Information. The survey is part of the technical assistance furnished to the Winooski Natural Resources Conservation District.

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

Cover: Farming on terraces and flood plains in an area of the Salmon-Adams-Buxton map unit in the Winooski River Valley.

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

Contents

Issued 2004

Foreword

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

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

Various 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 that affect various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

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

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

Francis M. Keeler
State Conservationist
Natural Resources Conservation Service

Soil Survey of
Washington County, Vermont

By Stephen H. Gourley, Bradley Wheeler, Gregory Howard, and Roger DeKett

Fieldwork by Stephen H. Gourley, Bradley Wheeler, Gregory Howard, and George Allen

United States Department of Agriculture, Natural Resources Conservation Service,
in cooperation with
United States Forest Service, Vermont Agency of Natural Resources, Vermont
Agricultural Experiment Station, and Vermont Center for Geographic Information

This soil survey updates the reconnaissance soil survey of Vermont published in 1930 (Bureau of Chemistry and Soils, 1930). It provides additional information and has larger maps, which show the soils in greater detail.

General Nature of the County

Washington County is in the north central part of Vermont. It is bordered by Lamoille County on the north, Caledonia County on the north and northeast, Orange County on the southeast, Addison County on the south and southwest, and Chittenden County on the west (fig. 1). The county occupies 444,800 acres (695 square miles), of which 440,554 acres (688.4 square miles) are land and 4,246 acres (6.6 square miles) are covered by water. The county seat and state capital is the city of Montpelier, which is located near the center of the county. The highest point in the county is the summit of Mount Ellen in Warren at 4,083 feet and the lowest spot is along the Winooski River in Duxbury at about 370 feet.

There are 42 different kinds of soils in Washington County. They vary widely in slope, texture, drainage, depth to bedrock, and other characteristics.

The soils on the upper parts and tops of hills and mountains are limited for many uses by depth to bedrock and steep or very steep slopes. Soils on knolls and the lower parts of hills and mountains are suitable for many uses, but wetness and depth to bedrock may be limitations. Soils in the stream valleys are suitable for many uses, but flooding and wetness may be limitations.

This soil survey provides updated information to a soil survey of Vermont published in 1930 and provides maps that show the soils in greater detail.

The descriptions, names and boundaries of some of the soils in this survey do not agree with those of adjacent soils in Addison, Chittenden, Lamoille, and Orange counties. The differences are the result of changes and advancements in the methods of soil classification and in the intensity of mapping.

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Montpelier, Vermont in the period 1951 to 1984. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter, the average temperature is 18 degrees F and the average daily minimum temperature is 9 degrees. The lowest temperature on record, which occurred on January 24, 1981, is -34 degrees. In summer, the average temperature is 64 degrees and the average daily maximum temperature is 76 degrees. The highest recorded temperature, which occurred on July 20, 1977, is 97 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

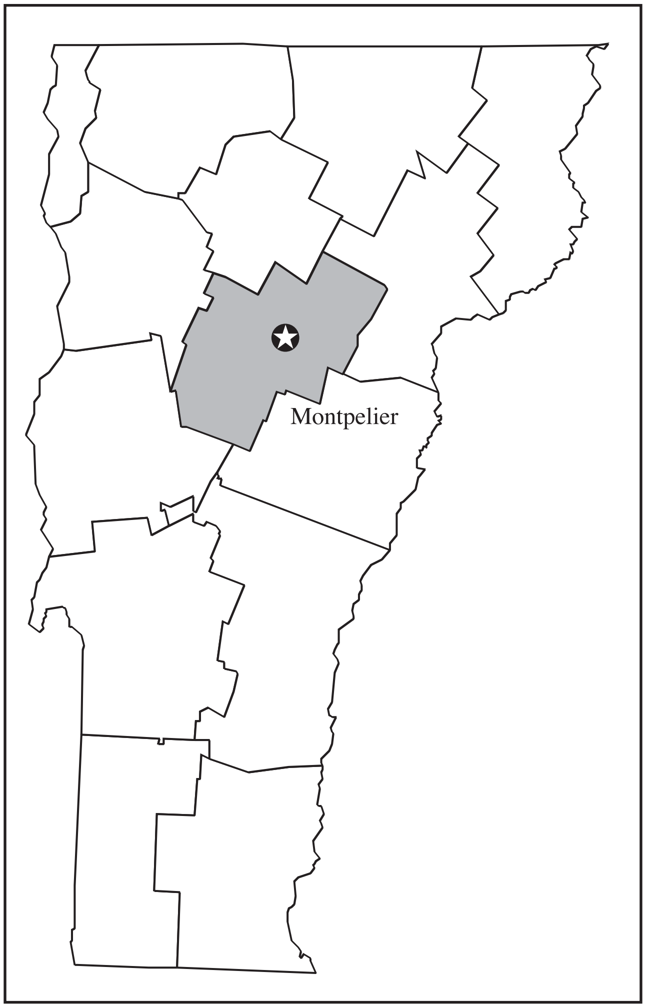

Figure 1.—Location of Washington County in Vermont.

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 total annual precipitation is about 34 inches. Of this, 18 inches, or 55 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 13 inches. The heaviest 1-day rainfall during the period of record was 3.9 inches on May 12, 1981. Thunderstorms occur on about 24 days each year, and most occur in the summer.

The average seasonal snowfall is about 100 inches. The greatest snow depth at any one time during the period of record was 70 inches. On the average, 79 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

The average relative humidity in mid-afternoon is about 60 percent. Humidity is higher at night, and the average at dawn is about 75 percent. The sun shines 60 percent of the time possible in summer and 30 percent in winter. The prevailing wind is from the south. Average windspeed is highest, 10 miles per hour, in the winter.

Drainage

Most of Washington County is drained by the Winooski River and its tributaries. The Winooski River has its source in the northeastern corner of the county and it flows southwest to East Montpelier, where it shifts to the northwest and leaves the county as the border between Duxbury and Waterbury. The main tributaries that flow into the Winooski River in Washington County and the parts of the county that they drain are as follows: Stevens Branch in the southeast, Pekin Brook in the northeast, Kingsbury Branch in the northeast and central, Dog River in the south central, North Branch in the north central and central, Thatcher Brook and Little River in the northwest and Mad River in the southwest and west central parts of Washington County.

Farming

In 1997 there were 344 farms in Washington County covering 56,290 acres. Of the 342 farms, 178 farm operators listed farming as their principle occupation. There were 122 farms that listed sales of less than $2,000 and 205 farms that listed sales of less than $10,000 (USDA, 1997).

In 1997, there were 233 farms that ranged in size from 50 to 499 acres. There was 23,166 acres in crop land. The major crops were alfalfa, corn silage, green chop, and hay. Other crops include apples, oats, and vegetables (USDA, 1997).

In 1997, there were 160 farms that had livestock or poultry. Milk cows were the predominant livestock. Other livestock included beef cows, poultry, sheep, and pigs (USDA, 1997).

The number of farms in the county has decreased from 467 in 1969 to 344 in 1997. The number of acres in farms has also decreased from 110,867 to 56,290. Similarly, the number of milk cows in Washington County has decreased from 9,037 cows on 263 farms in 1969 to 4,554 cows on 76 farms in 1997 (U.S. Department of Commerce, Bureau of the Census, 1977 and 1983; USDA, 1997).

Flooding

Urban development on the floodplain is a concern in Washington County. Many population centers are located in flood prone areas. At least 7 times since 1900, sections of town centers, cities, and villages have been flooded, with the worst, by far being in November of 1927. The 1927 flood is considered a 1 in 500 year flood. This report shows areas that should flood at least once in 100 years. Other areas may flood under extreme circumstances, such as large ice jams, extreme amounts of rain, such as in June 1984, or very rapid snowmelt. Several flood control dams have been built since 1927. Some areas that flooded at this time may not be prone to flooding any longer.

Geology-Bedrock

Most of Washington County is underlain by metamorphic bedrock. A small area of igneous bedrock is found in the eastern edge of the county. The bedrock is formed into two major geologic structures (Christman and Secor, 1961; Konig, 1961; Murthy, 1957).

The Green Mountain Anticlinorium makes up the western part of Washington County and the eastern part of the county is on the Connecticut Valley–Gaspe Synclinorium.

Bedrock throughout the county is mainly Lower Cambrian to Middle Devonian aged. It becomes progressively younger form west to east across the county. There are several major bedrock formations that are oriented in a north-south manner. The western three-fifths of the county is mainly underlain by impure schist and phyllite of the Underhill, Hazen Notch, Pinney Hollow, Ottauquechee, Stowe, Missisquoi and Moretown Formations. The eastern two-fifths of the county is mainly underlain by impure crystalline limestone and phyllite of the Northfield, Waits River, and Gile Mountain Formations. A pluton of undifferentiated granite rocks, which is part of the New Hampshire Plutonic Series, is on the eastern edge of the county. This is the youngest bedrock in the county (Doll, Cady, Thompson, Billings; 1961).

Glacial Geology

Glaciation has played a key role in shaping the landscape of Washington County (Stewart, 1961). The last glacier to enter Washington County was the Burlington Drift. This ice sheet advanced from the northwest to the eastern part of the county with an arm about six or eight miles wide extending down through Barre. Before that, an ice advance now called the Shelburne Drift covered all but the southern tip of Vermont. This glacier was preceded by the Bennington Drift which extended beyond Vermont, probably covering all of New England. Evidence of these three glacial advances have been recorded in geologic literature for well over 100 years (Stewart, MacClintock; 1969). As these huge sheets of ice pushed southward, they tore loose vast quantities of boulders, stones and soil material from hills, mountains and valleys alike. Geologists estimate that before the glaciers began invading this area, the Green Mountains were much higher than they are today.

As the glaciers melted, they dropped the mixed up soil materials they had picked up earlier. This material is now referred to as glacial till. It is generally found to be thinner on the peaks of mountains and higher hills and thicker on the sides of these hills and mountains and on lower elevation hills and knolls.

As the glaciers melted, streams formed in the ice. These streams carried soil material and gravel and deposited it on the landscape. As this material was deposited, it was sorted out as the heaviest particles fell out of the water first and the lightest material was carried further. These glaciofluvial deposits are found primarily in the valleys of Washington County. Some types of glaciofluvial deposits are kames and terraces.

A high level glacial lake that was created by an ice dam to the northwest of the county dominated Washington County after the Burlington Drift receded. This lake extended to the edges of the county along the Mad River, the Dog River, the North Branch of the Winooski River, the Winooski River, the Kingsbury Branch of the Winooski River, Pekin Branch, the Stevens Branch of the Winooski River and Thatcher Brook. In what is now the North Montpelier area, this lake was over five miles wide. Along most streams it was around two miles wide. After the ice receded north, this lake drained, but when the ice front was in the St. Lawrence Valley, it displaced a high volume of water which brought up the level of water in Vermont. A large lake that covered much of the western part of Vermont and branched into Washington County was the result. This lake is now referred to as Lake Vermont (Stewart, MacClintock, Doll; 1970). The soils we now see that show evidence of these lakes are loamy and clayey glaciolacustrine sediments on plains that have since been dissected by streams. After Lake Vermont drained out of the county, the rivers began forming the floodplains that exist today.

History and Population Trends

The first permanent white settlement in Washington County was established in 1781 in what is now the town of Middlesex. Between the years of 1796 and 1811, the area that is now Washington County was split up between four counties: Addison, Caledonia, Chittenden, and Orange (Child, 1889). In 1810, the area was incorporated into a separate county. It was named Jefferson County. Just over a year later, in 1811, it became an organized county. Jefferson County existed until late in the year of 1814, when its name was changed to Washington County (Thompson, 1842).

There was a population of around 23,506 people in Washington County in 1840. During this period, the major industry was farming, but in Barre and Montpelier and along some of the rivers, industries such as foundries, machine shops, grist mills and granite works were employing many people (Child, 1889). The population increased slowly until 1960. It was 41,733 in 1930, 42,870 in 1950, and 42,860 in 1960. The population in 1978 was 47,659, an increase of more than 11 percent in 18 years.

In 1999, the population of Washington County was 56,411. The population is spread throughout 18 towns, 4 incorporated villages, and 2 cities. The city of Montpelier is the county seat and state capital. In 1999, the town of Roxbury had the smallest population at 598 and the city of Barre had the largest at 9,392 (Vermont Department of Health, 2001).

Transportation and Industry

Interstate highway 89, which runs northwest to southeast, connects Washington County with the northeast states and Canada. U.S. Route 2 runs east to west and U.S. Route 302 runs east from the county. There is a good system of asphalt state highways. Many of the secondary roads are gravel topped.

The Central Vermont Railroad runs through the county in the Dog River and Winooski River Valleys. A local line connects Barre and Montpelier.

There is a small commercial airport in Berlin.

Many people are employed by the state government. Recreation and farming are major industries. Other important industries include manufacturing, the granite quarries, and woodland production.

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 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.

General Soil Map Units

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

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

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

Soil Descriptions

1. Stratton-Ricker-Londonderry

Very shallow to moderately deep to bedrock, well drained, moderately steep to very steep soils on mountains (fig. 2).

Setting

Landform: Mountains
Slope Range: 15 to 70 percent

Composition

Extent of the association: 4 percent of the soil survey area
Extent of the soils in the association:
Stratton soils—24 percent
Ricker soils—23 percent
Londonderry soils—17 percent
Minor soils—36 percent

Soil Properties and Qualities

Stratton
Depth class to bedrock: Shallow
Drainage class: Well drained
Position on the landform: Shoulders and backslopes
Parent material: Loamy friable glacial till
Slope class: Moderately steep to very steep

Ricker
Depth class to bedrock: Very shallow to moderately deep
Drainage class: Well drained
Position on the landform: Summits
Parent material: Organic
Slope class: Very steep

Londonderry
Depth class to bedrock: Very shallow
Drainage class: Well drained
Position on the landform: Summits and shoulders
Parent material: Loamy friable glacial till
Slope class: Very steep

Minor Soils
- Mountains—Glebe soils on shoulders and backslopes and Sisk soils on backslopes
- Mountains and foothills—Hogback soils on summits and shoulders and Rawsonville soils on shoulders and backslopes

Use and Management

Major uses: Woodland
Management Concerns: Depth to bedrock, slope

2. Hogback-Rawsonville-Houghtonville

Shallow to very deep to bedrock, very deep to dense basal till, well drained, moderately steep to very steep soils on mountains and foothills

Setting

Landform: Mountains and foothills
Slope Range: 15 to 70 percent

Composition

Extent of the association: 14 percent of the soil survey area

Figure 2.—Recreation in an area of Stratton-Ricker-Londonderry and Hogback-Rawsonville-Houghtonville in the background. Woodland in an area of Colonel-Berkshire-Peru in the foreground.

Extent of the soils in the association:
Hogback soils—31 percent
Rawsonville soils—23 percent
Houghtonville soils—9 percent
Minor soils—37 percent

Soil Properties and Qualities

Hogback
Depth class to bedrock: Shallow
Drainage class: Well drained
Position on the landform: Summits and shoulders
Parent material: Loamy friable glacial till
Slope class: Moderately steep to very steep

Rawsonville
Depth class to bedrock: Moderately deep
Drainage class: Well drained
Position on the landform: Shoulders and backslopes
Parent material: Loamy friable glacial till
Slope class: Moderately steep to very steep

Houghtonville
Depth class to bedrock: Very deep
Depth class to dense basal till: Very deep
Drainage class: Well drained
Position on the landform: Backslopes, footslopes
Parent material: Loamy friable glacial till
Slope class: Moderately steep to very steep

Minor soils
- Mountains—Ricker soils on summits, Londonderry soils on summits and shoulders, Stratton and Glebe soils on shoulders and backslopes
- Mountains and foothills—Mundal soils on backslopes and footslopes

• Hills and knolls—Lyman soils on summits and shoulders, Tunbridge soils on shoulders and backslopes, and Cabot soils on footslopes, toeslopes, and in drainageways

Use and Management

Major uses: Woodland
Management Concerns: Depth to bedrock (Hogback and Rawsonville soils), slope

3. Colonel-Berkshire-Peru

Very deep to bedrock, shallow to very deep to dense basal till, well drained to somewhat poorly drained, gently sloping to very steep soils on hills and knolls

Setting

Landform: Hills and knolls
Slope Range: 3 to 60 percent

Composition

Extent of the association: 15 percent of the soil survey area
Extent of the soils in the association:
Colonel soils—25 percent
Berkshire soils—19 percent
Peru soils—13 percent
Minor soils—43 percent

Soil Properties and Qualities

Colonel
Depth class to bedrock: Very deep
Depth class to dense basal till: Shallow or moderately deep
Drainage class: Somewhat poorly drained
Position on the landform: Footslopes
Parent material: Loamy dense basal till
Slope class: Gently sloping to steep

Berkshire
Depth class to bedrock: Very deep
Depth class to dense basal till: Very deep
Drainage class: Well drained
Position on the landform: Backslopes
Parent material: Loamy friable glacial till
Slope class: Moderately steep to very steep

Peru
Depth class to bedrock: Very deep
Depth class to dense basal till: Moderately deep
Drainage class: Moderately well drained
Position on the landform: Backslopes
Parent material: Loamy dense basal till
Slope class: Moderately steep to steep

Minor Soils
• Mountains and foothills—Hogback soils on summits and shoulders, Rawsonville soils on shoulders and backslopes, Houghtonville and Mundal soils on backslopes and footslopes
• Hills and knolls—Lyman soils on summits and shoulders, Tunbridge soils on shoulders and backslopes, Cabot soils on footslopes, toeslopes, and in drainageways, and Peacham soils in depressions and drainageways
• Kames and terraces—Colton soils
• Bogs and swamps—Markey soils, Rifle soils, and Wonsqueak soils

Use and Management

Major uses: Woodlands, farming in cleared areas
Management Concerns: Wetness and depth to dense basal till (Peru and Colonel soils), slope

4. Tunbridge-Lyman-Peru

Shallow to very deep to bedrock, moderately deep to very deep to dense basal till, somewhat excessively drained to moderately well drained, gently sloping to very steep soils on hills and knolls (fig. 3).

Setting

Landform: Hills and knolls
Slope Range: 3-60 percent

Composition

Extent of the association: 30 percent of the soil survey area
Extent of the soils in the association:
Tunbridge soils—34 percent
Lyman soils—22 percent
Peru soils—11 percent
Minor soils—33 percent

Soil Properties and Qualities

Tunbridge soils
Depth class to bedrock: Moderately deep
Drainage class: Well drained
Position on the landform: Shoulders and backslopes
Parent material: Loamy friable glacial till
Slope class: Strongly sloping to very steep

Lyman soils
Depth class to bedrock: Shallow
Drainage class: Somewhat excessively drained

Figure 3.—Woodland in an area of Tunbridge-Lyman-Peru in the background. Hayland in an area of Colton-Machias-Stetson in the foreground.

Position on the landform: Summits and shoulders
Parent material: Loamy friable glacial till
Slope class: Strongly sloping to very steep

Peru soils
Depth class to bedrock: Very deep
Depth class to dense basal till: Moderately deep
Drainage class: Moderately well drained
Position on the landform: Backslopes
Parent material: Loamy dense basal till
Slope class: Gently sloping to very steep

Minor Soils
- Hills and knolls—Hubbardton soils and Taconic soils on summits and shoulders, Berkshire soils on backslopes, Colonel soils on footslopes, and Cabot soils on footslopes, toeslopes, and in drainageways
- Kames and terraces—Colton soils

Use and Management

Major uses: Woodland, farming on cleared areas
Management Concerns: Slope, depth to bedrock (Tunbridge soils and Lyman soils), depth to dense basal till and wetness (Peru soils)

5. Cabot-Vershire-Dummerston

Moderately deep to very deep to bedrock, shallow to very deep to dense basal till, well drained to poorly drained, soils on hills and knolls (fig. 4).

Setting

Landform: Hills and knolls
Slope Range: 0-60 percent

Composition

Extent of the association: 27 percent of the soil survey area
Extent of the soils in the association:
Cabot soils—29 percent
Vershire soils—21 percent
Dummerston soils—16 percent
Minor soils—34 percent

Soil Properties and Qualities

Cabot soils
Depth class to bedrock: Very deep
Depth class to dense basal till: Shallow
Drainage class: Poorly drained
Position on the landform: Toeslopes, footslopes, and in drainageways
Parent material: Loamy dense basal till
Slope class: Nearly level to strongly sloping

Vershire soils
Depth class to bedrock: Moderately deep
Drainage class: Well drained
Position on the landform: Shoulders and backslopes
Parent material: Loamy friable glacial till
Slope class: Gently sloping to very steep

Dummerston soils
Depth class to bedrock: Very deep
Depth class to dense basal till: Very deep
Drainage class: Well drained
Position on the landform: Backslopes
Parent material: Loamy friable glacial till
Slope class: Gently sloping to very steep

Figure 4.—Hayland in an area of Cabot-Vershire-Dummerston.

Figure 5.—Hayland on terraces in an area of the Salmon-Adams-Buxton along the Winooski River.

Minor Soils

- Hills and knolls—Glover soils on summits and shoulders, Buckland soils on footslopes, and Peacham soils in depressions and drainageways
- Bogs or swamps—Rifle soils, Markey soils, and Wonsqueak soils

Use and Management

Major uses: Woodland, farming in cleared areas
Management Concerns: Slope, depth to rock (Vershire soils), wetness and depth to dense basal till (Cabot soils)

6. Salmon-Adams-Buxton

Very deep to bedrock, very deep to dense basal till, somewhat excessively drained to moderately well drained, soils on terraces and dissected lakeplains (fig. 5).

Setting

Landform: Terraces and dissected lakeplains
Slope Range: 0 to 60 percent

Composition

Extent of the association: 7 percent of the soil survey area
Extent of the soils in the association:
Salmon soils—20 percent
Adams soils—18 percent
Buxton soils—13 percent
Minor soils—49 percent

Soil Properties and Qualities

Salmon soils
Depth class to bedrock: Very deep
Depth class to dense basal till: Very deep

Drainage class: Well drained
Position on the landform: Dissected lakeplains and terraces
Parent material: Loamy lacustrine
Slope class: Gently sloping to very steep

Adams soils
Depth class to bedrock: Very deep
Depth class to dense basal till: Very deep
Drainage class: Somewhat excessively drained
Position on the landform: Terraces
Parent material: Sandy outwash
Slope class: Nearly level to very steep

Buxton soils
Depth class to bedrock: Very deep
Depth class to dense basal till: Very deep
Drainage class: Moderately well drained
Position on the landform: Dissected lakeplains
Parent material: Clayey lacustrine
Slope class: Moderately steep to very steep

Minor Soils
- Dissected lake plains—Adamant soils, Lamoine soils, Nicholville soils, Scantic soils
- Kames and terraces—Colton soils, Machias soils, and Grange soils
- Floodplains—Rumney soils, Sunday soils, and Ondawa soils

Use and Management

Major uses: Farming, woodland
Management Concerns: Slope, droughtiness (Adams soils), wetness (Buxton soils)

7. Colton-Machias-Stetson

Very deep to bedrock, very deep to dense basal till, excessively drained to moderately well drained, soils on kames and terraces

Setting

Landform: Kames and terraces
Slope Range: 0 to 60 percent

Composition

Extent of the association: 3 percent of the soil survey area
Extent of the soils in the association:
Colton soils—38 percent
Salmon soils—12 percent
Adams soils—10 percent
Minor soils—40 percent

Soil Properties and Qualities

Colton soils
Depth class to bedrock: Very deep
Depth class to dense basal till: Very deep
Drainage class: Excessively drained
Position on the landform: Kames and terraces
Parent material: Sandy outwash
Slope class: 0 to 60 percent

Machias soils
Depth class to bedrock: Very deep
Depth class to dense basal till: Very deep
Drainage class: Moderately well drained
Position on the landform: Kames and terraces
Parent material: Loamy over sandy outwash
Slope class: Nearly level to strongly sloping

Stetson soils
Depth class to bedrock: Very deep
Depth class to dense basal till: Very deep
Drainage class: Well drained
Position on the landform: Kames and terraces
Parent material: Sandy outwash
Slope class: Gently sloping to very steep

Minor Soils
- Dissected lakeplains—Buxton soils, Nicholville soils, and Salmon soils
- Terraces or kames—Adams soils and Grange soils
- Floodplains—Sunny soils, Waitsfield soils, and Weider soils

Use and Management

Major uses: Farming, woodland, sand and gravel
Management Concerns: Slope and droughtiness (Colton soils and Stetson soils), wetness (Machias soils)

Detailed Soil Map Units

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

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

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

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

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

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

Soils of one series can differ in texture of the surface layer, slope, stoniness, 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, Cabot silt loam, 0 to 8 percent slopes, very stony is a phase of the Cabot series.

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

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Stratton-Glebe complex, 35 to 60 percent slopes, very rocky is an example.

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

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Pits, quarry-Dumps, mine complex is an example.

Table 4 gives the acreage and proportionate extent of each map unit. 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 or miscellaneous areas.

Soil Descriptions

2A—Ondawa fine sandy loam, 0 to 3 percent slopes

This soil is very deep, nearly level, and well drained. It is on slightly elevated areas on flood plains that are frequently flooded by stream overflow for brief periods. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown fine sandy loam

Subsoil:
8 to 14 inches, dark grayish brown fine sandy loam
14 to 24 inches, olive brown fine sandy loam

Substratum:
24 to 30 inches, olive brown loamy fine sand
30 to 38 inches, olive brown fine sand
38 to 65 inches, olive brown loamy fine sand

Included with this soil in mapping are small areas of poorly drained Rumney soils, excessively drained Sunday soils, and poorly drained Sunny soils. Rumney soils and Sunny soils are in depressions. Sunday soils are adjacent to rivers and streams. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Waitsfield soils. Waitsfield soils are on higher positions on the flood plains. This soil makes up about 5 percent of this map unit.

Also included are some areas that have cobbles covering up to 3 percent of the soil surface, fine sandy loam textures in the substratum or greater than 15 percent rock fragments in the substratum.

Soil Properties

Permeability: moderate or moderately rapid in the solum, rapid in the substratum
Available water capacity: moderate
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are cleared and used for silage corn, hay, and pasture. Some areas are wooded.

This map unit is well suited to cultivated crops. Erosion is a hazard and flooding is a concern during periods of high rainfall. Flooding is of short duration and usually occurs in the spring, which may delay tillage. Using stubble mulch and growing cover crops are practices that help control erosion caused by floodwaters. Land shaping to provide good surface drainage will allow the soil to be tilled soon after flooding. Streambanks should be maintained in permanent protective cover to help control streambank erosion.

This map unit is well suited to hay and pasture. Erosion is a hazard and flooding is a concern during periods of high rainfall. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion caused by floodwater.

The potential productivity of this map unit is moderately low for sugar maple. It has few limitations for producing and harvesting timber.

This map unit is unsuited for dwellings and septic tank absorption fields because of flooding.

The capability subclass is 1.

3A—Rumney fine sandy loam, 0 to 2 percent slopes

This soil is very deep, nearly level, and poorly drained. It is on lower positions on flood plains that are frequently flooded by stream overflow for brief periods. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 7 inches, very dark grayish brown fine sandy loam, light brownish gray dry

Subsoil:

7 to 27 inches, very dark grayish brown mottled fine sandy loam

Substratum:

27 to 65 inches, dark grayish brown mottled gravelly sand

Included with this soil in mapping are small areas of poorly drained Sunny soils. Sunny soils are on similar landscape positions as Rumney soils. It makes up about 5 percent of this map unit. Also included are small areas of well drained Ondawa soils. Ondawa soils are on slightly elevated areas. This soil makes up about 10 percent of this map unit.

Soil Properties

Permeability: moderate or moderately rapid in the solum, rapid in the substratum
Available water capacity: moderate
Soil reaction: very strongly acid to slightly acid (4.5-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: at 0 to 1.5 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C

Most areas of this map unit are cleared and are used for hay and pasture. Some areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. Flooding and the seasonal high water table are concerns during periods of high rainfall. Flooding is of short duration and usually occurs in the spring, which may delay spring tillage. Using stubble mulch and growing cover crops are practices that help control erosion caused by floodwaters. Land shaping to provide good surface drainage helps to dry the soil after flooding. Streambanks should be maintained in permanent protective cover to help control streambank erosion.

This map unit is well suited to hay and pasture. Erosion is a hazard. Flooding and the seasonal high water table are concerns during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion caused by flood water. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Seedling mortality and windthrow are hazards. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. The use of special planting stock will help minimize seedling mortality during wet spring months. Trees are commonly subject to windthrow because root growth is limited by the seasonal high water table and firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited as a site for dwellings or for septic tank absorption fields because of flooding.

The capability subclass is 4w.

4A—Sunny silt loam, 0 to 2 percent slopes

This soil is very deep, nearly level, and poorly drained. It is on the lowest positions on flood plains that are frequently flooded by stream overflow for brief periods. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 8 inches, very dark grayish brown silt loam, light brownish gray, dry

Substratum:

8 to 14 inches, dark gray mottled silt loam
14 to 34 inches, olive gray mottled silt loam
34 to 49 inches, olive gray, mottled loamy sand
49 to 65 inches, olive gray gravelly sand

Included with this soil in mapping are small areas of poorly drained Grange soils and poorly drained Rumney soils. Grange soils are on slightly elevated areas. Rumney soils are on similar landscape positions as Sunny soils. These soils make up about 10 percent of this map unit. Also included are small areas of poorly drained Scantic soils. Scantic soils are on slightly elevated areas. This soil makes up about 5 percent of this map unit.

Also included are some areas that have silt loam textures in the lower part of the substratum.

Soil Properties

Permeability: moderate through the upper part of the substratum, rapid in the lower part of the substratum
Available water capacity: moderate

Soil reaction: strongly acid to slightly acid (5.1-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: at 0 to 1.5 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C

Most areas of this map unit are cleared and used for hay and pasture. Some areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. Flooding and the seasonal high water table are concerns during periods of high rainfall. Flooding is of short duration and usually occurs in the spring, which may delay spring tillage. Using stubble mulch and growing cover crops are practices that help control erosion by floodwaters. Land shaping to provide good surface drainage helps to dry the soil after flooding. Streambanks should be maintained in permanent protective cover to help control streambank erosion.

This map unit is well suited to hay and pasture. Erosion is a hazard. Flooding and the seasonal high water table are concerns during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion caused by flood water. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is very low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Seedling mortality and windthrow are hazards. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. The use of special planting stock will help minimize seedling mortality during wet spring months. Trees are commonly subject to windthrow because root growth is limited by the seasonal high water table and firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited as a site for dwellings or for septic tank absorption fields because of flooding and poorly drained soils.

The capability subclass is 4w, undrained and 3w, drained.

9A—Rifle muck, 0 to 2 percent slopes

This soil is very deep, nearly level, and very poorly drained. It is in marshes and swamps. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 6 inches, black broken faced and dark reddish brown rubbed and pressed muck, primarily from herbaceous plants

Bottom layer:
6 to 65 inches, dark brown broken faced and dark reddish brown rubbed and pressed mucky peat, primarily from herbaceous plants

Included with this soil in mapping are small areas of very poorly drained Markey soils, very poorly drained Wonsqueak soils, and very poorly drained organic soils with limnic layers in the bottom tier. These soils are on similar landscape positions as the Rifle soils. These soils make up about 15 percent of this map unit.

Also included are some areas that have dominantly muck or peat soil materials.

Soil Properties

Permeability: moderately slow to moderately rapid in the surface layer, moderate or moderately rapid below
Available water capacity: very high
Soil reaction: moderately acid to neutral (5.6-7.3)
Depth to Bedrock: more than 65 inches
Depth to water table: within 0.5 feet below the surface from January to December
Frost action: high
Hydrologic Group: D
Ponding: ponded to 1 foot above the surface from January to December

Most areas of this map unit are in native vegetation and used for wildlife habitat. Some areas are wooded.

This map unit is unsuited for most uses because of very poorly drained soils and the hazard of ponding.

The capability subclass is 7w.

14B—Colonel fine sandy loam, 3 to 8 percent slopes

This soil is very deep, gently sloping, and somewhat poorly drained. It is on footslopes of knolls and on till plains. Stones cover less than 0.1 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown fine sandy loam

Subsoil:
9 to 16 inches, dark yellowish brown mottled fine sandy loam

Substratum:
16 to 60 inches, olive mottled gravelly sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Tunbridge soils. Cabot soils are on toeslopes and in depressions and drainageways. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Peru soils. Berkshire soils and Peru soils are on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil, sandy textures in the substratum, a friable substratum or slopes of less than 3 percent.

Soil Properties

Permeability: moderate in the solum, moderately slow or slow in the firm substratum
Available water capacity: low
Soil reaction: very strongly acid to slightly acid (4.5-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: perched at 0.5 to 2.0 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 10 to 30 inches

Most areas of this map unit are cleared and used for hay and pasture. Some areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Windthrow is a hazard. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow hazard.

The seasonal high water table is the main limitation if this map unit is used as a site for dwellings. A suitable fill material is needed to raise the existing grade of the site if this map unit is used as a site for dwellings. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table and the slow or moderately slow permeability of the firm substratum are the main limitations if this map unit is used for septic tank absorption fields. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 3w.

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

This soil is very deep, strongly sloping, and somewhat poorly drained. It is on footslopes of knolls and hills. Stones cover less than 0.1 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown fine sandy loam

Subsoil:
9 to 16 inches, dark yellowish brown mottled fine sandy loam

Substratum:
16 to 60 inches, olive mottled gravelly sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Tunbridge soils. Cabot soils are on toeslopes and in depressions and drainageways. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Peru soils. Berkshire soils and Peru soils are on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil, sandy textures in the substratum, or a friable substratum.

Soil Properties

Permeability: moderate in the solum, moderately slow or slow in the firm substratum
Available water capacity: low
Soil reaction: very strongly acid to slightly acid (4.5-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: perched at 0.5 to 2.0 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 10 to 30 inches

Most areas of this map unit are cleared and used for hay and pasture. Some areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Windthrow is a hazard. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow hazard.

The seasonal high water table and strong slopes are the main limitations if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table, strong slopes and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 3e.

14D—Colonel fine sandy loam, 15 to 25 percent slopes

This soil is very deep, moderately steep, and somewhat poorly drained. It is on footslopes of hills. Stones cover less than 0.1 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown fine sandy loam

Subsoil:
9 to 16 inches, dark yellowish brown mottled fine sandy loam

Substratum:
16 to 60 inches, olive mottled gravelly sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Tunbridge soils. Cabot soils are on toeslopes and in depressions and drainageways. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Peru soils. Berkshire soils and Peru soils are on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil, sandy textures in the substratum or a friable substratum.

Soil Properties

Permeability: moderate in the solum, moderately slow or slow in the firm substratum

Available water capacity: low
Soil reaction: very strongly acid to slightly acid (4.5-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: perched at 0.5 to 2.0 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 10 to 30 inches

Most areas of this map unit are cleared and used for hay and pasture. Some areas are wooded.

This map unit is poorly suited to cultivated crops. The erosion hazard and slope severely limit the use of this map unit for cultivated crops. The slope also limits equipment use. The seasonal high water table is a concern during periods of high rainfall. The use of this map unit for long-term hay or pasture is effective in controlling erosion.

This map unit is moderately suited to hay and pasture. Erosion is a hazard and slope limits the use of equipment. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

The main limitations if this map unit is used as a site for dwellings are the seasonal high water table and moderately steep slopes. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent. The seasonal high water table, moderately steep slopes, and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction, such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 4e.

17A—Cabot silt loam, 0 to 3 percent slopes

This soil is very deep, nearly level, and poorly drained. It is on toeslopes of knolls and on till plains and in drainageways. Stones cover less than 0.1 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 4 inches, very dark grayish brown silt loam

Subsoil:
4 to 11 inches, dark grayish brown mottled channery very fine sandy loam

Substratum:
11 to 23 inches, olive mottled channery silt loam
23 to 60 inches, olive gray mottled channery silt loam

Included with this soil in mapping are small areas of very poorly drained Peacham soils. Peacham soils are in depressions. This soil makes up about 5 percent of this map unit. Also included are small areas of somewhat poorly drained Colonel soils, moderately well drained Peru soils and moderately well drained Buckland soils. Colonel soils, Peru soils and Buckland soils are on backslopes and footslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum or are somewhat poorly drained.

Soil Properties

Permeability: moderate in the solum, slow or very slow in the firm substratum
Available water capacity: very low

Soil reaction: strongly acid to neutral (5.1-7.3) in the solum, and moderately acid to neutral (5.6-7.3) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: at 0 to 1.5 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: D
Depth to dense material: 10 to 20 inches

Most areas of this map unit are cleared and used for pasture. Some areas are used for hay. A few areas are wooded.

This map unit is moderately suited to cultivated crops. The seasonal high water table is a concern during periods of high rainfall. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Seedling mortality and windthrow are hazards. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. The use of special planting stock will help minimize seedling mortality during wet spring months. Trees are commonly subject to windthrow because root growth is limited by the seasonal high water table and firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow hazard.

This map unit is unsuited for dwellings or for septic tank absorption fields because of poorly drained soils.

The capability subclass is 5w, undrained and 3w, drained.

17B—Cabot silt loam, 3 to 8 percent slopes

This soil is very deep, gently sloping, and poorly drained. It is on toeslopes of knolls, on till plains and in drainageways. Stones cover less than 0.1 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 4 inches, very dark grayish brown silt loam

Subsoil:
4 to 11 inches, dark grayish brown mottled channery very fine sandy loam

Substratum:
11 to 23 inches, olive mottled channery silt loam
23 to 60 inches, olive gray mottled channery silt loam

Included with this soil in mapping are small areas of very poorly drained Peacham soils. Peacham soils are in depressions. This soil makes up about 5 percent of this map unit. Also included are small areas of somewhat poorly drained Colonel soils, moderately well drained Peru soils, and moderately well drained Buckland soils. Colonel soils, Peru soils, and Buckland soils are on backslopes and footslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum or are somewhat poorly drained.

Soil Properties

Permeability: moderate in the solum, slow or very slow in the firm substratum
Available water capacity: very low
Soil reaction: strongly acid to neutral (5.1-7.3) in the solum, and moderately acid to neutral (5.6-7.3) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: at 0 to 1.5 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: D
Depth to dense material: 10 to 20 inches

Most areas of this map unit are cleared and are used for pasture. Some areas are used for hay. A few areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Seedling mortality and windthrow are hazards. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. The use of special planting stock will help minimize seedling mortality during wet spring months. Trees are commonly subject to windthrow because root growth is limited by the seasonal high water table and firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited for dwellings and septic tank absorption fields because of poorly drained soils.

The capability subclass is 5w, undrained and 3w drained.

17C—Cabot silt loam, 8 to 15 percent slopes

This soil is very deep, strongly sloping, and poorly drained. It is on toeslopes of knolls and hills and in drainageways. Stones cover less than 0.1 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 4 inches, very dark grayish brown silt loam

Subsoil:
4 to 11 inches, dark grayish brown mottled channery very fine sandy loam

Substratum:
11 to 23 inches, olive mottled channery silt loam
23 to 60 inches, olive gray mottled channery silt loam

Included with this soil in mapping are small areas of very poorly drained Peacham soils. Peacham soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat poorly drained Colonel soils, moderately well drained Peru soils and moderately well drained Buckland soils. Colonel soils, Peru soils, and Buckland soils are on backslopes and footslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum, are somewhat poorly drained or have slopes of 15 to 25 percent.

Soil Properties

Permeability: moderate in the solum, slow or very slow in the firm substratum
Available water capacity: very low
Soil reaction: strongly acid to neutral (5.1-7.3) in the solum, moderately acid to neutral (5.6-7.3) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: at 0 to 1.5 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: D
Depth to dense material: 10 to 20 inches

Most areas of this map unit are cleared and are used for pasture. Some areas are used for hay. A few areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitations. Seedling mortality and windthrow are hazards. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. The use of special planting stock will help minimize seedling mortality during wet spring months. Trees are commonly subject to windthrow because root growth is limited by the seasonal high water table and firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited for dwellings or for septic tank absorption fields because of poorly drained soils.

The capability subclass is 3e.

18B—Cabot silt loam, 0 to 8 percent slopes, very stony

This soil is very deep, nearly level to gently sloping and poorly drained. It is on toeslopes of knolls, on till plains and in drainageways. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch; slightly decomposed leaves, needles and twigs

Subsurface layer:
1 to 9 inches, very dark gray silt loam

Subsoil:
9 to 14 inches, dark olive gray mottled silt loam
14 to 17 inches, dark olive gray mottled channery silt loam

Substratum:
17 to 22 inches, dark olive gray mottled channery fine sandy loam
22 to 61 inches, dark gray mottled channery silt loam

Included with this soil in mapping are small areas of very poorly drained Peacham soils. Peacham soils are in depressions. This soil makes up about 5 percent of this map unit. Also included are small areas of somewhat poorly drained Colonel soils, moderately well drained Peru soils, and moderately well drained Buckland soils. Colonel soils, Peru soils, and Buckland soils are on backslopes and footslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum or are somewhat poorly drained.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and slow or very slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, strongly acid to neutral (5.1-7.3) in the subsurface layer and subsoil, moderately acid to neutral (5.6-7.3) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: at 0 to 1.5 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: D
Depth to dense material: 10 to 20 inches

Most areas of this map unit are wooded. A few areas are cleared and used for pasture.

This map unit is unsuited for cultivated crops because of the seasonal high water table and the stones on the surface.

This map unit is unsuited to hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Seedling mortality and windthrow are hazards. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. The use of special planting stock will help minimize seedling mortality during wet spring months. Trees are commonly subject to windthrow because root growth is limited by the seasonal high water table and firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited for dwellings or for septic tank absorption fields because of poorly drained soils.

The capability subclass is 6s.

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

This soil is very deep, strongly sloping, and poorly drained. It is on footslopes of knolls and hills and in drainageways. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch; slightly decomposed leaves, needles and twigs

Subsurface layer:
1 to 9 inches, very dark gray silt loam

Subsoil:
9 to 14 inches, dark olive gray mottled silt loam
14 to 17 inches, dark olive gray mottled channery silt loam

Substratum:
17 to 22 inches, dark olive gray mottled channery fine sandy loam
22 to 61 inches, dark gray mottled channery silt loam

Included with this soil in mapping are small areas of very poorly drained Peacham soils. Peacham soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat poorly drained Colonel soils, moderately well drained Peru soils, and moderately well drained Buckland soils. Colonel soils, Peru soils, and Buckland soils are on backslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum, are somewhat poorly drained, or have slopes of 15 to 25 percent.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and slow or very slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, strongly acid to neutral (5.1-7.3) in the subsurface layer and subsoil, moderately acid to neutral (5.6-7.3) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: at 0 to 1.5 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: D
Depth to dense material: 10 to 20 inches

Most areas of this map unit are wooded. A few areas are cleared and are used for pasture.

This map unit is unsuited for cultivated crops because of the seasonal high water table and the stones on the surface.

This map unit is unsuited to hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Seedling mortality and windthrow are hazards. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. The use of special planting stock will help minimize seedling mortality during wet spring months. Trees are commonly subject to windthrow because root growth is limited by the seasonal high water table and firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited for dwellings or for septic tank absorption fields because of poorly drained soils.

The capability subclass is 6s.

19B—Colonel fine sandy loam, 3 to 8 percent slopes, very stony

This soil is very deep, gently sloping, and somewhat poorly drained. It is on footslopes of knolls and on till plains. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inches, black highly decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, brown fine sandy loam

Subsoil:
4 to 5 inches, dark reddish brown fine sandy loam
5 to 11 inches, strong brown fine sandy loam
11 to 17 inches, yellowish brown mottled fine sandy loam

Substratum:
17 to 66 inches, dark grayish brown mottled gravelly sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Tunbridge soils. Cabot soils are on toeslopes and in depressions and drainageways. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Peru soils. Berkshire soils and Peru soils are on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil, sandy textures in the substratum, a friable substratum or slopes of less than 3 percent.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to slightly acid (4.5-6.5) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 0.5 to 2.0 feet below the surface from October to May
Frost action: high
Shrink-swell: low

Hydrologic Group: C
Depth to dense material: 10 to 30 inches

Most areas of this map unit are wooded. A few areas are cleared and used for pasture.

This map unit is unsuited to cultivated crops and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Windthrow is a hazard. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

The seasonal high water table is the main limitation if this map unit is used as a site for dwellings. A suitable fill material is needed to raise the existing grade of the site if this map unit is used as a site for dwellings. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 6s.

19C—Colonel fine sandy loam, 8 to 15 percent slopes, very stony

This soil is very deep, strongly sloping, and somewhat poorly drained. It is on footslopes of knolls and hills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inches, black highly decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, brown fine sandy loam

Subsoil:
4 to 5 inches, dark reddish brown fine sandy loam
5 to 11 inches, strong brown fine sandy loam
11 to 17 inches, yellowish brown mottled fine sandy loam

Substratum:
17 to 66 inches, dark grayish brown mottled gravelly sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Tunbridge soils. Cabot soils are on toeslopes and in depressions and drainageways. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Peru soils. Berkshire soils and Peru soils are on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil, sandy textures in the substratum or have a friable substratum.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to slightly acid (4.5-6.5) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 0.5 to 2.0 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 10 to 30 inches

Most areas of this map unit are wooded. A few areas are cleared and used for pasture.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is low for sugar maple. The main problems affecting timber production and harvesting are equipment limitations and the windthrow hazard. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

The seasonal high water table and strong slopes are the main limitations if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table, strong slopes and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 6s.

19D—Colonel fine sandy loam, 15 to 35 percent slopes, very stony

This soil is very deep, moderately steep or steep, and somewhat poorly drained. It is on footslopes of hills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 1 inch, slightly decomposed leaves and twigs

1 to 2 inches, black highly decomposed leaves and twigs

Subsurface layer:

2 to 4 inches, brown fine sandy loam

Subsoil:

4 to 5 inches, dark reddish brown fine sandy loam

5 to 11 inches, strong brown fine sandy loam

11 to 17 inches, yellowish brown mottled fine sandy loam

Substratum:

17 to 66 inches, dark grayish brown mottled gravelly sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Tunbridge soils. Cabot soils are on toeslopes and in depressions and drainageways. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Peru soils. Berkshire soils and Peru soils are on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil, sandy textures in the substratum, or have a friable substratum.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the firm substratum

Available water capacity: low

Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to slightly acid (4.5-6.5) in the subsurface layer, subsoil, and substratum

Depth to bedrock: more than 65 inches

Depth to water table: perched at 0.5 to 2.0 feet below the surface from October to May

Frost action: high

Shrink-swell: low

Hydrologic Group: C

Depth to dense material: 10 to 30 inches

Most areas of this map unit are wooded. A few areas are cleared and used for pasture.

This map unit is unsuited for cultivated crops and hay and poorly suited for pasture because of the stones on the surface and steep slopes. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is very low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow hazard.

This map unit is unsuited as a site for dwellings in areas of steep slopes. The seasonal high water table and moderately steep or steep slopes are the main limitations if this map unit is used as site for dwellings. In areas of moderately steep slopes extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

This map unit is unsuited as a site for septic tank absorption fields in areas with slopes greater than 20 percent. The seasonal high water table, moderately steep slopes, and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 7s.

20A—Peacham muck, 0 to 5 percent slopes

This soil is very deep, nearly level to gently sloping and very poorly drained. It is in depressions and drainageways on hills, knolls, and till plains. Stones cover less than 0.1 percent of the surface. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 2 inches, moderately decomposed leaves and needles

2 to 12 inches, black muck

Subsoil:

12 to 28 inches, dark grayish brown mottled fine sandy loam

Substratum:

28 to 35 inches, olive gray mottled gravelly silt loam

35 to 67 inches, olive gray mottled silt loam

Included with this soil in mapping are small areas of very poorly drained Wonsqueak soils and Rifle soils. Wonsqueak soils and Rifle soils are in swampy areas. These soils make up about 10 percent of this map unit. Also included are small areas of poorly drained Cabot soils. Cabot soils are on toeslopes. This soil makes up about 5 percent of this map unit.

Also included are some areas that have organic layers that are less than 8 inches thick or stones covering more than 1 percent of the surface.

Soil Properties

Permeability: moderately slow to moderately rapid in the surface layer, moderate in the subsoil, and slow or very slow in the firm substratum

Available water capacity: moderate

Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and strongly acid to slightly acid (5.1-6.5) in the subsoil and substratum

Depth to bedrock: more than 65 inches

Depth to water table: within 0.5 feet below the surface from October to June

Frost action: high

Shrink-swell: low

Hydrologic Group: D

Ponded: ponded to 1 foot above the surface from October to June

Depth to dense material: 10 to 20 inches

Most areas of this map unit are wooded. Some areas are cleared and used for unimproved pasture.

This map unit is unsuited for most uses because of the very poorly drained soils and the hazard of ponding.

The capability subclass is 5w.

21A—Sunday fine sand, 0 to 3 percent slopes

This soil is very deep, nearly level, and excessively drained. It is on flood plains adjacent to rivers and streams that are frequently flooded by stream overflow for brief periods. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 10 inches, very dark grayish brown and dark grayish brown fine sand

Substratum:

10 to 28 inches, olive brown fine sand

28 to 65 inches, dark grayish brown fine sand

Included with this soil in mapping are small areas of poorly drained Rumney soils and moderately well drained Weider soils. Rumney soils and Weider soils are in depressions. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Ondawa soils and well drained Waitsfield soils. Ondawa soils and Waitsfield soils are on higher positions on the flood plains. These soils make up about 5 percent of this map unit.

Also included are some areas that have silt loam lenses below a depth of 40 inches.

Soil Properties

Permeability: rapid
Available water capacity: low
Soil reaction: very strongly acid to slightly acid (4.5-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are cleared and used for silage corn or pasture. Some areas are wooded.

This map unit is moderately suited to cultivated crops. Droughtiness is a concern during periods of low rainfall. Flooding is of short duration and usually occurs in the spring, which may delay spring tillage. Using stubble mulch and growing cover crops are practices that help to control erosion by floodwaters. Land shaping to provide surface drainage will allow the soil to be tilled soon after flooding. Streambanks should be maintained in permanent protective cover to help control streambank erosion. Tillage practices that leave part of the crop residue on the surface and supplemental additions of organic matter help to increase the available water capacity of the soil.

This map unit is well suited to hay and pasture. Droughtiness is a concern during periods of low rainfall. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion caused by floodwater. Planting drought tolerant plants helps to overcome the droughtiness concern.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is seedling mortality. The use of special planting stock will help minimize seedling mortality during dry summer months.

This map unit is unsuited as a site for dwellings or septic tank absorption fields because of the hazard of flooding.

The capability subclass is 3s.

26A—Adams loamy fine sand, 0 to 3 percent slopes

This soil is very deep, nearly level, and somewhat excessively drained. It is on terraces. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, very dark brown loamy fine sand

Subsurface layer:
1 to 3 inches, pinkish gray loamy fine sand

Subsoil:
3 to 5 inches, dark reddish brown loamy fine sand
5 to 8 inches, reddish brown sand
8 to 16 inches, dark brown loamy fine sand
16 to 31 inches, yellowish brown, sand

Substratum:
31 to 65 inches, olive brown coarse sand

Included with this soil in mapping are small areas of moderately well drained sandy textured soils. The sandy textured soils are in depressions. These soils make up about 10 percent of this map unit. Also included are small areas of excessively drained Colton soils and well drained Salmon soils. Colton soils and Salmon soils are on small knolls. These soils make up about 5 percent of this map unit.

Also included are some areas that have yellowish brown colors in the upper part of the subsoil, fine sandy loam textures in upper part of the solum, more than 20 percent rock fragments in the substratum, or are excessively drained.

Soil Properties

Permeability: rapid in the solum, very rapid in the substratum
Available water capacity: low
Soil reaction: very strongly acid or strongly acid (4.5-5.5) in the solum and very strongly acid to moderately acid (4.5-6.0) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are cleared and used for silage corn, hay, or pasture. Some areas are wooded. A few areas are used as a source of sand.

This map unit is moderately suited to cultivated crops. Droughtiness is a concern during periods of low rainfall. Tillage practices that leave part of the crop residue on the surface, and supplemental additions of organic matter help to increase the available water capacity of the soil.

This map unit is well suited to hay and pasture. Droughtiness is a concern during periods of low rainfall. Proper stocking rates and rotational grazing during dry periods will help to maintain a good stand of hay and pasture plants. Planting drought tolerant plants helps to overcome the droughtiness concern.

The potential productivity of this map unit is high for eastern white pine. The main problem affecting timber production and harvesting is seedling mortality. The use of special planting stock will help minimize seedling mortality during dry summer months.

This map unit has few limitations as a site for dwellings. There is a potential for cutbanks to cave.

The poor filtering capacity of the soil is the main limitation if this map unit is used as a site for septic tank absorption fields. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supplies in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 3s.

26B—Adams loamy fine sand, 3 to 8 percent slopes

This soil is very deep, gently sloping, and somewhat excessively drained. It is on terraces. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, very dark brown loamy fine sand

Subsurface layer:
1 to 3 inches, pinkish gray loamy fine sand

Subsoil:
3 to 5 inches, dark reddish brown loamy fine sand
5 to 8 inches, reddish brown sand
8 to 16 inches, dark brown loamy fine sand
16 to 31 inches, yellowish brown, sand

Substratum:
31 to 65 inches, olive brown coarse sand

Included with this soil in mapping are small areas of moderately well drained sandy textured soils. The sandy textured soils are in depressions. These soils make up about 10 percent of this map unit. Also included are small areas of excessively drained Colton soils and well drained Salmon soils. Colton soils and Salmon soils are on small knolls. These soils make up about 5 percent of this map unit.

Also included are some areas that have yellowish brown colors in the upper part of the subsoil, fine sandy loam textures in upper part of the solum, more than 20 percent rock fragments in the substratum, or are excessively drained.

Soil Properties

Permeability: rapid in the solum, very rapid in the substratum
Available water capacity: low
Soil reaction: very strongly acid or strongly acid (4.5-5.5) in the solum and very strongly acid to moderately acid (4.5-6.0) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are cleared and used for silage corn, hay, and pasture. Some areas are wooded. A few areas are used as a source of sand.

This map unit is moderately suited to cultivated crops. Droughtiness is a concern during periods of low rainfall. Tillage practices that leave part of the crop residue on the surface, and supplemental additions of organic matter help to increase the available water capacity of the soil.

This map unit is well suited to hay and pasture. Droughtiness is a concern during periods of low rainfall. Proper stocking rates and rotational grazing during dry periods will help to maintain a good stand of hay and pasture plants. Planting drought tolerant plants helps to overcome the droughtiness concern.

The potential productivity of this map unit is high for eastern white pine. The main problem affecting timber production and harvesting is seedling mortality. The use of special planting stock will help minimize seedling mortality during dry summer months.

This map unit has few limitations as a site for dwellings. There is a potential for cutbanks to cave.

The poor filtering capacity of the soil is the main limitation if this map unit is used as a site for septic tank absorption fields. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supplies in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 3s.

26C—Adams loamy fine sand, 8 to 15 percent slopes

This soil is very deep, strongly sloping, and somewhat excessively drained. It is on terraces. Slopes typically are smooth.

Typically, the Adams soils are covered by a thin layer of undecomposed needles and twigs. Under that layer, the typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, very dark brown loamy fine sand

Subsurface layer:
1 to 3 inches, pinkish gray loamy fine sand

Subsoil:
3 to 5 inches, dark reddish brown loamy fine sand
5 to 8 inches, reddish brown sand
8 to 16 inches, dark brown loamy fine sand
16 to 31 inches, yellowish brown sand

Substratum:
31 to 65 inches, olive brown coarse sand

Included with this soil in mapping are small areas of moderately well drained sandy textured soils. The sandy textured soils are in depressions. These soils make up about 10 percent of this map unit. Also included are small areas of excessively drained Colton soils and well drained Salmon soils. Colton soils and Salmon soils are on small knolls and ridges. These soils make up about 5 percent of this map unit.

Also included are some areas that have yellowish brown colors in the upper part of the subsoil, fine sandy loam textures in upper part of the solum, more than 20 percent rock fragments in the substratum, or are excessively drained.

Soil Properties

Permeability: rapid in the solum, very rapid in the substratum
Available water capacity: low
Soil reaction: very strongly acid or strongly acid (4.5-5.5) in the solum and very strongly acid to moderately acid (4.5-6.0) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are wooded. A few areas are used as a source of sand. Some areas are cleared and used for hay and pasture. A few areas are used as a source for sand.

This map unit is poorly suited to cultivated crops. Erosion is a hazard. Droughtiness is a concern during periods of low rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Tillage practices that leave part of the crop residue on the surface and supplemental additions of organic matter help to increase the available water capacity of the soil.

This map unit is moderately suited to hay and pasture. Erosion is a hazard. Droughtiness is a concern during periods of low rainfall. Proper stocking rates and rotational grazing during dry periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting drought tolerant plants helps to overcome the droughtiness concern.

The potential productivity of this map unit is high for eastern white pine. The main limitation in producing and harvesting timber is seedling mortality. The use of special planting stock will help minimize seedling mortality during dry summer months.

A strong slope is the main limitation if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. There is a potential for cutbanks to cave.

Strong slopes and the poor filtering capacity of the soil are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design of septic tank absorption fields is needed in some places for septic tank absorption fields. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supplies in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 4e.

26D—Adams loamy fine sand, 15 to 25 percent slopes

This soil is very deep, moderately steep, and somewhat excessively drained. It is on terrace escarpments. Slopes typically are concave.

Typically, the Adams soils are covered by a thin layer of undecomposed needles and twigs. Under that layer, the typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, very dark brown loamy fine sand

Subsurface layer:
1 to 3 inches, pinkish gray loamy fine sand

Subsoil:
3 to 5 inches, dark reddish brown loamy fine sand
5 to 8 inches, reddish brown sand
8 to 16 inches, dark brown loamy fine sand
16 to 31 inches, yellowish brown, sand

Substratum:
31 to 65 inches, olive brown coarse sand

Included with this soil in mapping are small areas of moderately well drained sandy textured soils. The sandy textured soils are in depressions. These soils make up about 10 percent of this map unit. Also included are small areas of excessively drained Colton soils and well drained Salmon soils. Colton soils and Salmon soils are on small ridges. These soils make up about 5 percent of this map unit.

Also included are some areas that have yellowish brown colors in the upper part of the subsoil, fine sandy loam textures in upper part of the solum, more than 20 percent rock fragments in the substratum or are excessively drained.

Soil Properties

Permeability: rapid in the solum, very rapid in the substratum
Available water capacity: low
Soil reaction: very strongly acid or strongly acid (4.5-5.5) in the solum and very strongly acid to moderately acid (4.5-6.0) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are wooded. A few areas are used as a source of sand.

This map unit is poorly suited to cultivated crops. The erosion hazard and slope severely limit the use of this map unit for cultivated crops. Equipment use is limited by slope. Droughtiness is a concern during periods of low rainfall. The use of this map unit for long-term hay or pasture is effective in controlling erosion. Supplemental additions of organic matter help to overcome the low available water capacity.

This map unit is moderately suited to hay and pasture. Erosion is a hazard and slope limits the use of equipment. Droughtiness is a concern during periods of low rainfall. Proper stocking rates and rotational grazing during dry periods will help maintain a good stand of hay and pasture plants and help to control erosion. Planting drought tolerant plants helps to overcome the droughtiness concern.

The potential productivity of this map unit is moderate for eastern white pine. The main problems affecting timber production and harvesting are the equipment limitations and seedling mortality. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. The use of special planting stock will help minimize seedling mortality during dry summer months.

A moderately steep slope is the main limitation if this map unit is used as a site for dwellings. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. There is a potential for cutbanks to cave.

Moderately steep slopes and the poor filtering capacity of the soil are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supplies in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 6e.

26E—Adams loamy fine sand, 25 to 60 percent slopes

This soil is very deep, steep or very steep, and somewhat excessively drained. It is on terrace escarpments. Slopes typically are concave.

Typically, the Adams soils are covered by a thin layer of undecomposed needles and twigs. Under that layer, the typical sequence, depth, and composition of the layers of this soil are as follows—
Surface layer:
0 to 1 inch, very dark brown loamy fine sand

Subsurface layer:
1 to 3 inches, pinkish gray loamy fine sand

Subsoil:
3 to 5 inches, dark reddish brown loamy fine sand
5 to 8 inches, reddish brown sand

8 to 16 inches, dark brown loamy fine sand
16 to 31 inches, yellowish brown, sand

Substratum:
31 to 65 inches, olive brown coarse sand

Included with this soil in mapping are small areas of moderately well drained, sandy textured soils. The sandy textured soils are in depressions. These soils make up about 10 percent of this map unit. Also included are small areas of excessively drained Colton soils and well drained Salmon soils. Colton soils and Salmon soils are on small ridges. These soils make up about 5 percent of this map unit.

Also included are some areas that have yellowish brown colors in the upper part of the subsoil, fine sandy loam textures in upper part of the solum, more than 20 percent rock fragments in the substratum, or are excessively drained.

Soil Properties

Permeability: rapid in the solum, very rapid in the substratum
Available water capacity: low
Soil reaction: very strongly acid or strongly acid (4.5-5.5) in the solum and very strongly acid to moderately acid (4.5-6.0) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are wooded. A few areas are used as a source of sand.

This map unit is unsuited for cultivated crops, hay, and pasture because of steep or very steep slopes.

The potential productivity of this map unit is moderate for eastern white pine. The main problems affecting timber production and harvesting are equipment limitations and seedling mortality. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and waterbars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. The use of special planting stock will minimize seedling mortality during dry summer months.

This map unit is unsuited as a site for dwellings or septic tank absorption fields because of steep or very steep slopes.

The capability subclass is 7e.

33A—Machias fine sandy loam, 0 to 3 percent slopes

This soil is very deep, nearly level, and moderately well drained. It is on terraces and kames. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, dark brown fine sandy loam

Subsoil:
8 to 12 inches, yellowish brown fine sandy loam
12 to 22 inches, olive brown mottled fine sandy loam

Substratum:
22 to 28 inches, dark grayish brown mottled very gravelly loamy sand
28 to 65 inches, dark grayish brown very gravelly sand

Included with this soil in mapping are small areas of somewhat excessively drained Adams soils, excessively drained Colton soils, poorly drained Grange soils and moderately well drained sandy textured soils. Adams soils and Colton soils are on small knolls. Grange soils are in depressions. The moderately well drained sandy textured soils are on similar landscape positions as the Machias soils. These soils make up about 15 percent of this map unit.

Also included are some areas that have more than 10 percent rock fragments in the solum.

Soil Properties

Permeability: moderately rapid in the solum, rapid in the substratum
Available water capacity: low
Soil reaction: very strongly acid or strongly acid (4.5-5.5) in the surface layer, very strongly acid to moderately acid (4.5-6.0) in the subsoil and substratum
Depth to bedrock: more than 65 inches
Depth to water table: at 1.5 to 2.5 feet below the surface from November to April
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are cleared and used for hay and pasture. A few areas are wooded.

This map unit is well suited to cultivated crops. The seasonal high water table is a concern during periods of high rainfall. Tillage in the spring may be delayed because of the seasonal high water table. Where suitable, drainage outlets are available.

This map unit is well suited to hay and pasture. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is very high for eastern white pine. It has few limitations for producing and harvesting timber.

The seasonal high water table is the main limitation if this map unit is used as a site for dwellings. A suitable fill material is needed to raise the existing grade of the site if this map unit is used as a building site. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration, but outlets for drainage sometimes are difficult to locate. There is a potential for cutbanks to cave.

The seasonal high water table is the main limitation if this map unit is used as a site for septic tank absorption fields. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table. The poor filtering capacity of the soil is also a limitation for septic tank absorption fields. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supplies in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 2w.

33B—Machias fine sandy loam, 3 to 8 percent slopes

This soil is very deep, gently sloping, and moderately well drained. It is on terraces and kames. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 8 inches, dark brown fine sandy loam

Subsoil:

8 to 12 inches, yellowish brown fine sandy loam

12 to 22 inches, olive brown mottled fine sandy loam

Substratum:

22 to 28 inches, dark grayish brown mottled very gravelly loamy sand

28 to 65 inches, dark grayish brown very gravelly sand

Included with this soil in mapping are small areas of somewhat excessively drained Adams soils, excessively drained Colton soils, poorly drained Grange soils and moderately well drained sandy textured soils. Adams soils and Colton soils are on small knolls. Grange soils are in depressions. The moderately well drained sandy textured soils are on similar landscape positions as the Machias soils. These soils make up about 15 percent of this map unit.

Also included are some areas that have more than 10 percent rock fragments in the solum.

Soil Properties

Permeability: moderately rapid in the solum, rapid in the substratum

Available water capacity: low

Soil reaction: very strongly acid or strongly acid (4.5-5.5) in the surface layer, very strongly acid to moderately acid (4.5-6.0) in the subsoil and substratum

Depth to bedrock: more than 65 inches

Depth to water table: at 1.5 to 2.5 feet below the surface from November to April

Frost action: moderate

Shrink-swell: low

Hydrologic Group: B

Most areas of this map unit are cleared and used for hay and pasture. A few areas are wooded.

This map unit is well suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is very high for eastern white pine. It has few limitations for producing and harvesting timber.

The seasonal high water table is the main limitation if this map unit is used as a site for dwellings. A suitable fill material is needed to raise the existing grade of the site if this map unit is used as a building site. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration, but outlets for drainage sometimes are difficult to locate. There is a potential for cutbanks to cave.

The seasonal high water table and poor filtering capacity of the soil are the main limitations if this map unit is used as a site for septic tank absorption fields. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supplies in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 2w.

33C—Machias fine sandy loam, 8 to 15 percent slopes

This soil is very deep, strongly sloping, and moderately well drained. It is on terraces and kames. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, dark brown fine sandy loam

Subsoil:
8 to 12 inches, yellowish brown fine sandy loam
12 to 22 inches, olive brown mottled fine sandy loam

Substratum:
22 to 28 inches, dark grayish brown mottled very gravelly loamy sand
28 to 65 inches, dark grayish brown very gravelly sand

Included with this soil in mapping are small areas of somewhat excessively drained Adams soils, excessively drained Colton soils, poorly drained Grange soils, and moderately well drained sandy textured soils. Adams soils and Colton soils are on small knolls. Grange soils are in depressions. The moderately well drained sandy textured soils are on similar landscape positions as the Machias soils. These soils make up about 15 percent of this map unit.

Also included are some areas that have more than 10 percent rock fragments in the solum or have slopes of 15 to 25 percent.

Soil Properties

Permeability: moderately rapid in the solum, rapid in the substratum
Available water capacity: low
Soil reaction: very strongly acid or strongly acid (4.5-5.5) in the surface layer, very strongly acid to moderately acid (4.5-6.0) in the subsoil and substratum
Depth to bedrock: more than 65 inches
Depth to water table: at 1.5 to 2.5 feet below the surface from November to April
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are cleared and used for hay and pasture. A few areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is very high for eastern white pine. It has few limitations for producing and harvesting timber.

The seasonal high water table and strong slopes are the main limitations if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration. There is a potential for cutbanks to cave.

The seasonal high water table, strong slopes, and poor filtering capacity of the soil are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table. The soil readily absorbs the effluent, but it may not adequately filter it. As a result, the ground water supply in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 3e.

37B—Stetson loam, 3 to 8 percent slopes

This soil is very deep, gently sloping, and well drained. It is on terraces and kames. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 8 inches, very dark brown loam, dark gray dry

Subsoil:

8 to 20 inches, very dark brown gravelly fine sandy loam

20 to 25 inches, dark yellowish brown very gravelly loamy sand

Substratum:

25 to 65 inches, dark yellowish brown very gravelly sand

Included with this soil in mapping are small areas of somewhat excessively drained Adams soils and excessively drained Colton soils. Adams soils and Colton soils are on similar landscape positions as Stetson soils. These soils make up about 10 percent of this map unit.

Also included are some areas that are somewhat excessively drained.

Soil Properties

Permeability: moderate or moderately rapid in the solum, rapid in the substratum
Available water capacity: low
Soil reaction: moderately acid or slightly acid (5.6-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are wooded. Some areas are cleared and used for hay and pasture. A few areas are used as a source of sand and gravel.

This map unit is well suited to cultivated crops. Droughtiness is a concern during periods of low rainfall. Tillage practices that leave part of the crop residue on the surface, and supplemental additions of organic matter help to increase the available water capacity of the soil.

This map unit is well suited to hay and pasture. Droughtiness is a concern during periods of low rainfall. Proper stocking rates and rotational grazing during dry periods will help to maintain a good stand of hay and pasture plants. Planting drought tolerant plants helps to overcome the droughtiness concern.

The potential productivity of this map unit is very high for eastern white pine. It has few limitations for producing and harvesting timber.

This map unit has few limitations for dwellings. There is a potential for cutbanks to cave.

The poor filtering capacity of the soil is the main limitation if this map unit is used as a site for septic tank absorption fields. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supplies in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 2s.

37C—Stetson loam, 8 to 15 percent slopes

This soil is very deep, strongly sloping, and well drained. It is on terraces and kames. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 8 inches, very dark brown loam, dark gray dry

Subsoil:

8 to 20 inches, very dark brown gravelly fine sandy loam

20 to 25 inches, dark yellowish brown very gravelly loamy sand

Substratum:

25 to 65 inches, dark yellowish brown very gravelly sand

Included with this soil in mapping are small areas of somewhat excessively drained Adams soils and excessively drained Colton soils. Adams soils and Colton soils are on similar landscape positions as Stetson soils. These soils make up about 10 percent of this map unit.

Also included are some areas that are somewhat excessively drained.

Soil Properties

Permeability: moderate or moderately rapid in the solum, rapid in the substratum
Available water capacity: low
Soil reaction: moderately acid or slightly acid (5.6-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet

Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are wooded. Some areas are cleared and used for hay and pasture. A few areas are used as a source of sand and gravel.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. Droughtiness is a concern during periods of low rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Tillage practices that leave part of the crop residue on the surface and supplemental additions of organic matter help to increase the available water capacity of the soil.

This map unit is well suited to hay and pasture. Erosion is a hazard. Droughtiness is a concern during periods of low rainfall. Proper stocking rates and rotational grazing during dry periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting drought tolerant plants helps to overcome the droughtiness concern.

The potential productivity of this map unit is very high for eastern white pine. It has few limitations for producing and harvesting timber.

A strong slope is the main limitation if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. There is a potential for cutbanks to cave.

Strong slopes and the poor filtering capacity of the soil are the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design of septic tank absorption fields is needed in some places for septic tank absorption fields. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supplies in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 3e.

37D—Stetson loam, 15 to 25 percent slopes

This soil is very deep, moderately steep, and well drained. It is on terrace escarpments and kames. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark brown loam, dark gray dry

Subsoil:
8 to 20 inches, very dark brown gravelly fine sandy loam
20 to 25 inches, dark yellowish brown very gravelly loamy sand

Substratum:
25 to 65 inches, dark yellowish brown very gravelly sand

Included with this soil in mapping are small areas of somewhat excessively drained Adams soils and excessively drained Colton soils. Adams soils and Colton soils are on similar landscape positions as Stetson soils. These soils make up about 10 percent of this map unit.

Also included are some areas that are somewhat excessively drained.

Soil Properties

Permeability: moderate or moderately rapid in the solum, rapid in the substratum
Available water capacity: low
Soil reaction: moderately acid or slightly acid (5.6-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are wooded. A few areas are used as a source of sand and gravel.

This map unit is poorly suited to cultivated crops. Erosion is a hazard and slope severely limits the use of this map unit for cultivated crops. Equipment use is limited by slope. Droughtiness is a concern during periods of low rainfall. The use of this map unit for long-term hay or pasture is effective in controlling erosion. Supplemental additions of organic matter help to overcome the low available water capacity.

This map unit is moderately suited to hay and pasture. Erosion is a hazard and slope limits the use of equipment. Droughtiness is a concern during periods of low rainfall. Proper stocking rates and rotational grazing during dry periods will help maintain a good stand of hay and pasture plants and help to control erosion. Planting drought tolerant plants helps to overcome the droughtiness concern.

The potential productivity of this map unit is very high for eastern white pine. The main problem affecting timber production and harvesting is the equipment limitations. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope.

A moderately steep slope is the main limitation if this map unit is used as a site for dwellings. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. There is a potential for cutbanks to cave.

Moderately steep slopes and the poor filtering capacity of the soil are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supply can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 4e.

37E—Stetson loam, 25 to 60 percent slopes

This soil is very deep steep or very steep, and well drained. It is on terrace escarpments and kames. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark brown loam, dark gray dry

Subsoil:
8 to 20 inches, very dark brown gravelly fine sandy loam
20 to 25 inches, dark yellowish brown very gravelly loamy sand

Substratum:
25 to 65 inches, dark yellowish brown very gravelly sand

Included with this soil in mapping are small areas of somewhat excessively drained Adams soils and excessively drained Colton soils. Adams soils and Colton soils are on similar landscape positions as Stetson soils. These soils make up about 10 percent of this map unit.

Also included are some areas that are somewhat excessively drained.

Soil Properties

Permeability: moderate or moderately rapid in the solum, rapid in the substratum
Available water capacity: low
Soil reaction: moderately acid or slightly acid (5.6-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are wooded. A few areas are used as a source of sand and gravel.

This map unit is unsuited for cultivated crops, hay and pasture because of steep or very steep slopes.

The potential productivity of this map unit is moderate for eastern white pine. The main problems affecting timber production and harvesting is the equipment limitation. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and waterbars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope.

This map unit is unsuited for dwellings and septic tank absorption fields because of steep or very steep slopes.

The capability subclass is 7e.

39A—Colton gravelly loamy sand, 0 to 3 percent slopes

This soil is very deep, nearly level, and excessively drained. It is on terraces and kames. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 4 inches, dark brown gravelly loamy sand

Subsurface layer:
4 to 7 inches, grayish brown gravelly loamy sand

Subsoil:
7 to 10 inches, dark reddish brown gravelly loamy sand
10 to 20 inches, dark reddish brown gravelly sand
20 to 30 inches, dark yellowish brown very gravelly sand

Substratum:
30 to 65 inches, dark grayish brown very gravelly sand

Included with this soil in mapping are small areas of somewhat poorly drained Colonel soils, moderately well drained Peru soils, and moderately well drained Machias soils. Colonel soils and Peru soils are on knolls. Machias soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat excessively drained Adams soils and well drained Salmon soils. Adams soils and Salmon soils are on slightly concave areas. These soils make up about 10 percent of this map unit.

Also included are some areas that have fine sandy loam textures throughout the solum or less than 35 percent rock fragments throughout the soil.

Soil Properties

Permeability: rapid in the solum, very rapid in the substratum
Available water capacity: very low
Soil reaction: extremely acid to moderately acid (3.6-6.0) in the solum and very strongly acid to slightly acid (4.5-6.5) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are wooded. Many areas are cleared and used for silage corn or hay and pasture. A few areas are used as a source of sand and gravel.

This map unit is moderately suited to cultivated crops. Droughtiness is a concern during periods of low rainfall. Tillage practices that leave part of the crop residue on the surface, and supplemental additions of organic matter help to increase the available water capacity of the soil.

This map unit is well suited to hay and pasture. Droughtiness is a concern during periods of low rainfall. Proper stocking rates and rotational grazing during dry periods will help to maintain a good stand of hay and pasture plants. Planting drought tolerant plants helps to overcome the droughtiness concern.

The potential productivity of this map unit is high for eastern white pine. The main problem affecting timber production and harvesting is seedling mortality. The use of special planting stock will help minimize seedling mortality during dry summer months.

This map unit has few limitations for dwellings. There is a potential for cutbanks to cave.

The poor filtering capacity of the soil is the main limitation if this map unit is used as a site for septic tank absorption fields. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supplies in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 3s.

39B—Colton gravelly loamy sand, 3 to 8 percent slopes

This soil is very deep, gently sloping, and excessively drained. It is on terraces and kames. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 4 inches, dark brown gravelly loamy sand

Subsurface layer:
4 to 7 inches, grayish brown gravelly loamy sand

Subsoil:
7 to 10 inches, dark reddish brown gravelly loamy sand
10 to 20 inches, dark reddish brown gravelly sand
20 to 30 inches, dark yellowish brown very gravelly sand

Substratum:
30 to 65 inches, dark grayish brown very gravelly sand

Included with this soil in mapping are small areas of somewhat poorly drained Colonel soils, moderately well drained Peru soils, and moderately well drained Machias soils. Colonel soils and Peru soils are on knolls. Machias soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat excessively drained Adams soils and well drained Salmon soils. Adams soils and Salmon soils are on slightly concave areas. These soils make up about 10 percent of this map unit.

Also included are some areas that have fine sandy loam textures throughout the solum or less than 35 percent rock fragments throughout the soil.

Soil Properties

Permeability: rapid in the solum, very rapid in the substratum
Available water capacity: very low
Soil reaction: extremely acid to moderately acid (3.6-6.0) in the solum and very strongly acid to slightly acid (4.5-6.5) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low

Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are wooded. Many areas are cleared and used for silage corn or hay and pasture. A few areas are used as a source of sand and gravel.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. Droughtiness is a concern during periods of low rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Tillage practices that leave part of the crop residue on the surface and supplemental additions of organic matter help to increase the available water capacity of the soil.

This map unit is well suited to hay and pasture. Erosion is a hazard. Droughtiness is a concern during periods of low rainfall. Proper stocking rates and rotational grazing during dry periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting drought tolerant plants helps to overcome the droughtiness concern.

The potential productivity of this map unit is high for eastern white pine. The main problem affecting timber production and harvesting is seedling mortality. The use of special planting stock will help minimize seedling mortality during dry summer months.

This map unit has few limitations for dwellings. There is a potential for cutbanks to cave.

The poor filtering capacity of the soil is the main limitation if this map unit is used as a site for septic tank absorption fields. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supplies in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 3s.

39C—Colton gravelly loamy sand, 8 to 15 percent slopes

This soil is very deep, strongly sloping, and excessively drained. It is on terraces and kames. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 4 inches, dark brown gravelly loamy sand

Subsurface layer:
4 to 7 inches, grayish brown gravelly loamy sand

Subsoil:
7 to 10 inches, dark reddish brown gravelly loamy sand
10 to 20 inches, dark reddish brown gravelly sand
20 to 30 inches, dark yellowish brown very gravelly sand

Substratum:
30 to 65 inches, dark grayish brown very gravelly sand

Included with this soil in mapping are small areas of somewhat poorly drained Colonel soils, moderately well drained Peru soils, and moderately well drained Machias soils. Colonel soils and Peru soils are on knolls and hills. Machias soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat excessively drained Adams soils and well drained Salmon soils. Adams soils and Salmon soils are on slightly concave areas. These soils make up about 10 percent of this map unit.

Also included are some areas that have fine sandy loam textures throughout the solum or less than 35 percent rock fragments throughout the soil.

Soil Properties

Permeability: rapid in the solum, very rapid in the substratum
Available water capacity: very low
Soil reaction: extremely acid to moderately acid (3.6-6.0) in the solum and very strongly acid to slightly acid (4.5-6.5) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are wooded. Many areas are cleared and used for silage corn or hay and pasture. A few areas are used as a source of sand and gravel.

This map unit is poorly suited to cultivated crops. Erosion is a hazard. Droughtiness is a concern during periods of low rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Tillage practices that leave part of the crop residue on the surface and supplemental additions of organic matter help to increase the available water capacity of the soil.

This map unit is moderately suited to hay and pasture. Erosion is a hazard. Droughtiness is a concern during periods of low rainfall. Proper stocking rates and rotational grazing during dry periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting drought tolerant plants helps to overcome the droughtiness concern.

The potential productivity of this map unit is high for eastern white pine. The main problem affecting timber production and harvesting is seedling mortality. The use of special planting stock will help minimize seedling mortality during dry summer months.

A strong slope is the main limitation if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. There is a potential for cutbanks to cave.

Strong slopes and the poor filtering capacity of the soil are the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supplies in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 4e.

39D—Colton gravelly loamy sand, 15 to 25 percent slopes

This soil is very deep, moderately steep, and excessively drained. It is on terrace escarpments and kames. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 4 inches, dark brown gravelly loamy sand

Subsurface layer:
4 to 7 inches, grayish brown gravelly loamy sand

Subsoil:
7 to 10 inches, dark reddish brown gravelly loamy sand
10 to 20 inches, dark reddish brown gravelly sand
20 to 30 inches, dark yellowish brown very gravelly sand

Subsurface layer:
30 to 65 inches, dark grayish brown very gravelly sand

Included with this soil in mapping are small areas of somewhat poorly drained Colonel soils, moderately well drained Peru soils and moderately well drained Machias soils. Colonel soils and Peru soils are on hills. Machias soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat excessively drained Adams soils and well drained Salmon soils. Adams soils and Salmon soils are on slightly concave areas. These soils make up about 10 percent of this map unit.

Also included are some areas that have fine sandy loam textures throughout the solum or less than 35 percent rock fragments throughout the soil.

Soil Properties

Permeability: rapid in the solum, very rapid in the substratum
Available water capacity: very low
Soil reaction: extremely acid to moderately acid (3.6-6.0) in the solum and very strongly acid to slightly acid (4.5-6.5) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are wooded. Some areas are cleared and are used for hay and pasture. A few areas are used as a source of sand and gravel.

This map unit is poorly suited to cultivated crops. The erosion hazard and slope severely limits the use of this map unit for cultivated crops. Equipment use is limited by slope. Droughtiness is a concern during periods of low rainfall. The use of this map unit for long-term hay or pasture is effective in controlling erosion. Supplemental additions of organic matter help to overcome the low available water capacity.

This map unit is moderately suited to hay and pasture. Erosion is a hazard and slope limits the use of equipment. Droughtiness is a concern during periods of low rainfall. Proper stocking rates and rotational grazing during dry periods will help maintain a good stand of hay and pasture plants and help to control erosion. Planting drought tolerant plants helps to overcome the droughtiness concern.

The potential productivity of this map unit is moderate for eastern white pine. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and seedling mortality are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. The use of special planting stock will help minimize seedling mortality during dry summer months.

A moderately steep slope is the main limitation if this map unit is used as a site for dwellings. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. There is a potential for cutbanks to cave.

Moderately steep slopes and the poor filtering capacity of the soil are the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. The soil readily absorbs effluent, but it may not adequately filter it. As a result, the ground water supplies in the area can potentially become contaminated. Seepage can be monitored by periodically testing wells for possible contamination.

The capability subclass is 6e.

39E—Colton gravelly loamy sand, 25 to 60 percent slopes

This soil is very deep, steep or very steep, and excessively drained. It is on terrace escarpments and kames. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 4 inches, dark brown gravelly loamy sand

Subsurface layer:
4 to 7 inches, grayish brown gravelly loamy sand

Subsoil:
7 to 10 inches, dark reddish brown gravelly loamy sand
10 to 20 inches, dark reddish brown gravelly sand
20 to 30 inches, dark yellowish brown very gravelly sand

Subsurface layer:
30 to 65 inches, dark grayish brown very gravelly sand

Included with this soil in mapping are small areas of somewhat poorly drained Colonel soils, moderately well drained Peru soils, and moderately well drained Machias soils. Colonel soils and Peru soils are on hills. Machias soils are in depressions and drainageways. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat excessively drained Adams soils and well drained Salmon soils. Adams soils and Salmon soils are on slightly concave areas. These soils make up about 10 percent of this map unit.

Also included are some areas that have fine sandy loam textures throughout the solum or less than 35 percent rock fragments throughout the soil.

Soil Properties

Permeability: rapid in the solum, very rapid in the substratum
Available water capacity: very low
Soil reaction: extremely acid to moderately acid (3.6-6.0) in the solum and very strongly acid to slightly acid (4.5-6.5) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Most areas of this map unit are wooded. A few areas are used as a source of sand and gravel.

This map unit is unsuited for cultivated crops, hay, and pasture because of steep or very steep slopes.

The potential productivity of this map unit is moderate for eastern white pine. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and seedling mortality are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and waterbars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. The use of special planting stock will minimize seedling mortality during dry summer months.

This map unit is unsuited for dwellings and septic tank absorption fields because of steep or very steep slopes.

The capability subclass is 7e.

41D—Buxton silt loam, 15 to 25 percent slopes

This soil is very deep, moderately steep, and moderately well drained. It is on dissected lake plains. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch; slightly decomposed leaves and needles

Subsurface layer:
1 to 3 inches, dark brown silt loam

Subsoil:
3 to 9 inches, olive brown silt loam
9 to 13 inches, olive silt loam
13 to 26 inches, olive mottled silty clay loam

Subsurface layer:
26 to 66 inches, olive mottled silty clay

Included with this soil in mapping are small areas of moderately deep, well drained Adamant soils and poorly drained Scantic soils. Adamant soils are on ridges. Scantic soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat excessively drained Adams soils and well drained Salmon soils. Adams soils and Salmon soils are on slightly elevated areas. These soils make up about 10 percent of this map unit.

Also included are some areas that have more than 5 percent gravel in the substratum or less than 18 percent clay in the particle-size control section.

Soil Properties

Permeability: moderately rapid in the surface layer, moderately slow or slow in the subsurface layer and upper part of the subsoil, and slow or very slow in the lower part of the subsoil and substratum
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, strongly acid to slightly acid (5.1-6.5) in the subsurface layer, and moderately acid to neutral (5.6-7.3) in the subsoil and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.5 to 3.0 feet below the surface from November to May
Frost action: high
Shrink-swell: low in the surface layer and subsurface layer and moderate in the subsoil and substratum
Hydrologic Group: C

Most areas of this map unit are wooded. Many areas are used for pasture.

This map unit is poorly suited to cultivated crops. The erosion hazard and slope severely limit the use of this map unit for cultivated crops. Equipment use is limited by slope. The seasonal high water table is a concern during periods of high rainfall. The use of this map unit for long-term hay or pasture is effective in controlling erosion.

This map unit is moderately suited to hay and pasture. Erosion is a hazard and slope limits the use of equipment. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

The seasonal high water table and moderately steep slopes are the main limitations if this map unit is used for dwellings. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent. The seasonal high water table, moderately steep slopes and the slow permeability of the firm lower part of the subsoil and substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 4e.

41E—Buxton silt loam, 25 to 45 percent slopes

This soil is very deep, steep or very steep, and moderately well drained. It is on dissected lake plains. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—
Surface layer:
0 to 1 inch; slightly decomposed leaves and needles

Subsurface layer:
1 to 3 inches, dark brown silt loam

Subsoil:
3 to 9 inches, olive brown silt loam
9 to 13 inches, olive silt loam
13 to 26 inches, olive mottled silty clay loam

Subsurface layer:
26 to 66 inches, olive mottled silty clay

Included with this soil in mapping are small areas of moderately deep, well drained Adamant soils and poorly drained Scantic soils. Adamant soils are on ridges. Scantic soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat excessively drained Adams soils and well drained Salmon soils. Adams soils and Salmon soils are on slightly elevated areas. These soils make up about 10 percent of this map unit.

Also included are some areas that have more than 5 percent gravel in the substratum, less than 18 percent clay in the particle-size control section or slopes of 45 to 60 percent.

Soil Properties

Permeability: moderately rapid in the surface layer, moderately slow or slow in the subsurface layer and upper part of the subsoil, and slow or very slow in the lower part of the subsoil and substratum
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, strongly acid to slightly acid (5.1-6.5) in the subsurface layer, and moderately acid to neutral (5.6-7.3) in the subsoil and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.5 to 3.0 feet below the surface from November to May
Frost action: high
Shrink-swell: low in the surface layer and subsurface layer and moderate in the subsoil and substratum
Hydrologic Group: C

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of steep or very steep slopes.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitations. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited for dwellings and septic tank absorption fields because of steep or very steep slopes.

The capability subclass is 7e.

43B—Salmon very fine sandy loam, 3 to 8 percent slopes

This soil is very deep, gently sloping, and well drained. It is on dissected lake plains and terraces. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 6 inches, dark grayish brown very fine sandy loam

Subsoil:
6 to 10 inches, olive brown very fine sandy loam
10 to 22 inches, olive very fine sandy loam
22 to 30 inches, olive brown very fine sandy loam

Subsurface layer:
30 to 60 inches, olive silt loam

Included with this soil in mapping are small areas of moderately deep, well drained Adamant soils, somewhat excessively drained Adams soils, well drained Dummerston soils, somewhat poorly drained Lamoine soils and moderately well drained Nicholville soils. Adamant soils and Adams soils are on slightly elevated areas. Dummerston soils are on backslopes. Lamoine soils and Nicholville soils are in depressions and drainageways. These soils make up about 15 percent of this map unit.

Also included are some areas that have lenses of fine sand in the substratum.

Soil Properties

Permeability: moderate
Available water capacity: high
Soil reaction: extremely acid to moderately acid (3.6-6.0) in the solum and strongly acid or moderately acid (5.1-6.0) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: high
Shrink-swell: low
Hydrologic Group: B

Many areas are cleared and used for silage corn, or hay and pasture. Some areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. The use of this map unit for hay or pasture is also effective in controlling erosion.

This map unit is well suited to hay and pasture. Erosion is a hazard. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion.

The potential productivity of this map unit is very high for sugar maple. It has few limitations for producing and harvesting timber.

This map unit has few limitations for dwellings and septic tank absorption fields.

The capability subclass is 2e.

43C—Salmon very fine sandy loam, 8 to 15 percent slopes

This soil is very deep, strongly sloping, and well drained. It is on dissected lake plains and terraces. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows:

Surface layer:
0 to 6 inches, dark grayish brown very fine sandy loam

Subsoil:
6 to 10 inches, olive brown very fine sandy loam
10 to 22 inches, olive very fine sandy loam
22 to 30 inches, olive brown very fine sandy loam

Substratum:
30 to 60 inches, olive silt loam

Included with this soil in mapping are small areas of moderately deep, well drained Adamant soils, somewhat excessively drained Adams soils, well drained Dummerston soils, somewhat poorly drained Lamoine soils, and moderately well drained Nicholville soils. Adamant soils and Adams soils are on slightly elevated areas. Dummerston soils are on backslopes. Lamoine soils and Nicholville soils are in depressions and drainageways. These soils make up about 15 percent of this map unit.

Also included are some areas that have lenses of fine sand in the substratum.

Soil Properties

Permeability: moderate
Available water capacity: high
Soil reaction: extremely acid to moderately acid (3.6-6.0) in the solum and strongly acid or moderately acid (5.1-6.0) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: high
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are wooded. Some areas are cleared and are used for silage corn, hay, and pasture.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. The use of this map unit for hay or pasture is also effective in controlling erosion.

This map unit is well suited to hay and pasture. Erosion is a hazard. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion.

The potential productivity of this map unit is very high for sugar maple. The main limitation in producing and harvesting timber is the hazard of erosion. Fine textured soils on strong slopes cause a hazard of erosion. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion.

A strong slope is the main limitation if this map unit is used as a site for dwellings. Some excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A strong slope is the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation.

The capability subclass is 3e.

43D—Salmon very fine sandy loam, 15 to 25 percent slopes

This soil is very deep, moderately steep, and well drained. It is on dissected lake plains and terrace escarpments. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves, needles, and twigs
1 to 3 inches, moderately decomposed leaves, needles, and twigs

Subsurface layer:
3 to 7 inches, gray very fine sandy loam

Subsoil:
7 to 11 inches, strong brown very fine sandy loam
11 to 19 inches, yellowish brown very fine sandy loam
19 to 33 inches, dark grayish brown very fine sandy loam

Subsurface layer:
33 to 68 inches, olive silt loam

Included with this soil in mapping are small areas of moderately deep, well drained Adamant soils, somewhat excessively drained Adams soils, moderately well drained Buxton soils, well drained Dummerston soils, and moderately well drained Nicholville soils. Adamant soils and Adams soils are on slightly elevated areas. Dummerston soils are on backslopes. Buxton soils and Nicholville soils are in depressions and drainageways. These soils make up about 15 percent of this map unit.

Also included are some areas that have lenses of fine sand in the substratum.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate in the subsurface layer, subsoil, and substratum
Available water capacity: very high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil, and strongly acid or moderately acid (5.1-6.0) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: high
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are wooded. A few areas are cleared and used for hay and pasture.

This map unit is poorly suited to cultivated crops. The erosion hazard and slope severely limit the use of this map unit for cultivated cops. Equipment use is limited by slope. The use of this map unit for long-term hay or pasture is effective in controlling erosion.

This map unit is moderately suited to hay and pasture. Erosion is a hazard and slope limits the use of equipment. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion.

The potential productivity of this map unit is very high for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope.

A moderately steep slope is the main limitation if this map unit is used for dwellings. Extensive excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A moderately steep slope is the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation.

The capability subclass is 4e.

43E—Salmon very fine sandy loam, 25 to 50 percent slopes

This soil is very deep, steep or very steep, and well drained. It is on dissected lake plains and terrace escarpments. Slopes typically are concave-convex.

Typically, the Salmon soils are covered by a thin layer of leaves, needles and twigs. Under that layer, the typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves, needles, and twigs
1 to 3 inches, moderately decomposed leaves, needles, and twigs

Subsurface layer:
3 to 7 inches, gray very fine sandy loam

Subsoil:
7 to 11 inches, strong brown very fine sandy loam
11 to 19 inches, yellowish brown very fine sandy loam
19 to 33 inches, dark grayish brown very fine sandy loam

Substratum:
33 to 68 inches, olive silt loam

Included with this soil in mapping are small areas of moderately deep, well drained Adamant soils, somewhat excessively drained Adams soils, moderately well drained Buxton soils, well drained Dummerston soils, and moderately well drained Nicholville soils. Adamant soils and Adams soils are on slightly elevated areas. Dummerston soils are on backslopes. Buxton soils and Nicholville soils are in depressions and drainageways. These soils make up about 15 percent of this map unit.

Also included are some areas that have lenses of fine sand in the substratum.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate in the subsurface layer, subsoil, and substratum
Available water capacity: very high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil, and strongly acid or moderately acid (5.1-6.0) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: high
Shrink-swell: low
Hydrologic Group: B

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of steep or very steep slopes.

The potential productivity of this map unit is moderate for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope.

This map unit is unsuited for dwellings and septic tank absorption fields because of steep or very steep slopes.

The capability subclass is 7e.

44B—Lamoine silt loam, 3 to 8 percent slopes

This soil is very deep, gently sloping, and somewhat poorly drained. It is on dissected lake plains. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—
Surface layer:
0 to 10 inches, dark brown silt loam, light gray dry

Subsoil:
10 to 14 inches, olive brown silt loam
14 to 17 inches, dark grayish brown mottled silty clay loam

Substratum:
17 to 30 inches, dark grayish brown mottled silty clay
30 to 65 inches, olive gray mottled silty clay

Included with this soil in mapping are small areas of moderately deep, well drained Adamant soils, and poorly drained Scantic soils. Adamant soils are on ridges. Scantic soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat excessively drained Adams soils and well drained Salmon soils. Adams soils and Salmon soils are on slightly elevated areas. These soils make up about 10 percent of this map unit.

Also included are some areas that have more than 5 percent gravel in the substratum, less than 18 percent clay in the particle-size control section, or slopes of less than 3 percent.

Soil Properties

Permeability: moderate or moderately slow in the surface layer, moderately slow or slow in the subsoil, and slow or very slow in the substratum
Available water capacity: moderate
Soil reaction: strongly acid to slightly acid (5.1-6.5) in the surface layer, moderately acid to neutral (5.6-7.3) in the subsoil and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 0.5 to 1.5 feet below the surface from November to June
Frost action: high
Shrink-swell: low in the surface layer, moderate in subsoil and substratum
Hydrologic Group: D

Most areas of this map unit are cleared and used for hay and pasture. A few areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is low for sugar maple. The main problems affecting timber production and harvesting are the equipment limitations and windthrow hazard. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow. The operation of logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons.

The seasonal high water table is the main limitation if this map unit is used as a site for dwellings. A suitable fill material is needed to raise the existing grade of the site if this map unit is used as a site for dwellings. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table and the slow permeability of the firm lower part of the subsoil and substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 3w.

44C—Lamoine silt loam, 8 to 15 percent slopes

This soil is very deep, strongly sloping, and somewhat poorly drained. It is on dissected lake plains. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 10 inches, dark brown silt loam, light gray dry

Subsoil:

10 to 14 inches, olive brown silt loam

14 to 17 inches, dark grayish brown mottled silty clay loam

Substratum:

17 to 30 inches, dark grayish brown mottled silty clay

30 to 65 inches, olive gray mottled silty clay

Included with this soil in mapping are small areas of moderately deep, well drained Adamant soils and poorly drained Scantic soils. Adamant soils are on ridges. Scantic soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat excessively drained Adams soils and well drained Salmon soils. Adams soils and Salmon soils are on slightly elevated areas. These soils make up about 10 percent of this map unit.

Also included are some areas that have more than 5 percent gravel in the substratum or less than 18 percent clay in the particle-size control section.

Soil Properties

Permeability: moderate or moderately slow in the surface layer, moderately slow or slow in the subsoil, and slow or very slow in the substratum

Available water capacity: moderate

Soil reaction: strongly acid to slightly acid (5.1-6.5) in the surface layer, moderately acid to neutral (5.6-7.3) in the subsoil and substratum

Depth to bedrock: more than 65 inches

Depth to water table: perched at 0.5 to 1.5 feet below the surface from November to June

Frost action: high

Shrink-swell: low in the surface layer, moderate in subsoil and substratum

Hydrologic Group: D

Most areas of this map unit are cleared and used for hay and pasture. Some areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting timber is the equipment limitation. Windthrow is a hazard. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons.

The seasonal high water table and strong slopes are the main limitations if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table, strong slopes, and the slow permeability of the firm lower part of the subsoil and substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 3e.

45A—Scantic silt loam, 0 to 3 percent slopes

This soil is very deep, nearly level and poorly drained. It is on dissected lake plains. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, dark grayish brown mottled silt loam

Subsoil:
8 to 12 inches, olive gray mottled silty clay loam
12 to 30 inches, gray mottled silty clay loam

Substratum:
30 to 65 inches, gray mottled silty clay

Included with this soil in mapping are small areas of very poorly drained Wonsqueak soils and poorly drained Grange soils. Wonsqueak soils are in depressions. Grange soils are on slightly elevated areas. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat poorly drained Lamoine soils. Lamoine soils are on slightly elevated areas. These soils make up 10 percent of this map unit.

Also included are some areas that have slopes of 3 to 8 percent.

Soil Properties

Permeability: moderate or moderately slow in the surface layer and slow or very slow in the subsoil and substratum
Available water capacity: high
Soil reaction: strongly acid to slightly acid (5.1-6.5) in the solum and moderately acid or slightly acid (5.6-6.5) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 0 to 1.0 foot below the surface from October to June
Frost action: high
Shrink-swell: low in the surface layer, moderate in the subsoil and substratum
Hydrologic Group: D

Most areas of this map unit are cleared and used for hay and pasture. Many areas are wooded.

This map unit is moderately suited to cultivated crops. The seasonal high water table is a concern during periods of high rainfall. Tillage in the spring may be delayed because of the seasonal high water table. Where suitable, drainage outlets are available.

This map unit is well suited to hay and pasture. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is very low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Seedling mortality and windthrow are hazards. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. The use of special planting stock will help minimize seedling mortality during wet spring months. Trees are commonly subject to windthrow because root growth is limited by the seasonal high water table and firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited for dwellings and septic tank absorption fields because of poorly drained soils.

The capability subclass is 4w.

55B—Nicholville silt loam, 3 to 8 percent slopes

This soil is very deep, gently sloping, and moderately well drained. It is on dissected lake plains. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark grayish brown silt loam, light brownish gray dry

Subsoil:
8 to 14 inches, olive brown silt loam

Substratum:
14 to 24 inches, olive mottled silt loam
24 to 33 inches, olive mottled silt loam and very fine sandy loam
33 to 65 inches, olive mottled silt loam

Included with this soil in mapping are small areas of excessively drained Colton soils and poorly drained loamy soils. Colton soils are on slightly elevated areas. The poorly drained soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat excessively drained Adams soils, somewhat poorly drained Lamoine soils, and well drained Salmon soils. Adams soils and Salmon soils are on slightly elevated areas. Lamoine soils are on slightly lower areas. These soils make up about 10 percent of this map unit.

Also included are some areas that have up to 10 percent rock fragments throughout the soil, fine sandy loam textures in the upper part of the substratum, or slopes of 8 to 15 percent.

Soil Properties

Permeability: moderate
Available water capacity: high
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to water table: at 1.5 to 2.0 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are cleared and used for silage corn or hay and pasture. A few areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is very high for sugar maple. It has few limitations for producing and harvesting timber.

The seasonal high water table is the main limitation if this map unit is used as a site for dwellings. A suitable fill material is needed to raise the existing grade of the site if this map unit is used as a site for dwellings. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table is the main limitation if this map unit is used as a site for septic tank absorption fields. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table.

The capability subclass is 2e.

58A—Grange silt loam, 0 to 3 percent slopes

This soil is very deep, nearly level, and poorly drained. It is in depressions on kames and terraces. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, dark grayish brown mottled silt loam

Subsoil:
8 to 14 inches, olive mottled silt loam
14 to 17 inches, gray mottled very fine sandy loam
17 to 22 inches, olive mottled very fine sandy loam

Substratum:
22 to 41 inches, olive mottled stratified fine sand and sand
41 to 65 inches, olive gravelly sand

Included with this soil in mapping are small areas of poorly drained Cabot soils and poorly drained Scantic soils. Cabot soils are on toeslopes of knolls. Scantic soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of moderately well drained Machias soils. Machias soils are on slightly elevated areas. This soil makes up about 10 percent of this map unit.

Also included are some areas that have silt loam or very fine sandy loam textures in the substratum, are somewhat poorly drained or have slopes of 3 to 8 percent.

Soil Properties

Permeability: moderate in the solum, moderately rapid or rapid in the substratum
Available water capacity: moderate
Soil reaction: strongly acid to slightly acid (5.1-6.5) in the solum and moderately acid or slightly acid (5.6-6.5) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: within 1.5 feet of the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C

Many areas are cleared and used for pasture. Other areas are wooded.

This map unit is well suited to cultivated crops. The seasonal high water table is a concern during periods of high rainfall. Tillage in the spring may be delayed because of the seasonal high water table. Where suitable drainage outlets are available,

This map unit is well suited to hay and pasture. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is very low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Seedling mortality and windthrow are hazards. Operating logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. The use of special planting stock will help minimize seedling mortality during wet spring months. Trees are commonly subject to windthrow because root growth is limited by the seasonal high water table. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited for dwellings and septic tank absorption fields because of poorly drained soils.

The capability subclass is 4w, undrained and 3w, drained.

59A—Waitsfield silt loam, 0 to 3 percent slopes

This soil is very deep, nearly level, and well drained. It is on slightly elevated areas on flood plains that are frequently flooded by stream overflow for brief periods. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 9 inches, dark grayish brown silt loam

Subsoil:
9 to 20 inches, olive brown very fine sandy loam

Substratum:
20 to 65 inches, olive brown fine sand

Included with this soil in mapping are small areas of poorly drained Rumney soils, excessively drained Sunday soils, poorly drained Sunny soils, and moderately well drained Weider soils. Sunday soils are adjacent to rivers or streams. Rumney soils, Sunny soils and Weider soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of well drained Ondawa soils. Ondawa soils are on similar landscape positions as Waitsfield soils. These soils make up about 10 percent of this map unit.

Also included are some areas that have thin lenses of loamy fine sand in the solum.

Soil Properties

Permeability: moderate in the solum, rapid in the substratum
Available water capacity: moderate
Soil reaction: strongly acid to slightly acid (5.1-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Almost all areas are cleared and used for silage corn or hay and pasture.

This map unit is well suited to cultivated crops. Flooding is of short duration and usually occurs in the spring, which may delay tillage. Applying stubble mulch and growing cover crops are practices that help control erosion by flood waters. Land shaping to provide good surface drainage will allow the soil to be tilled soon after flooding. Streambanks should be maintained in permanent protective cover to help control streambank erosion.

This map unit is well suited to hay and pasture. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion caused by flood water.

The potential productivity of this map unit is moderate for sugar maple. This map unit has few limitations for producing and harvesting timber.

This map unit is unsuited for dwellings and septic tank absorption fields because of the hazard of flooding.

The capability subclass is 1.

60A—Weider very fine sandy loam, 0 to 3 percent slopes

This soil is very deep, nearly level, and moderately well drained. It is on floodplains that are frequently flooded by stream overflow for brief periods. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 6 inches, dark grayish brown very fine sandy loam

Subsoil:
6 to 18 inches, olive brown very fine sandy loam
18 to 25 inches, olive brown mottled very fine sandy loam

Substratum:
25 to 38 inches, olive brown mottled loamy sand
38 to 42 inches, grayish brown mottled sand
42 to 65 inches, olive very gravelly sand

Included with this soil in mapping are small areas of poorly drained Rumney soils, excessively drained Sunday soils, and poorly drained Sunny soils. Rumney soils are in low-lying areas directly adjacent to the rivers and streams. Sunday soils are on slightly elevated areas adjacent to rivers and streams. Sunny soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of well drained Waitsfield soils, moderately well drained floodplain soils with a silt loam substratum, and moderately well drained floodplain soils with a sandy solum. Waitsfield soils are on slightly elevated areas. The soils with silt loam substratums are further from the river than the Weider soils. The soils with sandy solums are in depressions. These soils make up about 10 percent of this map unit.

Also included are some areas that have sandy loam textures in the solum.

Soil Properties

Permeability: moderate in the solum, rapid in the substratum
Available water capacity: moderate
Soil reaction: very strongly acid to slightly acid (4.5-6.5)
Depth to bedrock: more than 65 inches
Depth to Water Table: at 1.5 to 3.0 feet below the surface from November to May
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are cleared and used for silage corn, or hay and pasture. Some areas are wooded.

This map unit is well suited to cultivated crops. Flooding and the seasonal high water table are concerns during periods of high rainfall. Flooding is of short duration and usually occurs in the spring, which may delay spring tillage. Applying stubble mulch and growing cover crops are practices that help control erosion by flood waters. Land shaping to provide good surface drainage helps to dry the soil after flooding. Streambanks should be maintained in permanent protective cover to help control streambank erosion.

This map unit is well suited to hay and pasture. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion caused by flood water. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is moderate for sugar maple. It has few limitations for producing and harvesting timber.

This map unit is unsuited for dwellings and septic tank absorption fields because of the hazard of flooding.

The capability subclass is 2w.

62B—Berkshire fine sandy loam, 3 to 8 percent slopes

This soil is very deep, gently sloping, and well drained. It is on summits of knolls and on till plains. Stones cover less than 0.1 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark gray fine sandy loam

Subsoil:
8 to 11 inches, dark yellowish brown fine sandy loam
11 to 26 inches, olive brown fine sandy loam
26 to 32 inches, olive channery fine sandy loam

Substratum:
32 to 60 inches, olive channery fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, moderately well drained Peru soils, well drained Houghtonville soils, and moderately deep, well drained Tunbridge soils. Cabot soils and Colonel soils are on toeslopes and in depressions. Peru soils are on footslopes. Houghtonville soils are on similar landscape positions as the Berkshire soils. Tunbridge soils are on summits and shoulders. These soils make up about 15 percent of this map unit.

Also included are some areas that have loamy sand textures in the substratum or silt loam textures throughout the soil.

Soil Properties

Permeability: moderate or moderately rapid
Available water capacity: moderate
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to Water Table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are cleared and used for silage corn, or hay and pasture. A few areas are wooded.

This map unit is well suited to cultivated crops. Erosion is a hazard. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. The use of this map unit for hay or pasture is also effective in controlling erosion.

This map unit is well suited to hay and pasture. Erosion is a hazard. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion.

The potential productivity of this map unit is high for sugar maple. It has few limitations for producing and harvesting timber.

This map unit has few limitations for dwellings and septic tank absorption fields.

The capability subclass is 2e.

62C—Berkshire fine sandy loam, 8 to 15 percent slopes

This soil is very deep, strongly sloping, and well drained. It is on backslopes of hills and knolls. Stones cover less than 0.1 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark gray fine sandy loam

Subsoil:
8 to 11 inches, dark yellowish brown fine sandy loam
11 to 26 inches, olive brown fine sandy loam
26 to 32 inches, olive channery fine sandy loam

Substratum:
32 to 60 inches, olive channery fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, moderately well drained Peru soils, well drained Houghtonville soils and moderately deep, well drained Tunbridge soils. Cabot soils and Colonel soils are on toeslopes and in depressions. Peru soils are on footslopes. Houghtonville soils are on similar landscape positions as the Berkshire soils. Tunbridge soils are on summits and shoulders. These soils make up about 15 percent of this map unit.

Also included are some areas that have loamy sand textures in the substratum or silt loam textures throughout the soil.

Soil Properties

Permeability: moderate or moderately rapid
Available water capacity: moderate
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to Water Table: more than 6.0 feet
*Frost action:*moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are cleared and used for silage corn, hay, and pasture. A few areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. The use of this map unit for hay or pasture is also effective in controlling erosion.

This map unit is well suited to hay and pasture. Erosion is a hazard. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion.

The potential productivity of this map unit is high for sugar maple. It has few limitations for producing and harvesting timber.

A strong slope is the main limitation if this map unit is used as a site for dwellings. Some excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A strong slope is the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation.

The capability subclass is 3e.

62D—Berkshire fine sandy loam, 15 to 25 percent slopes

This soil is very deep, moderately steep, and well drained. It is on backslopes of hills. Stones cover less than 0.1 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 8 inches, very dark gray fine sandy loam

Subsoil:
8 to 11 inches, dark yellowish brown fine sandy loam
11 to 26 inches, olive brown fine sandy loam
26 to 32 inches, olive channery fine sandy loam

Substratum:
32 to 60 inches, olive channery fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, moderately well drained Peru soils, well drained Houghtonville soils, and moderately deep, well drained Tunbridge soils. Cabot soils and Colonel soils are on toeslopes and in depressions. Peru soils are on footslopes. Houghtonville soils are on similar landscape positions as the Berkshire soils. Tunbridge soils are on summits and shoulders. These soils make up about 15 percent of this map unit.

Also included are some areas that have loamy sand textures in the substratum or silt loam textures throughout the soil.

Soil Properties

Permeability: moderate or moderately rapid
Available water capacity: moderate
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are cleared and used for hay and pasture. A few areas are wooded.

This map unit is poorly suited to cultivated crops. The erosion hazard and slope severely limits the use of this map unit for cultivated cops. Equipment use is limited by slope. The use of this map unit for long-term hay or pasture is effective in controlling erosion.

This map unit is moderately suited to hay and pasture. Erosion is a hazard and slope limits the use of equipment. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion.

The potential productivity of this map unit is moderate for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope.

A moderately steep slope is the main limitation if this map unit is used as a site for dwellings. Extensive excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A moderately steep slope is the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation.

The capability subclass is 4e.

63B—Berkshire fine sandy loam, 3 to 8 percent slopes, very stony

This soil is very deep, gently sloping, and well drained. It is on summits of knolls and on till plains. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, slightly decomposed leaves and twigs

Subsurface layer:
2 to 3 inch, very dark gray fine sandy loam
3 to 6 inches, light brownish gray fine sandy loam

Subsoil:
6 to 8 inches, dark reddish brown fine sandy loam

8 to 12 inches, reddish brown channery fine sandy loam
12 to 23 inches, dark yellowish brown and olive brown channery fine sandy loam
23 to 38 inches, olive brown channery fine sandy loam

Substratum:
38 to 67 inches, olive channery fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, moderately well drained Peru soils, well drained Houghtonville soils, and moderately deep, well drained Tunbridge soils. Cabot soils and Colonel soils are on toeslopes and in depressions. Peru soils are on footslopes. Houghtonville soils are on similar landscape positions as the Berkshire soils. Tunbridge soils are on summits and shoulders. These soils make up about 15 percent of this map unit.

Also included are some areas that have loamy sand textures in the substratum or silt loam textures throughout the soil.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: high
Soil reaction: extremely acid to moderately acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are wooded. A few areas are cleared and used for pasture.

This map unit is unsuited to cultivated crops and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderate for sugar maple. It has few limitations for producing and harvesting timber.

This map unit has few limitations for dwellings and septic tank absorption fields.

The capability subclass is 6s.

63C—Berkshire fine sandy loam, 8 to 15 percent slopes, very stony

This soil is very deep, strongly sloping, and well drained. It is on backslopes of hills and knolls. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, slightly decomposed leaves and twigs

Subsurface layer:
2 to 3 inch, very dark gray fine sandy loam
3 to 6 inches, light brownish gray fine sandy loam

Subsoil:
6 to 8 inches, dark reddish brown fine sandy loam
8 to 12 inches, reddish brown channery fine sandy loam
12 to 23 inches, dark yellowish brown and olive brown channery fine sandy loam
23 to 38 inches, olive brown channery fine sandy loam

Substratum:
38 to 67 inches, olive channery fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, moderately well drained Peru soils, well drained Houghtonville soils and moderately deep, well drained Tunbridge soils. Cabot soils and Colonel soils are on toeslopes and in depressions. Peru soils are on footslopes. Houghtonville soils are on similar landscape positions as the Berkshire soils. Tunbridge soils are on summits and shoulders. These soils make up about 15 percent of this map unit.

Also included are some areas that have loamy sand textures in the substratum or silt loam textures throughout the soil.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: high
Soil reaction: extremely acid to moderately acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate

Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are wooded. A few areas are cleared and used for pasture.

This map unit is unsuited to cultivated crops and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderate for sugar maple. It has few limitations for producing and harvesting timber.

A strong slope is the main limitation if this map unit is used as a site for dwellings. Some excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A strong slope is the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation.

The capability subclass is 6s.

63D—Berkshire fine sandy loam, 15 to 35 percent slopes, very stony

This soil is very deep, moderately steep or steep, and well drained. It is on backslopes of hills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, slightly decomposed leaves and twigs

Subsurface layer:
2 to 3 inch, very dark gray fine sandy loam
3 to 6 inches, light brownish gray fine sandy loam

Subsoil:
6 to 8 inches, dark reddish brown fine sandy loam
8 to 12 inches, reddish brown channery fine sandy loam
12 to 23 inches, dark yellowish brown and olive brown channery fine sandy loam
23 to 38 inches, olive brown channery fine sandy loam

Substratum:
38 to 67 inches, olive channery fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, moderately well drained Peru soils, well drained Houghtonville soils and moderately deep, well drained Tunbridge soils. Cabot soils and Colonel soils are on toeslopes and in depressions. Peru soils are on footslopes. Houghtonville soils are on similar landscape positions as the Berkshire soils. Tunbridge soils are on summits and shoulders. These soils make up about 15 percent of this map unit.

Also included are some areas that have loamy sand textures in the substratum or silt loam textures throughout the soil.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: high
Soil reaction: extremely acid to moderately acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to Water Table: more than 6.0 feet
*Frost action:*moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are wooded. A few areas are cleared and used for pasture.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface and steep slopes. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderately low for sugar maple. The main problems affecting timber production and harvesting is the equipment limitation. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope.

This map unit is unsuited for dwellings in areas of steep slopes. A moderately steep slope is the main limitation if this map unit is used for dwellings. In areas of moderately steep slopes extensive excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

Moderately steep or steep slopes are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation.

The capability subclass is 7s.

63E—Berkshire fine sandy loam, 35 to 60 percent slopes, very stony

This soil is very deep, very steep, and well drained. It is on backslopes of hills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, slightly decomposed leaves and twigs

Subsurface layer:
2 to 3 inch, very dark gray fine sandy loam
3 to 6 inches, light brownish gray fine sandy loam

Subsoil:
6 to 8 inches, dark reddish brown fine sandy loam
8 to 12 inches, reddish brown channery fine sandy loam
12 to 23 inches, dark yellowish brown and olive brown channery fine sandy loam
23 to 38 inches, olive brown channery fine sandy loam

Substratum:
38 to 67 inches, olive channery fine sandy loam

Included with this soil in mapping are small areas of somewhat poorly drained Colonel soils, moderately well drained Peru soils, well drained Houghtonville soils, and moderately deep, well drained Tunbridge soils. Colonel soils are on toeslopes and in depressions. Peru soils are on footslopes. Houghtonville soils are on similar landscape positions as the Berkshire soils. Tunbridge soils are on summits and shoulders. These soils make up about 15 percent of this map unit.

Also included are some areas that have loamy sand textures in the substratum, silt loam textures throughout the soil or slopes of 60 to 70 percent.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: high
Soil reaction: extremely acid to moderately acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to Water Table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Almost all areas are wooded.

This map unit is unsuited to cultivated crops, hay, and pasture because of stones on the surface and very steep slopes.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting timber is the equipment limitations. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope.

This map unit is unsuited for dwellings and septic tank absorption fields because of very steep slopes.

The capability subclass is 7s.

64C—Salmon-Adamant complex, 8 to 15 percent slopes, very rocky

This map unit consists of strongly sloping soils on hills and knolls on dissected lake plains. The very deep, well drained Salmon soils are on shoulders and backslopes and the moderately deep, well drained Adamant soils are on summits and shoulders. Slopes typically are concave-convex. This map unit consists of 45 percent Salmon soils, 35 percent Adamant soils, and 20 percent other soils and areas of rock outcrop. The Salmon soils and Adamant soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Salmon soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves, needles, and twigs
1 to 3 inches, moderately decomposed leaves, needles, and twigs

Subsurface layer:
3 to 7 inches, gray very fine sandy loam

Subsoil:
7 to 11 inches, strong brown very fine sandy loam
11 to 19 inches, yellowish brown very fine sandy loam
19 to 33 inches, dark grayish brown very fine sandy loam

Substratum:

33 to 68 inches, olive silt loam

The typical sequence, depth, and composition of the layers of the Adamant soils are as follows—

Surface layer:

0 to 1 inch, slightly decomposed leaves and twigs
1 to 4 inches, black highly decomposed leaves and twigs

Subsurface layer:

4 to 9 inches, grayish brown very fine sandy loam

Subsoil:

9 to 14 inches, dark brown very fine sandy loam
14 to 22 inches, dark yellowish brown very fine sandy loam

Substratum:

22 to 28 inches, dark grayish brown very fine sandy loam

Bedrock:

28 inches, slightly weathered schist bedrock

Included with these soils in mapping are small areas of somewhat excessively drained Adams soils, excessively drained Colton soils, somewhat poorly drained Lamoine soils and shallow, well drained soils. Adams and Colton soils are on small mounds. Lamoine soils are in depressions. The shallow soils are near areas of rock outcrop and on summits. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately deep, well drained Tunbridge soils. Berkshire soils and Tunbridge soils are on summits and shoulders. These soils make up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders, and backslopes and cover about 5 percent of this map unit.

Also included are some areas that have slopes of 3 to 8 percent or more than 10 percent areas of rock outcrop.

Soil Properties

Salmon soils

Permeability: moderately rapid in the surface layer and moderate in the subsurface layer, subsoil, and substratum
Available water capacity: very high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil, and strongly acid or moderately acid (5.1-6.0) in the substratum
*Depth to bedrock:*more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: high
Shrink-swell: low
Hydrologic Group: B

Adamant soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Most areas of this map unit are wooded. A few areas are cleared and used for hay and pasture.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Areas of exposed bedrock sometimes interfere with tillage operations. Conservation tillage practices help to minimize this concern.

This map unit is well suited to hay and pasture. Erosion is a hazard. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion. Areas of exposed bedrock sometimes interfere with the operation of farming equipment.

The potential productivity of this map unit is high for sugar maple. The main problems affecting timber production and harvesting are the hazard of erosion and windthrow. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Trees are commonly subject to windthrow on the Adamant soils because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

Depth to bedrock in Adamant soils and strong slopes are the main limitations if this map unit is used as a site for dwellings. Bedrock has to be removed where deep excavations are necessary in areas of Adamant soils. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

Depth to bedrock in Adamant soils and strong slopes are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in some places is needed to raise the field the required distance above the bedrock.

The capability subclass is 3e.

64D—Salmon-Adamant complex, 15 to 25 percent slopes, very rocky

This map unit consists of moderately steep soils on hills on dissected lake plains. The very deep, well drained Salmon soils are on shoulders and backslopes and the moderately deep, well drained Adamant soils are on summits and shoulders. Slopes typically are concave-convex. This map unit consists of 45 percent Salmon soils, 35 percent Adamant soils, and 20 percent other soils and areas of rock outcrop. The Salmon soils and Adamant soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Salmon soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves, needles, and twigs
1 to 3 inches, moderately decomposed leaves, needles, and twigs

Subsurface layer:
3 to 7 inches, gray very fine sandy loam

Subsoil:
7 to 11 inches, strong brown very fine sandy loam
11 to 19 inches, yellowish brown very fine sandy loam
19 to 33 inches, dark grayish brown very fine sandy loam

Substratum:
33 to 68 inches, olive silt loam

The typical sequence, depth, and composition of the layers of the Adamant soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 4 inches, black highly decomposed leaves and twigs

Subsurface layer:
4 to 9 inches, grayish brown very fine sandy loam

Subsoil:
9 to 14 inches, dark brown very fine sandy loam
14 to 22 inches, dark yellowish brown very fine sandy loam

Substratum:
22 to 28 inches, dark grayish brown very fine sandy loam

Bedrock:
28 inches, slightly weathered schist bedrock

Included with these soils in mapping are small areas of somewhat excessively drained Adams soils, moderately well drained Buxton soils, excessively drained Colton soils, and shallow, well drained soils. Buxton soils are in depressions. Adams soils and Colton soils are on small mounds. The shallow soils are near areas of rock outcrop and on summits. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately deep, well drained Tunbridge soils. Berkshire soils and Tunbridge soils are on summits and shoulders. These soils make up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders, and backslopes and cover about 5 percent of this map unit.

Also included are some areas that have more than 10 percent areas of rock outcrop.

Soil Properties

Salmon soils

Permeability: moderately rapid in the surface layer and moderate in the subsurface layer, subsoil, and substratum
Available water capacity: very high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil, and strongly acid or moderately acid (5.1-6.0) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: high
Shrink-swell: low
Hydrologic Group: B

Adamant soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to

moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

This map unit is poorly suited to cultivated crops. The erosion hazard and slope severely limits the use of this map unit for cultivated crops. Equipment use is limited by slope. Areas of exposed bedrock will interfere with equipment operations. The use of this map unit for long-term hay or pasture is effective in controlling erosion.

This map unit is moderately suited to hay and pasture. Erosion is a hazard and slope limits the use of equipment. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion. Areas of exposed bedrock sometimes interfere with the operation of farming equipment.

The potential productivity of this map unit is high for sugar maple. The main problem affecting timber production and harvesting timber is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on the Adamant soils because root growth is limited by the depth of bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

Depth to bedrock in Adamant soils and moderately steep slopes are the main limitations if this map unit is used as a site for dwellings. In areas of Adamant soils, bedrock has to be removed where deep excavations are necessary. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A moderately steep slope is the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in some places is needed to raise the field the required distance above the bedrock.

The capability subclass is 4e.

64E—Salmon-Adamant complex, 25 to 50 percent slopes, very rocky

This map unit consists of steep or very steep soils on hills on dissected lake plains. The very deep, well drained Salmon soils are on shoulders and backslopes and the moderately deep, well drained Adamant soils are on summits and shoulders. Slopes typically are concave-convex. This map unit consists of 45 percent Salmon soils, 35 percent Adamant soils and 20 percent other soils and areas of rock outcrop. The Salmon soils and Adamant soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Salmon soils are as follows—
Surface layer:
0 to 1 inch, slightly decomposed leaves, needles, and twigs
1 to 3 inches, moderately decomposed leaves, needles, and twigs

Subsurface layer:
3 to 7 inches, gray very fine sandy loam

Subsoil:
7 to 11 inches, strong brown very fine sandy loam
11 to 19 inches, yellowish brown very fine sandy loam
19 to 33 inches, dark grayish brown very fine sandy loam

Substratum:
33 to 68 inches, olive silt loam

The typical sequence, depth, and composition of the layers of the Adamant soils are as follows—
Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 4 inches, black highly decomposed leaves and twigs

Subsurface layer:
4 to 9 inches, grayish brown very fine sandy loam

Subsoil:
9 to 14 inches, dark brown very fine sandy loam
14 to 22 inches, dark yellowish brown very fine sandy loam

Substratum:
22 to 28 inches, dark grayish brown very fine sandy loam

Bedrock:
28 inches, slightly weathered schist bedrock

Included with these soils in mapping are small areas of somewhat excessively drained Adams soils, moderately well drained Buxton soils, excessively drained Colton soils, and shallow well drained soils.

Buxton soils are in depressions. Adams soils and Colton soils are on small mounds. The shallow soils are near areas of rock outcrop and on summits. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately deep, well drained Tunbridge soils. Berkshire soils and Tunbridge soils are on summits and shoulders. These soils make up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders and backslopes and cover about 5 percent of this map unit.

Also included are some areas that have more than 10 percent areas of rock outcrop or slopes of 60 to 70 percent.

Soil Properties

Salmon soils

Permeability: moderately rapid in the surface layer and moderate in the subsurface layer, subsoil, and substratum
Available water capacity: very high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil, and strongly acid or moderately acid (5.1-6.0) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: high
Shrink-swell: low
Hydrologic Group: B

Adamant soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of steep or very steep slopes.

The potential productivity of this map unit is high for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on the Adamant soils because root growth is limited by depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited for dwellings and septic tank absorption fields because of steep or very steep slopes.

The capability subclass is 7e.

66B—Vershire-Dummerston complex, 3 to 8 percent slopes, rocky

This map unit consists of gently sloping soils on knolls. The moderately deep, well drained Vershire soils are on summits and shoulders and the very deep, well drained Dummerston soils are on shoulders and backslopes. Stones cover less than 0.1 percent of the surface. Slopes typically are convex. This map unit consists of 44 percent Vershire soils, 35 percent Dummerston soils, and 21 percent other soils and areas of rock outcrop. The Vershire soils and Dummerston soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Vershire soils are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown very fine sandy loam

Subsoil:
9 to 17 inches, dark brown very fine sandy loam

Substratum:
17 to 36 inches, dark olive fine sandy loam

Bedrock:
36 inches, phyllite bedrock

The typical sequence, depth, and composition of the layers of the Dummerston soils are as follows—

Surface layer:
0 to 4 inches, very dark grayish brown fine sandy loam

Subsoil:
4 to 15 inches, olive brown fine sandy loam
15 to 26 inches, olive brown gravelly fine sandy loam

Substratum:
26 to 39 inches, dark grayish brown gravelly fine sandy loam
39 to 65 inches, olive gray, gravelly fine sandy loam

Included with these soils in mapping are small areas of very deep, poorly drained Cabot soils, very deep, moderately well drained Buckland soils, shallow, somewhat excessively drained Glover soils, and very shallow, excessively drained soils. Cabot soils are in depressions and drainageways. Buckland soils are on footslopes. Glover soils are on summits and shoulders. The very shallow soils are on summits. These soils make up about 15 percent of this map unit. Also included are small areas of deep, well drained soils. The deep soils are on shoulders. These soils make up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders and backslopes and cover about 1 percent of this map unit.

Also included are some areas that have a neutral reaction throughout the soil, sandy textures in the substratum, more than 2 percent rock outcrop or more than 1 percent stones covering on the surface.

Soil Properties

Vershire soils
Permeability: moderate
Available water capacity: low
Soil reaction: very strongly acid to slightly acid (4.5-6.5)
Depth to bedrock: 20 to 40 inches
Depth to water table: more than 6.0 feet
*Frost action:*moderate
Shrink-swell: low
Hydrologic Group: C

Dummerston soils
Permeability: moderate
Available water capacity: high
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Many areas are cleared and used for silage corn or hay and pasture. Some areas are wooded.

This map unit is well suited to cultivated crops. Erosion is a hazard. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Areas of exposed bedrock sometimes interfere with tillage operations. Conservation tillage practices help to minimize this concern.

This map unit is well suited to hay and pasture. Erosion is a hazard. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion. Areas of exposed bedrock sometimes interfere with the operation of farming equipment.

The potential productivity of this map unit is high for sugar maple. The main problem affecting timber production and harvesting is the windthrow hazard. Trees are commonly subject to windthrow on the Vershire soils because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

Dummerston soils soil have few limitations for dwellings. Depth to bedrock is the main limitation if Vershire soils are used as a site for dwellings. Bedrock has to be removed where deep excavations are necessary.

Depth to bedrock in Vershire soils is the main limitation if this map unit is used for dwellings. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the bedrock. Dummerston soils have few limitations for septic tank absorption fields.

The capability subclass is 2e.

66C—Vershire-Dummerston complex, 8 to 15 percent slopes, rocky

This map unit consists of strongly sloping soils on hills and knolls. The moderately deep, well drained Vershire soils are on summits and shoulders and the very deep, well drained Dummerston soils are on shoulders and backslopes. Stones cover less than 0.1 percent of the surface. Slopes typically are convex. This map unit consists of 44 percent Vershire soils, 35 percent Dummerston soils, and 21 percent other soils and areas of rock outcrop. The Vershire soils and Dummerston soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Vershire soils are as follows—
Surface layer:
0 to 9 inches, very dark grayish brown very fine sandy loam

Subsoil:
9 to 17 inches, dark brown very fine sandy loam

Substratum:
17 to 36 inches, dark olive fine sandy loam

Bedrock:
36 inches, phyllite bedrock

The typical sequence, depth, and composition of the layers of the Dummerston soils are as follows—

Surface layer:
0 to 4 inches, very dark grayish brown fine sandy loam

Subsoil:
4 to 15 inches, olive brown fine sandy loam
15 to 26 inches, olive brown gravelly fine sandy loam

Substratum:
26 to 39 inches, dark grayish brown gravelly fine sandy loam
39 to 65 inches, olive gray, gravelly fine sandy loam

Included with these soils in mapping are small areas of very deep, poorly drained Cabot soils, very deep, moderately well drained Buckland soils, shallow, somewhat excessively drained Glover soils, and very shallow, excessively drained soils. Cabot soils are in depressions and drainageways. Buckland soils are on footslopes. Glover soils are on summits and shoulders. The very shallow soils are on summits. These soils make up about 15 percent of this map unit. Also included are small areas of deep, well drained soils. The deep soils are on shoulders. These soils make up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders and backslopes and cover about 1 percent of this map unit.

Also included are some areas that have a neutral reaction throughout the soil, sandy textures in the substratum, more than 2 percent rock outcrop or more than 1 percent stones covering on the surface.

Soil Properties

Vershire soils
Permeability: moderate
Available water capacity: low
Soil reaction: very strongly acid to slightly acid (4.5-6.5)
Depth to bedrock: 20 to 40 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Dummerston soils
Permeability: moderate
Available water capacity: high
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Many areas are cleared and used for silage corn, hay, and pasture. Some areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Areas of exposed bedrock sometimes interfere with tillage operations. Conservation tillage practices help to minimize this concern.

This map unit is well suited to hay and pasture. Erosion is a hazard. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion. Areas of exposed bedrock sometimes interfere with the operation of farming equipment.

The potential productivity of this map unit is high for sugar maple. The main problem affecting timber production and harvesting is windthrow. Trees are commonly subject to windthrow on the Vershire soils because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

Depth to bedrock in Vershire soils and strong slopes are the main limitations if this map unit is used as a site for dwellings. Bedrock has to be removed where deep excavations are necessary in areas of Vershire soils. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

Depth to bedrock in Vershire soils and strong slopes are the main limitations if this map unit is used as a site for dwellings. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the bedrock in areas of Vershire soils.

The capability subclass is 3e.

66D—Vershire-Dummerston complex, 15 to 25 percent slopes, rocky

This map unit consists of moderately steep soils on hills. The moderately deep, well drained Vershire soils are on summits and shoulders, the very deep, well drained Dummerston soils are on shoulders and backslopes. Stones cover less than 0.1 percent of the surface. Slopes typically are convex. This map unit consists of 44 percent Vershire soils, 35 percent Dummerston soils, and 21 percent other soils and areas of rock outcrop. The Vershire soils and Dummerston soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Vershire soils are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown very fine sandy loam

Subsoil:
9 to 17 inches, dark brown very fine sandy loam

Substratum:
17 to 36 inches, dark olive fine sandy loam

Bedrock:
36 inches, phyllite bedrock

The typical sequence, depth, and composition of the layers of the Dummerston soils are as follows—

Surface layer:
0 to 4 inches, very dark grayish brown fine sandy loam

Subsoil:
4 to 15 inches, olive brown fine sandy loam
15 to 26 inches, olive brown gravelly fine sandy loam

Substratum:
26 to 39 inches, dark grayish brown gravelly fine sandy loam
39 to 65 inches, olive gray, gravelly fine sandy loam

Included with these soils in mapping are small areas of very deep, poorly drained Cabot soils; very deep, moderately well drained Buckland soils; shallow, somewhat excessively drained Glover soils; and very shallow, excessively drained soils. Cabot soils are in depressions and drainageways. Buckland soils are on footslopes. Glover soils are on summits and shoulders. The very shallow soils are on summits. These soils make up about 15 percent of this map unit. Also included are small areas of deep, well drained soils. The deep soils are on shoulders. These soils make up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders, and backslopes and cover about 1 percent of this map unit.

Also included are some areas that have a neutral reaction throughout the soil, sandy textures in the substratum, more than 2 percent rock outcrop or more than 1 percent stones covering on the surface.

Soil Properties

Vershire soils
Permeability: moderate
Available water capacity: low
Soil reaction: very strongly acid to slightly acid (4.5-6.5)
Depth to bedrock: 20 to 40 inches
Depth to Water Table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Dummerston soils
Permeability: moderate
Available water capacity: high
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Many areas are cleared and used for silage corn or hay and pasture. Some areas are wooded.

This map unit is poorly suited to cultivated crops. The erosion hazard and slope severely limit the use of this map unit for cultivated crops. Equipment use is limited by slope. Areas of exposed bedrock sometimes interfere with equipment operations. The use of this map unit for long-term hay or pasture is effective in controlling erosion.

This map unit is moderately suited to hay and pasture. Erosion is a hazard and slope limits the use of equipment. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion. Areas of exposed bedrock sometimes interfere with the operation of farming equipment.

The potential productivity of this map unit is moderate for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on the Vershire soils because root growth is limited by the depth of bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

Depth to bedrock in Vershire soils and moderately steep slopes are the main limitations if this map unit is used as a site for dwellings. Bedrock has to be removed where deep excavations are necessary. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent. Depth to bedrock in Vershire soils and moderately steep slopes is the main limitation if this map unit is used for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in some places is needed to raise the field the required distance above the bedrock.

The capability subclass is 4e.

66E—Vershire-Dummerston complex, 25 to 60 percent slopes, rocky

This map unit consists of steep or very steep soils on hills. The moderately deep, well drained Vershire soils are on summits and shoulders and the very deep, well drained Dummerston soils are on shoulders and backslopes. Stones cover less than 0.1 percent of the surface. Slopes typically are convex. This map unit consists of 44 percent Vershire soils, 35 percent Dummerston soils, and 21 percent other soils and areas of rock outcrop. The Vershire soils and Dummerston soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Vershire soils are as follows—

Surface layer:
0 to 9 inches, very dark grayish brown very fine sandy loam

Subsoil:
9 to 17 inches, dark brown very fine sandy loam

Substratum:
17 to 36 inches, dark olive fine sandy loam

Bedrock:
36 inches, phyllite bedrock

The typical sequence, depth, and composition of the layers of the Dummerston soils are as follows—

Surface layer:
0 to 4 inches, very dark grayish brown fine sandy loam

Subsoil:
4 to 15 inches, olive brown fine sandy loam
15 to 26 inches, olive brown gravelly fine sandy loam

Substratum:
26 to 39 inches, dark grayish brown gravelly fine sandy loam
39 to 65 inches, olive gray, gravelly fine sandy loam

Included with these soils in mapping are small areas of very deep, moderately well drained Buckland soils; shallow, somewhat excessively drained Glover soils; and very shallow, excessively drained soils. Buckland soils are on footslopes. Glover soils are on summits and shoulders. The very shallow soils are on summits. These soils make up about 15 percent of this map unit. Also included are small areas of deep, well drained soils. The deep soils are on shoulders. These soils make up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders, and backslopes and cover about 1 percent of this map unit.

Also included are some areas that have a neutral reaction throughout the soil, sandy textures in the substratum, more than 2 percent rock outcrop or more than 1 percent stones covering on the surface.

Soil Properties

Vershire soils
Permeability: moderate
Available water capacity: low
Soil reaction: very strongly acid to slightly acid (4.5-6.5)
Depth to bedrock: 20 to 40 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Dummerston soils
Permeability: moderate
Available water capacity: high
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Many areas are wooded. Some areas are cleared and used for pasture.

This map unit is unsuited for cultivated crops, hay, and pasture because of steep or very steep slopes.

The potential productivity of this map unit is moderately low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on the Vershire soils because root growth is limited by depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited as a site for dwellings and septic tank absorption fields because of steep or very steep slopes.

The capability subclass is 7e.

67C—Glover-Vershire complex, 8 to 15 percent slopes, very rocky

This map unit consists of strongly sloping soils on hills and knolls. The shallow, somewhat excessively drained Glover soils are on summits and shoulders and the moderately deep, well drained Vershire soils are on shoulders and backslopes. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 45 percent Glover soils, 35 percent Vershire soils and 20 percent other soils and areas of rock outcrop. The Glover soils and Vershire soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Glover soils are as follows—

Surface layer:
0 to 2 inches, black highly decomposed needles and twigs

Subsurface layer:
2 to 4 inches, very dark grayish brown silt loam

Subsoil:
4 to 17 inches, dark brown silt loam

Bedrock:
17 inches, limestone bedrock

The typical sequence, depth, and composition of the layers of the Vershire soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inches, moderately decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, black very fine sandy loam

Subsoil:
4 to 26 inches, very dark grayish brown very fine sandy loam

Bedrock:
26 inches, phyllite bedrock

Included with these soils in mapping are small areas of very deep, poorly drained Cabot soils; very deep, moderately well drained Buckland soils; and very shallow, excessively drained soils. Cabot soils are in depressions and drainageways. Buckland soils are on footslopes. The very shallow soils are on summits. These soils make up about 10 percent of this map unit. Also included are small areas of very deep, well drained Dummerston soils and deep, well drained soils. Dummerston soils are on backslopes. The deep soils are on shoulders and backslopes. These soils make up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders, and backslopes and cover about 5 percent of this map unit.

Also included are some areas that have a neutral reaction throughout the soil or less than 2 percent rock outcrop.

Soil Properties

Glover soils

Permeability: moderately rapid in the surface layer and moderate in the subsurface layer and subsoil
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer and subsoil
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: D

Vershire soils

Permeability: moderately rapid in the surface layer and moderate in the subsurface layer and subsoil
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to slightly acid (4.5-6.5) in the subsurface layer and subsoil
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Most areas of this map unit are wooded. A few areas are cleared and used for pasture.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface and the bedrock outcrops. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderately low for sugar maple. The main problems affecting timber production and harvesting are seedling mortality and windthrow. The use of special planting stock will help minimize seedling mortality during dry summer months on the shallow Glover soils. Trees are commonly subject to windthrow on this map unit because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

Glover soils are unsuited for dwellings with basements because of shallow depth to bedrock. Depth to bedrock and strong slopes are main limitations if Vershire soils are used as a site for dwellings. Bedrock has to be removed where deep excavations are necessary. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

Glover soils are unsuited for septic tank absorption fields because of shallow depth to bedrock. Depth to bedrock and strong slopes are the main limitations if Vershire soils are used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the bedrock.

The capability subclass is 6s.

67D—Glover-Vershire complex, 15 to 35 percent slopes, very rocky

This map unit consists of moderately steep or steep soils on hills. The shallow, somewhat excessively drained Glover soils are on summits and shoulders and the moderately deep, well drained Vershire soils are on shoulders and backslopes. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 45 percent Glover soils, 35 percent Vershire soils and 20 percent other soils and areas of rock outcrop. The Glover soils and Vershire soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Glover soils are as follows—

Surface layer:
0 to 2 inches, black highly decomposed needles and twigs

Subsurface layer:
2 to 4 inches, very dark grayish brown silt loam

Subsoil:
4 to 17 inches, dark brown silt loam

Bedrock:
17 inches, limestone bedrock

The typical sequence, depth, and composition of the layers of the Vershire soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inches, moderately decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, black very fine sandy loam

Subsoil:
4 to 26 inches, very dark grayish brown very fine sandy loam

Bedrock:
26 inches, phyllite bedrock

Included with these soils in mapping are small areas of very deep, poorly drained Cabot soils, very deep, moderately well drained Buckland soils and very shallow, excessively drained soils. Cabot soils are in depressions and drainageways. Buckland soils are on footslopes. The very shallow soils are on summits. These soils make up about 10 percent of this map unit. Also included are small areas of very deep, well drained Dummerston soils and deep, well drained soils. Dummerston soils are on backslopes. The deep soils are on shoulders and backslopes. These soils make up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders and backslopes and cover about 5 percent of this map unit.

Also included are some areas that have a neutral reaction throughout the soil or less than 2 percent rock outcrop.

Soil Properties

Glover soils

Permeability: moderately rapid in the surface layer and moderate in the subsurface layer and subsoil
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to

moderately acid (4.5-6.0) in the subsurface layer and subsoil
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: D

Vershire soils
Permeability: moderately rapid in the surface layer and moderate in the subsurface layer and subsoil
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to slightly acid (4.5-6.5) in the subsurface layer and subsoil
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Most areas of this map unit are wooded. A few areas are cleared and used for pasture.

This map unit is unsuited to cultivated crops and hay and poorly suited to pasture because of steep slopes, the stones on the surface, and the bedrock outcrops. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion, seedling mortality, and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. The use of special planting stock will help minimize seedling mortality during dry summer months on the Glover soils. Trees are commonly subject to windthrow on this map unit because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited for dwellings in areas of steep slopes and is unsuited for dwellings with basements in Glover soils because of shallow depth to bedrock. Depth to bedrock and moderately steep slopes in Vershire soils are the main limitation if this map unit is used as a site for dwellings. Bedrock has to be removed where deep excavations are necessary. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent and in areas of Glover soils because of shallow depth to bedrock. Depth to bedrock and moderately steep slopes in Vershire soils are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in some places to raise the field the required distance above the bedrock.

The capability subclass is 7s.

67E—Glover-Vershire complex, 35 to 60 percent slopes, very rocky

This map unit consists of very steep soils on hills. The shallow, somewhat excessively drained Glover soils are on summits and shoulders and the moderately deep, well drained Vershire soils are on shoulders and backslopes. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 45 percent Glover soils, 35 percent Vershire soils, and 20 percent other soils and areas of rock outcrop. The Glover soils and Vershire soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Glover soils are as follows—
Surface layer:
0 to 2 inches, black highly decomposed needles and twigs

Subsurface layerk:
2 to 4 inches, very dark grayish brown silt loam

Subsoil:
4 to 17 inches, dark brown silt loam

Bedrock:
17 inches, limestone bedrock

The typical sequence, depth, and composition of the layers of the Vershire soils are as follows—
Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inches, moderately decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, black very fine sandy loam

Subsoil:
4 to 26 inches, very dark grayish brown very fine sandy loam

Bedrock:
26 inches, phyllite bedrock

Included with these soils in mapping are small areas of very deep, moderately well drained Buckland soils and very shallow, excessively drained soils. Buckland soils are on footslopes. The very shallow soils are on summits. These soils make up about 10 percent of this map unit. Also included are small areas of very deep, well drained Dummerston soils and deep, well drained soils. Dummerston soils are on backslopes. The deep soils are on backslopes and shoulders. These soils make up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders, and backslopes and cover about 5 percent of this map unit.

Also included are some areas that have a neutral reaction throughout the soil, less than 2 percent rock outcrop, or have slopes of 60 to 70 percent.

Soil Properties

Glover soils
Permeability: moderately rapid in the surface layer and moderate in the subsurface layer and subsoil
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer and subsoil
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: D

Vershire soils
Permeability: moderately rapid in the surface layer and moderate in the subsurface layer and subsoil
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to slightly acid (4.5-6.5) in the subsurface layer and subsoil
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of stones on the surface and very steep slopes.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion, seedling mortality and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and waterbars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. The use of special planting stock will help minimize seedling mortality during dry summer months on the Glover soils. Trees are commonly subject to windthrow on this map unit because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited for dwellings and septic tank absorption fields because of very steep slopes and shallow depth to bedrock.

The capability subclass is 7s.

68D—Stratton-Glebe complex, 15 to 35 percent slopes, very rocky

This map unit consists of moderately steep or steep soils on mountains. The shallow, well drained Stratton soils are on summits and shoulders and the moderately deep, well drained Glebe soils are on shoulders and backslopes. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 45 percent Stratton soils, 35 percent Glebe soils, and 20 percent other soils and areas of rock outcrop. The Stratton soils and Glebe soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Stratton soils are as follows—
Surface layer:
0 to 1 inch, slightly decomposed needles and twigs

Subsurface Layer:
1 to 2 inch, dark reddish brown fine sandy loam

Subsoil:
2 to 4 inches, dark reddish brown gravelly fine sandy loam
4 to 18 inches, dark reddish brown very gravelly fine sandy loam

Bedrock:
18 inches, schist bedrock

The typical sequence, depth, and composition of the layers of the Glebe soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves, needles and twigs

Subsurface layer:
1 to 2 inch, black very fine sandy loam

Subsoil:
2 to 34 inches, dark reddish brown fine sandy loam

Bedrock:
34 inches, schist bedrock

Included with these soils in mapping are small areas of very shallow, well drained Londonderry soils. Londonderry soils are on summits. This soil makes up about 10 percent of this map unit. Also included are small areas of very deep, well drained Sisk soils. Sisk soils are on backslopes. This soil makes up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders, and backslopes and cover about 5 percent of this map unit.

Also included are areas that have shallow soils with less than 35 percent rock fragments throughout the soil or slopes of 3 to 15 percent.

Soil Properties

Stratton soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer and subsoil
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: D

Glebe soils

Permeability: moderately rapid
Available water capacity: high
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: high
Shrink-swell: low
Hydrologic Group: C

Most areas of this map unit are wooded. A few areas are cleared and used for recreation.

This map unit is unsuited for cultivated crops, hay, and pasture because of the stones on the surface, steep slopes, and a very short growing season.

This map unit is not recommended for forest management because it only occurs at elevations above 2,500 feet.

Stratton soils are unsuited for dwellings with basements because of shallow depth to bedrock. Areas of steep slopes are unsuited for dwellings. Depth to bedrock and moderately steep slopes are main limitations if Glebe soils are used as a site for dwelling. Bedrock has to be removed where deep excavations are necessary. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

This map unit is unsuited for septic tank absorption fields in areas with slopes greater than 20 percent and in areas of Stratton soils because of shallow depth to bedrock. Depth to bedrock and moderately steep slopes are main limitations if Glebe soils are used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in some places is needed to raise the field the required distance above the bedrock.

The capability subclass is 7s.

68E—Stratton-Glebe complex, 35 to 60 percent slopes, very rocky

This map unit consists of very steep soils on mountains. The shallow, well drained Stratton soils are on summits and shoulders and the moderately deep, well drained Glebe soils are on shoulders and backslopes. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 45 percent Stratton soils, 35 percent Glebe soils and 20 percent other soils and areas of rock outcrop. The Stratton soils and Glebe soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Stratton soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed needles and twigs

Subsurface layer:
1 to 2 inch, dark reddish brown fine sandy loam

Subsoil:
2 to 4 inches, dark reddish brown gravelly fine sandy loam
4 to 18 inches, dark reddish brown very gravelly fine sandy loam

Bedrock:
18 inches, schist bedrock

The typical sequence, depth, and composition of the layers of the Glebe soils are as follows—
Surface layer:
0 to 1 inch, slightly decomposed leaves, needles and twigs

Subsurface layer:
1 to 2 inch, black very fine sandy loam

Subsoil:
2 to 34 inches, dark reddish brown fine sandy loam

Bedrock:
34 inches, schist bedrock

Included with these soils in mapping are small areas of very shallow, well drained Londonderry soils. Londonderry soils are on summits of mountains and ridgetops. This soil makes up about 10 percent of this map unit. Also included are small areas of very deep, well drained Sisk soils. Sisk soils are on backslopes. These soils make up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders and backslopes and cover about 5 percent of this map unit.

Also included are areas that have shallow soils with less than 35 percent rock fragments throughout the soil or slopes of 60 to 70 percent.

Soil Properties

Stratton soils
Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer and subsoil
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: D

Glebe soils
Permeability: moderately rapid
Available water capacity: high
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: high
Shrink-swell: low
Hydrologic Group: C

Most areas of this map unit are wooded. A few areas are cleared and used for recreation.

This map unit is unsuited for cultivated crops, hay and pasture because of very steep slopes and a very short growing season.

This map unit is not recommended for forest management because it only occurs at elevations above 2,500 feet.

This map unit is unsuited as a site for dwellings and septic tank absorption fields because of very steep slopes and shallow depth to bedrock.

The capability subclass is 7s.

69D—Sisk-Glebe complex, 15 to 35 percent slopes, very bouldery

This map unit consists of moderately steep or steep soils on mountains. The very deep, well drained Sisk soils are on backslopes and the moderately deep, well drained Glebe soils are on shoulders and backslopes. Boulders cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 45 percent Sisk soils, 40 percent Glebe soils, and 15 percent other soils. The Sisk soils and Glebe soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Sisk soils are as follows—
Surface layer:
0 to 1 inch, slightly decomposed leaves, needles and twigs
1 to 2 inches, moderately decomposed leaves, needles and twigs

Subsurface layer:
2 to 5 inches, dark reddish brown gravelly very fine sandy loam
5 to 6 inches, reddish gray gravelly fine sandy loam

Subsoil:
6 to 12 inches, dark reddish brown gravelly fine sandy loam
12 to 26 inches, dark brown gravelly fine sandy loam

Substratum:
26 to 33 inches, olive brown gravelly fine sandy loam
33 to 67 inches, olive brown and light olive brown gravelly fine sandy loam

The typical sequence, depth, and composition of the layers of the Glebe soils are as follows—

Surface layer:

0 to 1 inch, slightly decomposed leaves, needles and twigs

Subsurface layer:

1 to 2 inch, black very fine sandy loam

Subsoil:

2 to 34 inches, dark reddish brown fine sandy loam

Bedrock:

34 inches, schist bedrock

Included with these soils in mapping are small areas of very shallow, well drained Londonderry soils and shallow, well drained Stratton soils. Londonderry soils are on summits and Stratton soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of very deep, well drained Houghtonville soils. Houghtonville soils are on backslopes and footslopes. This soil makes up about 5 percent of this map unit.

Soil Properties

Sisk soils

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the substratum

Available water capacity: low

Soil reaction: extremely acid or very strongly acid (3.6-5.0) in the surface layer, subsurface layer and subsoil and very strongly acid or strongly acid (4.5-5.5) in the substratum

Depth to bedrock: more than 65 inches

Depth to water table: more than 6.0 feet

Frost action: moderate

Shrink-swell: low

Hydrologic Group: C

Depth to dense material: 20 to 34 inches

Glebe soils

Permeability: moderately rapid

Available water capacity: high

Soil reaction: extremely acid to strongly acid (3.6-5.5)

Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)

Depth to water table: more than 6.0 feet

Frost action: high

Shrink-swell: low

Hydrologic Group: C

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of the stones on the surface, steep slopes and a very short growing season.

This map unit is not recommended for forest management because it only occurs at elevations above 2,500 feet.

Areas of steep slopes are unsuited for dwellings. Depth to bedrock in Glebe soils and the seasonal high water table and moderately steep slopes are the main limitations if this map unit is used as a site for dwellings. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent. Depth to bedrock in Glebe soils, the seasonal high water table and the moderately slow or very slow permeability of the firm substratum in Sisk soils, and moderately steep slopes are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in some places is needed to raise the field the required distance above the bedrock seasonal high water table, and the firm substratum.

The capability subclass is 7s.

69E—Sisk-Glebe complex, 35 to 60 percent slopes, very bouldery

This map unit consists of very steep soils on mountains. The very deep, well drained Sisk soils are on backslopes and the moderately deep, well drained Glebe soils are on shoulders and backslopes. Boulders cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 45 percent Sisk soils, 40 percent Glebe soils, and 15 percent other soils. The Sisk soils and Glebe soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Sisk soils are as follows—

Surface layer:

0 to 1 inch, slightly decomposed leaves, needles and twigs

1 to 2 inches, moderately decomposed leaves, needles and twigs

Subsurface layer:
2 to 5 inches, dark reddish brown gravelly very fine sandy loam
5 to 6 inches, reddish gray gravelly fine sandy loam

Subsoil:
6 to 12 inches, dark reddish brown gravelly fine sandy loam
12 to 26 inches, dark brown gravelly fine sandy loam

Substratum:
26 to 33 inches, olive brown gravelly fine sandy loam
33 to 67 inches, olive brown and light olive brown gravelly fine sandy loam

The typical sequence, depth, and composition of the layers of the Glebe soils are as follows—
Surface layer:
0 to 1 inch, slightly decomposed leaves, needles, and twigs

Subsurface layer:
1 to 2 inch, black very fine sandy loam

Subsoil:
2 to 34 inches, dark reddish brown fine sandy loam

Bedrock:
34 inches, schist bedrock

Included with these soils in mapping are small areas of very shallow, well drained Londonderry soils and shallow, well drained Stratton soils. Londonderry soils are on summits and Stratton soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of very deep, well drained Houghtonville soils. Houghtonville soils are on backslopes and footslopes. This soil makes up about 5 percent of this map unit.

Soil Properties

Sisk soils
Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the substratum
Available water capacity: low
Soil reaction: extremely acid or very strongly acid (3.6-5.0) in the surface layer, subsurface layer and subsoil and very strongly acid or strongly acid (4.5-5.5) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 34 inches

Glebe soils
Permeability: moderately rapid
Available water capacity: high
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: high
Shrink-swell: low
Hydrologic Group: C

Almost all areas are wooded.

This map unit is unsuited to cultivated crops, hay, and pasture because of very steep slopes and a very short growing season.

This map unit is not recommended for forest management because it only occurs at elevations above 2,500 feet.

This map unit is unsuited for dwellings and septic tank absorption fields because of very steep slopes.

The capability subclass is 7s.

71C—Tunbridge-Lyman complex, 3 to 15 percent slopes, rocky

This map unit consists of gently sloping to strongly sloping soils on hills and knolls. The moderately deep, well drained Tunbridge soils are on shoulders and backslopes and the shallow, somewhat excessively drained Lyman soils are on summits and shoulders. Stones cover less than 0.1 percent of the surface. Slopes typically are convex. This map unit consists of 45 percent Tunbridge soils, 34 percent Lyman soils and 21 percent other soils and areas of rock outcrop. The Tunbridge soils and Lyman soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Tunbridge soils are as follows—
Surface layer:
0 to 6 inches, dark brown very fine sandy loam

Subsoil:
6 to 9 inches, dark brown fine sandy loam
9 to 16 inches, yellowish brown fine sandy loam

Substratum:
16 to 22 inches, olive fine sandy loam

Bedrock:
22 inches, phyllite bedrock

The typical sequence, depth, and composition of the layers of the Lyman soils are as follows—
Surface layer:
0 to 7 inch, dark brown fine sandy loam

Subsoil:
7 to 9 inches, dark brown fine sandy loam
9 to 15 inches, dark yellowish brown fine sandy loam

Bedrock:
15 inches, schist bedrock

Included with these soils in mapping are small areas of very deep, poorly drained Cabot soils; very deep, moderately well drained Peru soils; shallow, well drained Hogback soils; and moderately deep, well drained Rawsonville soils. Cabot soils are on toeslopes, and in depressions and drainageways. Peru soils are on footslopes. Rawsonville soils are on similar landscape positions as the Tunbridge soils. Hogback soils are on similar positions as the Lyman soils. These soils make up about 10 percent of this map unit. Also included are small areas of very deep, well drained Berkshire soils. Berkshire soils are on backslopes. This soil makes up about 10 percent of this map unit.

The areas of rock outcrop are on summits, shoulders and backslopes and cover about 1 percent of this map unit.

Soil Properties

Tunbridge soils
Permeability: moderate or moderately rapid
Available water capacity: low
Soil reaction: extremely acid to moderately acid (3.6-6.0) in the surface layer and subsoil and strongly acid to slightly acid (5.1-6.5) in the substratum
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Lyman soils
Permeability: moderately rapid
Available water capacity: very low
Soil reaction: extremely acid to moderately acid (3.6-6.0) in the surface layer and subsoil
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsoil)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C/D

Almost all areas are cleared and are used for hay and pasture.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Areas of exposed bedrock sometimes interfere with tillage operations. Conservation tillage practices help to minimize this concern.

This map unit is well suited to hay and pasture. Erosion is a hazard. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion. Areas of exposed bedrock sometimes interfere with the operation of farming equipment.

The potential productivity of this map unit is moderately low for sugar maple. The main limitation in producing and harvesting timber is seedling mortality and windthrow. The use of special planting stock will help minimize seedling mortality during dry summer months on the shallow Lyman soils. Trees are commonly subject to windthrow because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

Lyman soils are unsuited for dwellings with basements because of shallow depth to bedrock. Depth to bedrock in Tunbridge soils and strong slopes are the main limitation if this map unit is used as a site for dwellings. Bedrock has to be removed where deep excavations are necessary. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

Lyman soils are unsuited for septic tank absorption fields because of shallow depth to bedrock. Depth to bedrock in Tunbridge soils and strong slopes are the main limitation if this map unit is used for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the bedrock.

The capability subclass is 3e for Tunbridge soils and 4e for Lyman soils.

72B—Tunbridge-Lyman complex, 3 to 8 percent slopes, very rocky

This map unit consists of gently sloping soils on knolls. The moderately deep well drained Tunbridge soils are on shoulders and backslopes and the shallow, somewhat excessively drained Lyman soils are on summits and shoulders. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 45 percent Tunbridge soils, 30 percent Lyman soils, and 25 percent other soils and areas of rock outcrop. The Tunbridge soils and Lyman soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Tunbridge soils are as follows—

Surface layer:

0 to 1 inch, slightly decomposed leaves and twigs

1 to 2 inch, moderately decomposed leaves and twigs

2 to 3 inches, black highly decomposed leaves and twigs

Subsurface layer:

3 to 4 inches, dark gray very fine sandy loam

Subsoil:

4 to 10 inches, dark reddish brown very fine sandy loam

10 to 17 inches, dark yellowish brown fine sandy loam

Substratum:

17 to 25 inches, olive brown channery fine sandy loam

Bedrock:

25 inches, phyllite bedrock

The typical sequence, depth, and composition of the layers of the Lyman soils are as follows—

Surface layer:

0 to 1 inch, moderately decomposed leaves, needles and twigs

Subsurface layer:

1 to 2 inches, black fine sandy loam

Subsoil:

2 to 4 inches, dark reddish brown fine sandy loam

4 to 8 inches, dark brown fine sandy loam

8 to 15 inches, yellowish brown gravelly fine sandy loam

Bedrock:

15 inches, schist bedrock

Included with these soils in mapping are small areas of very deep poorly drained Cabot soils, very deep, moderately well drained Peru soils; shallow, well drained Hogback soils; and moderately deep, well drained Rawsonville soils and very shallow, excessively drained soils. Cabot soils are on toeslopes, in depressions, and drainageways. Peru soils are on footslopes. Rawsonville soils are on similar landscape positions as the Tunbridge soils. Hogback soils are on similar positions as the Lyman soils. The very shallow, excessively drained soils are on summits and near rock outcrops. These soils make up about 15 percent of this map unit. Also included are small areas of very deep, well drained Berkshire soils. Berkshire soils are on backslopes. This soil makes up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders, and backslopes and cover about 5 percent of this map unit.

Soil Properties

Tunbridge soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum

Available water capacity: low

Soil reaction: extremely acid to strongly acid (3.6 to 5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil, and strongly acid to slightly acid (5.1-6.5) in the substratum

Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)

Depth to water table: more than 6.0 feet

Frost action: moderate

Shrink-swell: low

Hydrologic Group: C

Lyman soils

Permeability: moderately rapid

Available water capacity: low

Soil reaction: extremely acid to strongly acid (3.6 to 5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil

Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)

Depth to water table: more than 6.0 feet

Frost action: moderate

Shrink-swell: low

Hydrologic Group: C/D

Almost all areas are wooded.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface and the bedrock outcrops. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderately low for sugar maple. The main problems affecting timber production and harvesting are seedling mortality and windthrow. The use of special planting stock will help minimize seedling mortality during dry summer months on the shallow Lyman soils. Trees are commonly subject to windthrow on this map unit because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

Lyman soils are unsuited for dwellings with basements because of shallow depth to bedrock. Depth to bedrock in Tunbridge soils is the main limitation if this map unit is used for dwellings. Bedrock has to be removed where deep excavations are necessary.

Lyman soils are unsuited for septic tank absorption fields because of shallow depth to bedrock. Depth to bedrock in Tunbridge soils is the main limitations if this map unit is used for septic tank absorption fields. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the bedrock.

The capability subclass is 6s.

72C—Tunbridge-Lyman complex, 8 to 15 percent slopes, very rocky

This map unit consists of strongly sloping soils on hills and knolls. The moderately deep, well drained Tunbridge soils are on shoulders and backslopes and the shallow, somewhat excessively drained Lyman soils are on summits and shoulders. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 45 percent Tunbridge soils, 30 percent Lyman soils, and 25 percent other soils and areas of rock outcrop. The Tunbridge soils and Lyman soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Tunbridge soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inch, moderately decomposed leaves and twigs
2 to 3 inches, black highly decomposed leaves and twigs

Subsurface layer:
3 to 4 inches, dark gray very fine sandy loam

Subsoil:
4 to 10 inches, dark reddish brown very fine sandy loam
10 to 17 inches, dark yellowish brown fine sandy loam

Substratum:
17 to 25 inches, olive brown channery fine sandy loam

Bedrock:
25 inches, phyllite bedrock

The typical sequence, depth, and composition of the layers of the Lyman soils are as follows—

Surface layer:
0 to 1 inch, moderately decomposed leaves, needles and twigs

Subsurface layer:
1 to 2 inches, black fine sandy loam

Subsoil:
2 to 4 inches, dark reddish brown fine sandy loam
4 to 8 inches, dark brown fine sandy loam
8 to 15 inches, yellowish brown gravelly fine sandy loam

Bedrock:
15 inches, schist bedrock

Included with these soils in mapping are small areas of very deep, poorly drained Cabot soils; very deep, moderately well drained Peru soils; shallow, well drained Hogback soils; and moderately deep, well drained Rawsonville soils and very shallow, excessively drained soils. Cabot soils are on toeslopes, and in depressions and drainageways. Peru soils are on footslopes. Rawsonville soils are on similar landscape positions as the Tunbridge soils. Hogback soils are on similar positions as the Lyman soils. The very shallow, excessively drained soils are on summits and near rock outcrops. These soils make up about 15 percent of this map unit. Also included are small areas of very deep, well drained Berkshire soils. Berkshire soils are on backslopes. This soil makes up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders and backslopes and cover about 5 percent of this map unit.

Soil Properties

Tunbridge soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6 to 5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil, and strongly acid to slightly acid (5.1-6.5) in the substratum
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Lyman soils

Permeability: moderately rapid
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6 to 5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil

Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C/D

Almost all areas are wooded.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface and the bedrock outcrops. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderately low for sugar maple. The main limitations in producing and harvesting timber are seedling mortality and windthrow. The use of special planting stock will help minimize seedling mortality during dry summer months on the shallow Lyman soils. Trees are commonly subject to windthrow on this map unit because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow hazard.

Lyman soils are unsuited for dwellings with basements because of shallow depth to bedrock. Depth to bedrock in Tunbridge soils and strong slopes are the main limitation if this map unit is used for dwellings. Bedrock has to be removed where deep excavations are necessary. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

Lyman soils are unsuited for septic tank absorption fields because of shallow depth to bedrock. Depth to bedrock in Tunbridge soils and strong slopes are the main limitation if this map unit is used for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the bedrock.

The capability subclass is 6s.

72D—Tunbridge-Lyman complex, 15 to 35 percent slopes, very rocky

This map unit consists of moderately steep or steep soils on hills. The moderately deep well drained Tunbridge soils are on shoulders and backslopes and the shallow, somewhat excessively drained Lyman soils are on summits and shoulders. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 45 percent Tunbridge soils, 30 percent Lyman soils, and 25 percent other soils and areas of rock outcrop. The Tunbridge soils and Lyman soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Tunbridge soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inch, moderately decomposed leaves and twigs
2 to 3 inches, black highly decomposed leaves and twigs

Subsurface layer:
3 to 4 inches, dark gray very fine sandy loam

Subsoil:
4 to 10 inches, dark reddish brown very fine sandy loam
10 to 17 inches, dark yellowish brown fine sandy loam

Substratum:
17 to 25 inches, olive brown channery fine sandy loam

Bedrock:
25 inches, phyllite bedrock

The typical sequence, depth, and composition of the layers of the Lyman soils are as follows—

Surface layer:
0 to 1 inch, moderately decomposed leaves, needles and twigs

Subsurface layer:
1 to 2 inches, black fine sandy loam

Subsoil:
2 to 4 inches, dark reddish brown fine sandy loam
4 to 8 inches, dark brown fine sandy loam
8 to 15 inches, yellowish brown gravelly fine sandy loam

Bedrock:
15 inches, schist bedrock

Included with these soils in mapping are small areas of very deep, poorly drained Cabot soils; very deep, moderately well drained Peru soils; shallow, well drained Hogback soils; and moderately deep, well drained Rawsonville soils and very shallow, excessively drained soils. Cabot soils are on toeslopes, and in depressions and drainageways. Peru soils are on footslopes. Rawsonville soils are on similar landscape positions as the Tunbridge soils.

The very shallow, excessively drained soils are on summits and near rock outcrops. Hogback soils are on similar positions as the Lyman soils. These soils make up about 15 percent of this map unit. Also included are small areas of very deep, well drained Berkshire soils. Berkshire soils are on backslopes. This soil makes up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders, and backslopes and cover about 5 percent of this map unit.

Soil Properties

Tunbridge soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6 to 5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil, and strongly acid to slightly acid (5.1-6.5) in the substratum
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Lyman soils

Permeability: moderately rapid
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6 to 5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C/D

Almost all areas are wooded.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface and the bedrock outcrops. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is low for sugar maple. The main limitations in producing and harvesting timber are the hazard of erosion, equipment limitations, seedling mortality and windthrow. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. The use of special planting stock will help minimize seedling mortality during dry summer months on the shallow Lyman soils. Trees are commonly subject to windthrow on this map unit because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited for dwellings in areas of steep slopes and is unsuited for dwellings with basements in Lyman soils because of shallow depth to bedrock. Depth to bedrock and moderately steep slopes in Tunbridge soils are the main limitation if this map unit is used for dwellings. Bedrock has to be removed where deep excavations are necessary. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent and in areas of Lyman soils because of shallow depth to bedrock. Depth to bedrock and moderately steep slopes in Tunbridge soils are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in some places is needed to raise the field the required distance above the bedrock.

The capability subclass is 7s.

72E—Tunbridge-Lyman complex, 35 to 60 percent slopes, very rocky

This map unit consists of very steep soils on hills. The moderately deep, well drained Tunbridge soils are on shoulders and backslopes and the shallow, somewhat excessively drained Lyman soils are on summits and shoulders. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 45 percent Tunbridge soils, 30 percent Lyman soils, and 25 percent other soils and areas of rock outcrop. The Tunbridge soils and Lyman soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Tunbridge soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inch, moderately decomposed leaves and twigs
2 to 3 inches, black highly decomposed leaves and twigs

Subsurface layer:
3 to 4 inches, dark gray very fine sandy loam

Subsoil:
4 to 10 inches, dark reddish brown very fine sandy loam
10 to 17 inches, dark yellowish brown fine sandy loam

Substratum:
17 to 25 inches, olive brown channery fine sandy loam

Bedrock:
25 inches, phyllite bedrock

The typical sequence, depth, and composition of the layers of the Lyman soils are as follows—
Surface layer:
0 to 1 inch, moderately decomposed leaves, needles and twigs

Subsurface layer:
1 to 2 inches, black fine sandy loam

Subsoil:

2 to 4 inches, dark reddish brown fine sandy loam

4 to 8 inches, dark brown fine sandy loam

8 to 15 inches, yellowish brown gravelly fine sandy loam

Bedrock:
15 inches, schist bedrock

Included with these soils in mapping are small areas of very deep, moderately well drained Peru soils, shallow, well drained Hogback soils, and moderately deep, well drained Rawsonville soils and very shallow, excessively drained soils. Peru soils are on footslopes. Rawsonville soils are on similar landscape positions as the Tunbridge soils. Hogback soils are on similar positions as the Lyman soils. The very shallow, excessively drained soils are on summits and near rock outcrops. These soils make up about 15 percent of this map unit. Also included are small areas of very deep, well drained Berkshire soils. Berkshire soils are on backslopes. This soil makes up about 5 percent of this map unit.

The areas of rock outcrop are on summits, shoulders and backslopes and cover about 5 percent of this map unit.

Soil Properties

Tunbridge soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6 to 5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil, and strongly acid to slightly acid (5.1-6.5) in the substratum
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Lyman soils

Permeability: moderately rapid
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6 to 5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C/D

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of the stones on the surface and very steep slopes.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion, seedling mortality, and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and waterbars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. The use of special planting stock will help minimize seedling mortality during dry summer months on the shallow Lyman soils. Trees are commonly subject to windthrow on this map unit because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited for dwellings and septic tank absorption fields because of very steep slopes and shallow to very shallow depth to bedrock.

The capability subclass is 7s.

76C—Berkshire fine sandy loam, 8 to 15 to percent slopes, very bouldery

This soil is very deep, strongly sloping, and well drained. It is on backslopes of hills and knolls. Boulders cover 0.1 to 3 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, slightly decomposed leaves and twigs

Subsurface layer:
2 to 3 inch, very dark gray fine sandy loam
3 to 6 inches, light brownish gray fine sandy loam

Subsoil:
6 to 8 inches, dark reddish brown fine sandy loam
8 to 12 inches, reddish brown channery fine sandy loam
12 to 23 inches, dark yellowish brown and olive brown channery fine sandy loam
23 to 38 inches, olive brown channery fine sandy loam

Substratum:
38 to 67 inches, olive channery fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, moderately well drained Peru soils, well drained Houghtonville soils, and moderately deep, well drained Tunbridge soils. Cabot soils and Colonel soils are on toeslopes and in depressions. Peru soils are on footslopes. Houghtonville soils are on similar landscape positions as the Berkshire soils. Tunbridge soils are on summits and shoulders. These soils make up 15 percent of this map unit.

Also included are some areas that have loamy sand textures in the substratum or silt loam textures throughout the soil.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: high
Soil reaction: extremely acid to moderately acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of the boulders on the surface.

The potential productivity of this map unit is moderate for sugar maple. It has few limitations for producing and harvesting timber.

A strong slope is the main limitation if this map unit is used for dwellings. Some excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A strong slope is the main limitation if this map unit is used for septic tank absorption fields. Special slope design of septic tank absorption fields is needed in some places for septic tank absorption fields.

The capability subclass is 6s.

76D—Berkshire fine sandy loam, 15 to 35 percent slopes, very bouldery

This soil is very deep, moderately steep or steep, and well drained. It is on backslopes of hills. Boulders cover 0.1 to 3 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, slightly decomposed leaves and twigs

Subsurface layer:
2 to 3 inch, very dark gray fine sandy loam
3 to 6 inches, light brownish gray fine sandy loam

Subsoil:
6 to 8 inches, dark reddish brown fine sandy loam
8 to 12 inches, reddish brown channery fine sandy loam
12 to 23 inches, dark yellowish brown and olive brown channery fine sandy loam
23 to 38 inches, olive brown channery fine sandy loam

Substratum:
38 to 67 inches, olive channery fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, moderately well drained Peru soils, well drained Houghtonville soils and moderately deep, well drained Tunbridge soils. Cabot soils and Colonel soils are on toeslopes and in depressions. Peru soils are on footslopes. Houghtonville soils are on similar landscape positions as the Berkshire soils. Tunbridge soils are on summits and shoulders. These soils make up 15 percent of this map unit.

Also included are some areas that have loamy sand textures in the substratum or silt loam textures throughout the soil.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: high
Soil reaction: extremely acid to moderately acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of the boulders on the surface and steep slopes.

The potential productivity of this map unit is moderately low for sugar maple. The main problem affecting timber production and harvesting timber is the equipment limitations. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope.

This map unit is unsuited for dwellings in areas of steep slopes. A moderately steep slope is the main limitation if this map unit is used as a site for dwellings. In areas of moderately steep slopes extensive excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A moderately steep slope is the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation.

The capability subclass is 7s.

76E—Berkshire fine sandy loam, 35 to 60 percent slopes, very bouldery

This soil is very deep, very steep, and well drained. It is on backslopes of hills. Boulders cover 0.1 to 3 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, slightly decomposed leaves and twigs

Subsurface layer:
2 to 3 inch, very dark gray fine sandy loam
3 to 6 inches, light brownish gray fine sandy loam

Subsoil:
6 to 8 inches, dark reddish brown fine sandy loam
8 to 12 inches, reddish brown channery fine sandy loam
12 to 23 inches, dark yellowish brown and olive brown channery fine sandy loam
23 to 38 inches, olive brown channery fine sandy loam

Substratum:
38 to 67 inches, olive channery fine sandy loam

Included with this soil in mapping are small areas of somewhat poorly drained Colonel soils, moderately well drained Peru soils, well drained Houghtonville soils and moderately deep, well drained Tunbridge soils. Colonel soils are on toeslopes and in depressions. Peru soils are on footslopes. Houghtonville soils are on similar landscape positions as the Berkshire soils. Tunbridge soils are on summits and shoulders. These soils make up 15 percent of this map unit.

Also included are some areas that have loamy sand textures in the substratum, silt loam textures throughout the soil or slopes of 60 to 70 percent.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: high
Soil reaction: extremely acid to moderately acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of the boulders on the surface and very steep slopes.

The potential productivity of this map unit for sugar maple is low. The main problems affecting timber production and harvesting is the equipment limitations. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope.

This map unit is unsuited as a site for dwellings and septic tank absorption fields because of very steep slopes.

The capability subclass is 7s.

77B—Peru gravelly fine sandy loam, 3 to 8 percent slopes

This soil is very deep, gently sloping, and moderately well drained. It is on backslopes of knolls and on till plains. Stones cover less than 0.1 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 7 inches, dark brown gravelly fine sandy loam

Subsoil:

7 to 14 inches, dark yellowish brown gravelly fine sandy loam

14 to 20 inches, dark yellowish brown and dark brown mottled gravelly fine sandy loam

Substratum:

20 to 60 inches, dark grayish brown mottled gravelly fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, and moderately deep, well drained Tunbridge soils. Cabot soils are in depressions and drainageways. Colonel soils are on footslopes. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Mundal soils. Berkshire soils are on backslopes. Mundal soils are on similar landscape positions as Peru soils. This soil makes up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil or silty clay lenses throughout the soil.

Soil Properties

Permeability: moderate in the solum and moderately slow or slow in the firm substratum

Available water capacity: very low

Soil reaction: very strongly acid to moderately acid (4.5-6.0)

Depth to bedrock: more than 65 inches

Depth to water table: perched at 1.5 to 2.5 feet below the surface from November to May

Frost action: high

Shrink-swell: low

Hydrologic Group: C

Depth to dense material: 20 to 36 inches

Most areas of this map unit are cleared and are used for silage corn, hay, and pasture. Some areas are wooded.

This map unit is well suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is high for sugar maple. The main limitation in producing and harvesting timber is windthrow. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

The seasonal high water table is the main limitation if this map unit is used as a site for dwellings. A suitable fill material is needed to raise the existing grade of the site if this map unit is used as a site for dwellings. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 2e.

77C—Peru gravelly fine sandy loam, 8 to 15 percent slopes

This soil is very deep, strongly sloping, and moderately well drained. It is on backslopes of hills and knolls. Stones cover less than 0.1 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, dark brown gravelly fine sandy loam

Subsoil:
7 to 14 inches, dark yellowish brown gravelly fine sandy loam
14 to 20 inches, dark yellowish brown and dark brown mottled gravelly fine sandy loam

Substratum:
20 to 60 inches, dark grayish brown mottled gravelly fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, and moderately deep, well drained Tunbridge soils. Cabot soils are in depressions and drainageways. Colonel soils are on footslopes. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Mundal soils. Berkshire soils are on backslopes. Mundal soils are on similar landscape positions as Peru soils. This soil makes up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil or silty clay lenses throughout the soil.

Soil Properties

Permeability: moderate in the solum, moderately slow or slow in the firm substratum
Available water capacity: very low
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.5 to 2.5 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 36 inches

Most areas of this map unit are cleared and are used for silage corn, hay, and pasture. Some areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is high for sugar maple. The main limitation in producing and harvesting timber is windthrow. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

The seasonal high water table and strong slopes are the main limitations if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table, strong slopes, and the moderately slow or slow permeability of the firm substratum are the main limitations if the map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 3e.

77D—Peru gravelly fine sandy loam, 15 to 25 percent slopes

This soil is very deep, moderately steep, and moderately well drained. It is on backslopes of hills. Stones cover less than 0.1 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 7 inches, dark brown gravelly fine sandy loam

Subsoil:
7 to 14 inches, dark yellowish brown gravelly fine sandy loam
14 to 20 inches, dark yellowish brown and dark brown mottled gravelly fine sandy loam

Substratum:
20 to 60 inches, dark grayish brown mottled gravelly fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, and moderately deep, well drained Tunbridge soils. Cabot soils are in depressions and drainageways. Colonel soils are on footslopes. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Mundal soils. Berkshire soils are on backslopes. Mundal soils are on similar landscape positions as Peru soils. This soil makes up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil or silty clay lenses throughout the soil.

Soil Properties

Permeability: moderate in the solum, moderately slow or slow in the firm substratum
Available water capacity: very low
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.5 to 2.5 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 36 inches

Most areas of this map unit are cleared and are used for hay and pasture. Some areas are wooded.

This map unit is poorly suited to cultivated crops. The erosion hazard and slope severely limit the use of this map unit for cultivated crops. Equipment use is limited by slope. The seasonal high water table is a concern during periods of high rainfall. The use of this map unit for long-term hay or pasture is effective in controlling erosion.

This map unit is moderately suited to hay and pasture. Erosion is a hazard and slope limits the use of equipment. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is moderate for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

The seasonal high water table and moderately steep slopes are the main limitations if this map unit is used as a site for dwellings. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent. The seasonal high water table, moderately steep slopes, and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 4e.

78C—Peru gravelly fine sandy loam, 8 to 15 percent slopes, very stony

This soil is very deep, strongly sloping, and moderately well drained. It is on backslopes of hills and knolls. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inch, moderately decomposed leaves and twigs
2 to 3 inches, black highly decomposed leaves and twigs

Subsurface layer:

3 to 4 inches dark brown gravelly fine sandy loam

Subsoil:

4 to 10 inches, dark brown gravelly fine sandy loam
10 to 19 inches, dark yellowish brown gravelly fine sandy loam
19 to 23 inches, olive brown channery fine sandy loam
23 to 32 inches, olive brown mottled channery fine sandy loam

Substratum:

32 to 67 inches, olive mottled channery fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, and moderately deep, well drained Tunbridge soils. Cabot soils are in depressions and drainageways. Colonel soils are on footslopes. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Mundal soils. Berkshire soils are on backslopes. Mundal soils are on similar landscape positions as Peru soils. This soil makes up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil or silty clay lenses throughout the soil.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.5 to 2.5 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 36 inches

Most areas of this map unit are wooded. A few areas are cleared and used for pastures.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderate for sugar maple. The main limitation in producing and harvesting timber is windthrow. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

The seasonal high water table and strong slopes are the main limitations if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table, strong slopes, and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 6s.

78D—Peru gravelly fine sandy loam, 15 to 35 percent slopes, very stony

This soil is very deep, moderately steep or steep, and moderately drained. It is on backslopes of hills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inch, moderately decomposed leaves and twigs
2 to 3 inches, black highly decomposed leaves and twigs

Subsurface layer:
3 to 4 inches dark brown gravelly fine sandy loam

Subsoil:
4 to 10 inches, dark brown gravelly fine sandy loam
10 to 19 inches, dark yellowish brown gravelly fine sandy loam
19 to 23 inches, olive brown channery fine sandy loam
23 to 32 inches, olive brown mottled channery fine sandy loam

Substratum:
32 to 67 inches, olive mottled channery fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, and moderately deep, well drained Tunbridge soils. Cabot soils are in depressions and drainageways. Colonel soils are on footslopes. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Mundal soils. Berkshire soils are on backslopes. Mundal soils are on similar landscape positions as Peru soils. This soil makes up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil, silty clay lenses throughout the soil or slopes of greater than 35 percent.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.5 to 2.5 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 36 inches

Most areas of this map unit are wooded. A few areas are cleared and used for pastures.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderately low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited as a site for dwellings in areas of steep slopes. The main limitations if this map unit is used as a site for dwellings are the seasonal high water table and moderately steep or steep slopes. In areas of moderately steep slopes extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent. The seasonal high water table, moderately steep slopes, and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 7s.

78E—Peru gravelly fine sandy loam, 35 to 60 percent slopes, very stony

This soil is very deep, very steep, and moderately well drained. It is on backslopes of hills. Stones cover

0.1 to 3 percent of the surface. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inch, moderately decomposed leaves and twigs
2 to 3 inches, black highly decomposed leaves and twigs

Subsurface layer:
3 to 4 inches dark brown gravelly fine sandy loam

Subsoil:
4 to 10 inches, dark brown gravelly fine sandy loam
10 to 19 inches, dark yellowish brown gravelly fine sandy loam
19 to 23 inches, olive brown channery fine sandy loam
23 to 32 inches, olive brown mottled channery fine sandy loam

Substratum:
32 to 67 inches, olive mottled channery fine sandy loam

Included with this soil in mapping are small areas of somewhat poorly drained Colonel soils, and moderately deep, well drained Tunbridge soils. Colonel soils are on footslopes. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Mundal soils. Berkshire soils are on backslopes. Mundal soils are on similar landscape positions as Peru soils. This soil makes up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil, silty clay lenses throughout the soil or slopes of 60 to 70 percent.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.5 to 2.5 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 36 inches

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of the stones on the surface and very steep slopes.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and waterbars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited as a site for dwellings and septic tank absorption fields because of very steep slopes.

The capability subclass is 7s.

79A—Markey and Wonsqueak mucks, 0 to 2 percent slopes, ponded

This soil is very deep, nearly level, and very poorly drained. It is in marshes and swamps. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of Markey soils are as follows—

Surface layer:
0 to 22 inches, black broken faced and rubbed and dark reddish brown pressed muck, primarily from herbaceous plants

Subsurface layer:
22 to 29 inches, dark brown broken faced rubbed and pressed muck, primarily from herbaceous plants
29 to 35 inches, very dark gray broken faced and very dark grayish brown rubbed and pressed muck, primarily from herbaceous plants

Bottom layer:
35 to 42 inches, very dark brown broken faced, rubbed and pressed muck, primarily from herbaceous plants

Substratum:
42 to 65 inches, olive gray fine sand

The typical sequence, depth, and composition of the layers of Wonsqueak soils are as follows—

Surface layer:
0 to 9 inches, very dark brown broken face and rubbed and black pressed muck, primarily from herbaceous plants

Subsurface layer:
9 to 15 inches, very dark brown broken face, very dark gray rubbed and black pressed muck, primarily from herbaceous plants

Bottom layer:
15 to 42 inches, very dark brown broken face and rubbed and black pressed muck, primarily from herbaceous plants

Substratum:
42 to 65 inches, dark gray silty clay loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, very poorly drained Peacham soils, very poorly drained Rifle soils, and poorly drained Scantic soils. Cabot soils, Peacham soils, and Scantic soils are on slightly higher positions on the landscape than the Wonsqueak soils. Rifle soils are on similar landscape positions as the Markey soils and Wonsqueak soils. These soils make up about 15 percent of this map unit.

Also included are some areas that have dominantly mucky peat or peat in the organic part of the control section, a loamy glacial till substratum or thin muck layers in the substratum.

Soil Properties

Markey soils
Permeability: moderately slow to moderately rapid in the organic layers and very rapid in the substratum
Available water capacity: very high
Soil reaction: moderately acid or slightly acid (5.6-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: within 0.5 feet below the surface from January to December
Frost action: high
Shrink-swell: low in the substratum
Hydrologic Group: D
Ponded: ponded to 1 foot above the surface from January to December

Wonsqueak soils
Permeability: moderately slow to moderately rapid in the organic layers and moderate or moderately slow in the substratum
Available water capacity: very high
Soil reaction: moderately acid or slightly acid (5.6-6.5)
Depth to bedrock: more than 65 inches
Depth to water table: within 0.5 feet of the surface from January to December
Frost action: high
Shrink-swell: low in the substratum
Hydrologic Group: D
Ponded: Ponded to 1 foot above the surface from January to December

Most areas of this map unit are in native vegetative and are used for wildlife habitat. Some areas are wooded.

This map unit is unsuited for most uses because of very poorly drained soils and the hazard of ponding

The capability subclass is 7w.

82A—Peacham muck, 0 to 5 percent slopes, extremely bouldery

This soil is very deep, nearly level to gently sloping, and very poorly drained. It is in depressions and drainageways on hills, knolls, and till plains. Boulders cover 3 to 15 percent of the surface. Slopes typically are smooth.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 2 inches, moderately decomposed leaves and needles
2 to 12 inches, black muck

Subsoil:
12 to 28 inches, dark grayish brown mottled fine sandy loam

Substratum:
28 to 35 inches, olive gray mottled gravelly silt loam
35 to 67 inches, olive gray mottled silt loam

Included with this soil in mapping are small areas of very poorly drained Wonsqueak soils and Rifle soils. Wonsqueak soils and Rifle soils are in swampy areas. These soils make up about 10 percent of this map unit. Also included are small areas of poorly drained Cabot soils. Cabot soils are on high spots. This soil makes up about 5 percent of this map unit.

Also included are some areas that have organic layers that are less than 8 inches thick.

Soil Properties

Permeability: moderately slow to moderately rapid in the surface layer, moderate in the subsoil, slow or very slow in the firm substratum
Available water capacity: moderate
Soil reaction: extremely to strongly acid (3.6-5.5) in the surface layer and strongly acid to slightly acid (5.1-6.5) in the subsoil and substratum
Depth to bedrock: more than 65 inches
Depth to water table: within 0.5 feet of the surface from October to June
Frost action: high
Shrink-swell: low
Hydrologic Group: D
Ponded: ponded to 1 foot above the surface from October to June

Depth to dense material: 10 to 20 inches

Almost all areas are wooded.

This map unit is unsuited for most uses because of very poorly drained soils and the hazard of ponding.

The capability subclass is 7s.

85E—Ricker-Londonderry-Stratton complex, 35 to 70 percent slopes, very rocky

This map unit consists of very steep soils on mountain tops. The very shallow to moderately deep, well drained Ricker soils are on summits; the very shallow, well drained Londonderry soils are on summits and shoulders; and the shallow, well drained Stratton soils are on shoulders and backslopes. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave-convex. This map unit consists of 40 percent Ricker soils, 25 percent Londonderry soils, 15 percent Stratton soils and 20 percent other soils and areas of rock outcrop. The Ricker soils, Londonderry soils, and Stratton soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Ricker soils are as follows—

Surface layer:

0 to 2 inches, dark reddish brown broken faced, rubbed and pressed slightly decomposed plant material, primarily from herbaceous material

2 to 8 inches, dark reddish brown broken faced, rubbed and pressed moderately decomposed plant material, primarily from herbaceous material

Bedrock:

8 inches, schist bedrock

The typical sequence, depth, and composition of the layers of the Londonderry soils are as follows—

Surface layer:

0 to 1 inch, slightly decomposed leaves, needles, and twigs

1 to 3 inches, moderately decomposed leaves, needles, and twigs

Subsurface layer:

3 to 8 inches, gray gravelly fine sandy loam

Bedrock:

8 inches, schist bedrock

The typical sequence, depth, and composition of the layers of the Stratton soils are as follows—

Surface layer:

0 to 1 inch, slightly decomposed needles and twigs

Subsurface layer:

1 to 2 inch, dark reddish brown fine sandy loam

Subsoil:

2 to 4 inches, dark reddish brown gravelly fine sandy loam

4 to 18 inches, dark reddish brown very gravelly fine sandy loam

Bedrock:

18 inches, schist bedrock

Included with these soils in mapping are small areas of moderately deep, well drained Glebe soils and very deep well drained Sisk soils. Glebe soils and Sisk soils are on backslopes. These soils make up about 15 percent of this map unit.

The areas of rock outcrop are on summits, shoulders, and backslopes and cover about 5 percent of this map unit.

Also included are some areas of shallow soils that have less than 35 percent rock fragments throughout the soil, slopes of less than 15 percent, more than 10 percent rock outcrop or are somewhat excessively drained or excessively drained.

Soil Properties

Ricker soils

Permeability: moderately rapid
Available water capacity: low
Soil reaction: extremely acid (3.6-4.4)
Depth to bedrock: 2 to 26 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Londonderry soils

Permeability: moderately rapid in the surface layer and moderate in the subsurface layer
Available water capacity: very low
Soil reaction: extremely acid or very strongly acid (3.6-5.0)
Depth to bedrock: 2 to 10 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C/D

Stratton soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer and subsoil
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5)

Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: D

Most areas of this map unit are wooded. A few areas are cleared and are used for recreation.

This map unit is unsuited for cultivated crops, hay, and pasture because of the stones on the surface, a very short growing season, and very steep slopes.

This map unit is not recommended for forest management because it only occurs at elevations above 2,500 feet.

This map unit is unsuited as a site for dwellings and septic tank absorption fields because of very steep slopes and shallow to very shallow depth to bedrock.

The capability subclass is 7s.

86F—Ricker-Londonderry-Rock outcrop complex, 35 to 70 percent slopes

This map unit consists of very steep soils on mountain tops. The very shallow to moderately deep, well drained Ricker soils are on summits and the very shallow, well drained Londonderry soils are on summits and shoulders. The areas of rock outcrop are on summits and shoulders. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave-convex. This map unit consists of 40 percent Ricker soils, 30 percent Londonderry soils, 15 percent other soils and about 15 percent rock outcrop. The Ricker soils and Londonderry soils and areas of rock outcrop are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Ricker soils are as follows—

Surface layer:
0 to 2 inches, dark reddish brown broken faced, rubbed and pressed slightly decomposed plant material, primarily from herbaceous material
2 to 8 inches, dark reddish brown broken faced, rubbed and pressed moderately decomposed plant material, primarily from herbaceous material

Bedrock:
8 inches, schist bedrock

The typical sequence, depth, and composition of the layers of the Londonderry soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves, needles, and twigs
1 to 3 inches, moderately decomposed leaves, needles, and twigs

Subsurface layer:
3 to 8 inches, gray gravelly fine sandy loam

Bedrock:
8 inches, schist bedrock

Areas of rock outcrop are exposures of schist bedrock.

Included with this soil in mapping are small areas of moderately deep, well drained Glebe soils and shallow, well drained Stratton soils. Glebe soils are on backslopes. Stratton soils are on shoulders. These soils make up about 15 percent of this map unit.

Also included are some areas that have more than 25 percent rock outcrop, slopes of less than 15 percent, or are somewhat excessively drained or excessively drained.

Soil Properties

Ricker soils
Permeability: moderately rapid
Available water capacity: low
Soil reaction: extremely acid (3.6-4.4)
Depth to bedrock: 2 to 26 inches
Depth to water table: more than 6.0 feet
Frost action: low
Shrink-swell: low
Hydrologic Group: A

Londonderry soils
Permeability: moderately rapid in the surface layer and moderate in the subsurface layer
Available water capacity: very low
Soil reaction: extremely acid or very strongly acid (3.6-5.0)
Depth to bedrock: 2 to 10 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C/D

Most areas of this map unit are wooded. A few areas are cleared and are used for recreation.

This map unit is unsuited for cultivated crops, hay, and pasture because of the stones on the surface, a very short growing season and very steep slopes.

This map unit is not recommended for forest management because it only occurs at elevations above 2500 feet.

This map unit is unsuited for dwellings and septic tank absorption fields because of very steep slopes and shallow to very shallow depth to bedrock.

The capability subclass is 7s for Ricker soils and Londonderry soils and 8s for areas of Rock outcrop.

88D—Houghtonville fine sandy loam, 15 to 35 percent slopes, very bouldery

This soil is very deep, moderately steep or steep, and well drained. It is on backslopes and footslopes of mountains and foothills. Boulders cover 0.1 to 3 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs

Subsurface layer:
1 to 5 inches, black fine sandy loam
5 to 8 inches, reddish gray gravelly fine sandy loam

Subsoil:
8 to 11 inches, dark reddish brown gravelly fine sandy loam
11 to 33 inches, dark brown gravelly fine sandy loam

Substratum:
33 to 66 inches, olive brown gravelly fine sandy loam

Included with this soil in mapping are small areas of moderately well drained Mundal soils; moderately deep, well drained Rawsonville soils; and poorly drained Cabot soils. Mundal soils are on footslopes. Rawsonville soils are on summits and shoulders. Cabot soils are in depressions and drainageways. These soils make up 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and deep, well drained soils. Berkshire soils and the deep soils are on similar landscape positions as Houghtonville soils. These soils make up 5 percent of this map unit.

Also included are some areas that have slopes of greater than 35 percent.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: very high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and extremely acid to moderately acid (3.6-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
*Frost action:*moderate
Shrink-swell: low
Hydrologic Group: B

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of the boulders on the surface and steep slopes.

The potential productivity of this map unit is moderately low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. When the soils in this map unit are wet the high organic matter content of the surface layer and subsoil gives them a greasy characteristic which sometimes interferes with the operation of logging equipment.

This map unit is unsuited as a site for dwellings in areas of steep slopes. The main limitation if this map unit is used as a site for dwellings is moderately steep slopes. In areas of moderately steep slopes, extensive excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent. A moderately steep slope is the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation.

The capability subclass is 7s.

89E—Houghtonville fine sandy loam, 15 to 60 percent slopes, rubbly

This soil is very deep, moderately steep to very steep, and well drained. It is on backslopes and footslopes of mountains and foothills. Boulders cover more than 15 percent of the surface. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs

Subsurface layer:
1 to 5 inches, black fine sandy loam
5 to 8 inches, reddish gray gravelly fine sandy loam

Subsoil:
8 to 11 inches, dark reddish brown gravelly fine sandy loam
11 to 33 inches, dark brown gravelly fine sandy loam

Substratum:
33 to 66 inches, olive brown gravelly fine sandy loam

Included with this soil in mapping are small areas of moderately well drained Mundal soils; moderately deep, well drained Rawsonville soils; and poorly drained Cabot soils. Mundal soils are on footslopes. Rawsonville soils are on summits and shoulders. Cabot soils are in depressions and drainageways. These soils make up 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and deep, well drained soils. Berkshire soils and the deep soils are on similar landscape positions as the Houghtonville soils. These soils make up 5 percent of this map unit.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: very high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and extremely acid to moderately acid (3.6-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Almost all areas are wooded. A few areas with more than 15 percent boulders on the surface have little or no vegetation.

This map unit is unsuited for most uses because of the rubbly surface layer.

The capability subclass is 7s.

90B—Dummerston fine sandy loam, 3 to 8 percent slopes

This soil is very deep, gently sloping, and well drained. It is on shoulders and backslopes of knolls and on till plains. Stones cover less than 0.1 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—
Surface layer:
0 to 4 inches, very dark grayish brown fine sandy loam

Subsoil:
4 to 15 inches, olive brown fine sandy loam
15 to 26 inches, olive brown gravelly fine sandy loam

Substratum:
26 to 39 inches, dark grayish brown gravelly fine sandy loam
39 to 65 inches, olive gray, gravelly fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, moderately well drained Buckland soils, and moderately deep, well drained Vershire soils. Cabot soils are in depressions and drainageways. Buckland soils are on footslopes. Vershire soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of deep, well drained soils and well drained Salmon soils. The deep soils are on shoulders. Salmon soils are in concave areas on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have a neutral reaction throughout the soil or sandy textures in the substratum.

Soil Properties

Permeability: moderate
Available water capacity: high
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are cleared and used for silage corn, hay, and pasture. A few areas are wooded.

This map unit is well suited to cultivated crops. Erosion is a hazard. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. The use of this map unit for hay or pasture is also effective in controlling erosion.

This map unit is well suited to hay and pasture. Erosion is a hazard. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion.

The potential productivity of this map unit is high for sugar maple. It has few limitations for producing and harvesting timber.

This map unit has few limitations for dwellings and septic tank absorption fields.

The capability subclass is 2e.

90C—Dummerston fine sandy loam, 8 to 15 percent slopes

This soil is very deep, strongly sloping, and well drained. It is on shoulders and backslopes of hills and knolls. Stones cover less than 0.1 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 4 inches, very dark grayish brown fine sandy loam

Subsoil:

4 to 15 inches, olive brown fine sandy loam

15 to 26 inches, olive brown gravelly fine sandy loam

Substratum:

26 to 39 inches, dark grayish brown gravelly fine sandy loam

39 to 65 inches, olive gray, gravelly fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, moderately well drained Buckland soils, and moderately deep, well drained Vershire soils. Cabot soils are in depressions and drainageways. Buckland soils are on footslopes. Vershire soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of deep, well drained soils and well drained Salmon soils. The deep soils are on shoulders. Salmon soils are in concave areas on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have a neutral reaction throughout the soil or sandy textures in the substratum.

Soil Properties

Permeability: moderate
Available water capacity: high
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are cleared and used for silage corn, hay, and pasture. A few areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. The use of this map unit for hay or pasture is also effective in controlling erosion.

This map unit is well suited to hay and pasture. Erosion is a hazard. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion.

The potential productivity of this map unit is high for sugar maple. It has few limitations for producing and harvesting timber.

Strong slopes are the main limitation if this map unit is used as a site for dwellings. Some excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A strong slope is the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design of septic tank absorption fields is needed in some places for septic tank absorption fields.

The capability subclass is 3e.

90D—Dummerston fine sandy loam, 15 to 25 percent slopes

This soil is very deep, moderately steep, and well drained. It is on shoulders and backslopes of hills. Stones cover less than 0.1 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 4 inches, very dark grayish brown fine sandy loam

Subsoil:

4 to 15 inches, olive brown fine sandy loam

15 to 26 inches, olive brown gravelly fine sandy loam

Substratum:

26 to 39 inches, dark grayish brown gravelly fine sandy loam

39 to 65 inches, olive gray, gravelly fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, moderately well drained Buckland soils and moderately deep, well drained Vershire soils. Cabot soils are in depressions and drainageways. Buckland soils are on footslopes. Vershire soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of deep, well drained soils and well drained Salmon soils. The deep soils are on shoulders. Salmon soils are in concave areas on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have a neutral reaction throughout the soil or sandy textures in the substratum.

Soil Properties

Permeability: moderate
Available water capacity: high
Soil reaction: very strongly acid to moderately acid (4.5-6.0)
*Depth to bedrock:*more than 65 inches
Depth to water table: more than 6.0 feet
*Frost action:*moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are cleared and used for silage corn, hay, and pasture. A few areas are wooded.

This map unit is poorly suited to cultivated crops. The erosion hazard and slope severely limits the use of this map unit for cultivated cops. Equipment use is limited by slope. The use of this map unit for long-term hay or pasture is effective in controlling erosion.

This map unit is moderately suited to hay and pasture. Erosion is a hazard and slope limits the use of equipment. Proper stocking rates and rotational grazing will help to maintain a good stand of hay and pasture plants and help to control erosion.

The potential productivity of this map unit is moderate for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope.

A moderately steep slope is the main limitation if this map unit is used as a site for dwellings. Extensive excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A moderately steep slope is the main limitation if this map unit is used for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation.

The capability subclass is 4e.

91C—Dummerston fine sandy loam, 8 to 15 percent slopes, very stony

This soil is very deep, strongly sloping, and well drained. It is on shoulders and back slopes of hills and knolls. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex.

Typically, the Dummerston soils are covered by a thin layer of undecomposed leaves, needles and twigs. Under that layer, the typical sequence, depth, and composition of the layers of this soil are as follows—

The typical sequence, depth, and composition of the layers of this soil are as follows:

Surface layer:
0 to 2 inches, moderately decomposed leaves and needles

Subsurface layer:
2 to 4 inches, dark grayish brown and grayish brown fine sandy loam

Subsoil:
4 to 24 inches, dark yellowish brown and olive brown fine sandy loam

Substratum:
24 to 60 inches, dark grayish brown fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, moderately well drained Buckland soils, and moderately deep, well drained Vershire soils. Cabot soils are in depressions and drainageways. Buckland soils are on footslopes. Vershire soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of deep, well drained soils and well drained Salmon soils. The deep soils are on shoulders. Salmon soils are in concave areas on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have a neutral reaction throughout the soil, sandy textures in the substratum or slopes of less than 8 percent.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate in the subsurface layer, subsoil, and substratum
Available water capacity: high
Soil reaction: extermely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet

Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are wooded. A few areas are cleared and are used for pasture.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting, and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderate for sugar maple. It has few limitations for producing and harvesting timber.

A strong slope is the main limitation if this map unit is used as a site for dwellings. Some excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A strong slope is the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design of septic tank absorption fields is needed in some places for septic tank absorption fields.

The capability subclass is 6s.

91D—Dummerston fine sandy loam, 15 to 35 percent slopes, very stony

This soil is very deep, moderately steep or steep, and well drained. It is on shoulders and backslopes of hills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex.

Typically, the Dummerston soils are covered by a thin layer of undecomposed leaves, needles and twigs. Under that layer, the typical sequence, depth, and composition of the layers of this soil are as follows—

The typical sequence, depth, and composition of the layers of this soil are as follows:

Surface layer:
0 to 2 inches, moderately decomposed leaves and needles

Subsurface layer:
2 to 4 inches, dark grayish brown and grayish brown fine sandy loam

Subsoil:
4 to 24 inches, dark yellowish brown and olive brown fine sandy loam

Substratum:
24 to 60 inches, dark grayish brown fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, moderately well drained Buckland soils, and moderately deep, well drained Vershire soils. Cabot soils are in depressions and drainageways. Buckland soils are on footslopes. Vershire soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of deep, well drained soils and well drained Salmon soils. The deep soils are on shoulders. Salmon soils are in concave areas on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have a neutral reaction throughout the soil, sandy textures in the substratum or have slopes of greater than 35 percent.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate in the subsurface layer, subsoil, and substratum
Available water capacity: high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are wooded. A few areas are cleared and used for pasture.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface and steep slopes. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderately low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitations. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope.

A moderately steep slope is the main limitation if this map unit is used as a site for dwellings. In areas of moderately steep slopes, extensive excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A moderately steep slope is the main limitation if this map unit is used as a site for septic tank absorption fields. This map unit is unsuited for septic tank absorption fields in areas of steep slopes. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation.

The capability subclass is 7s.

92B—Buckland silt loam, 3 to 8 percent slopes

This soil is very deep, gently sloping, and moderately well drained. It is on footslopes of knolls and on till plains. Stones cover less than 0.1 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 5 inches, very dark grayish brown silt loam, light brownish gray dry

Subsoil:

5 to 10 inches, very dark grayish brown silt loam
10 to 20 inches, olive mottled channery silt loam

Substratum:

20 to 65 inches, dark olive gray mottled channery silt loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Vershire soils. Cabot soils are in depressions and drainageways. Vershire soils are on summits and shoulders. These soils make up about 5 percent of this map unit. Also included are small areas of well drained Dummerston soils. Dummerston soils are on backslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum.

Soil Properties

Permeability: moderate in the solum and slow in the firm substratum
Available water capacity: low
Soil reaction: moderately acid to neutral (5.6-7.3)
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.0 to 2.0 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 30 inches

Most areas of this map unit are cleared and are used for silage corn, hay, and pasture. Some areas are wooded.

This map unit is well suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is moderate for sugar maple. The main limitation in producing and harvesting timber is windthrow. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

The seasonal high water table is the main limitation if this map unit is used as a site for dwellings. A suitable fill material is needed to raise the existing grade of the site if this map unit is used as a site for dwellings. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table and the slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 2w.

92C—Buckland silt loam, 8 to 15 percent slopes

This soil is very deep, strongly sloping, and moderately well drained. It is on footslopes of knolls and hills. Stones cover less than 0.1 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 5 inches, very dark grayish brown silt loam, light brownish gray dry

Subsoil:

5 to 10 inches, very dark grayish brown silt loam
10 to 20 inches, olive mottled channery silt loam

Substratum:

20 to 65 inches, dark olive gray mottled channery silt loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Vershire soils. Cabot soils are in depressions and drainageways. Vershire soils are on summits and shoulders. These soils make up about 5 percent of this map unit. Also included are small areas of well drained Dummerston soils. Dummerston soils are on backslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum.

Soil Properties

Permeability: moderate in the solum and slow in the firm substratum
Available water capacity: low
Soil reaction: moderately acid to neutral (5.6-7.3)
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.0 to 2.0 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 30 inches

Most areas of this map unit are cleared and are used for silage corn, hay, and pasture. Some areas are wooded.

This map unit is moderately suited to cultivated crops. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Using conservation practices, such as crop rotation, cover crops, contour farming, and conservation tillage can help control erosion. Installing diversion ditches to divert surface runoff can also help control erosion. Tillage in the spring may be delayed because of the seasonal high water table.

This map unit is well suited to hay and pasture. Erosion is a hazard. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is moderate for sugar maple. The main limitation in producing and harvesting timber is windthrow. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

The seasonal high water table and strong slopes are the main limitations if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table, strong slopes, and the slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 3e.

92D—Buckland silt loam, 15 to 25 percent slopes

This soil is very deep, moderately steep, and moderately well drained. It is on footslopes on hills. Stones cover less than 0.1 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:

0 to 5 inches, very dark grayish brown silt loam, light brownish gray dry

Subsoil:

5 to 10 inches, very dark grayish brown silt loam
10 to 20 inches, olive mottled channery silt loam

Substratum:

20 to 65 inches, dark olive gray mottled channery silt loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Vershire soils. Cabot soils are in depressions and drainageways. Vershire soils are on summits and shoulders. These soils make up about 5 percent of this map unit. Also included are small areas of well drained Dummerston soils. Dummerston soils are on backslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum.

Soil Properties

Permeability: moderate in the solum and slow in the firm substratum
Available water capacity: low
Soil reaction: moderately acid to neutral (5.6-7.3)
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.0 to 2.0 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 30 inches

Most areas of this map unit are cleared and are used for silage corn, hay, and pasture. Some areas are wooded.

This map unit is poorly suited to cultivated crops. The erosion hazard and slope severely limit the use of this map unit for cultivated crops. Equipment use is limited by slope. The seasonal high water table is a concern during periods of high rainfall. The use of this map unit for long-term hay or pasture is effective in controlling erosion.

This map unit is moderately suited to hay and pasture. Erosion is a hazard and slope limits the use of equipment. The seasonal high water table is a concern during periods of high rainfall. Proper stocking rates and rotational grazing during wet periods will help to maintain a good stand of hay and pasture plants and help to control erosion. Planting water tolerant plants helps to overcome the wetness caused by the seasonal high water table.

The potential productivity of this map unit is moderate for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

The seasonal high water table and moderately steep slopes are the main limitations if this map unit is used as a site for dwellings. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent. The seasonal high water table, moderately steep slopes, and slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 4e.

93B—Buckland silt loam, 3 to 8 percent slopes, very stony

This soil is very deep, gently sloping, and moderately well drained. It is on footslopes of knolls and on till plains. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves, needles, and twigs

Subsurface layer:
1 to 5 inches, very dark grayish brown silt loam

Subsoil:
5 to 9 inches, olive brown silt loam
9 to 29 inches, olive mottled very fine sandy loam

Substratum:
29 to 61 inches, dark olive brown mottled very fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Vershire soils. Cabot soils are in depressions and drainageways. Vershire soils are on summits and shoulders. These soils make up about 5 percent of this map unit. Also included are small areas of well drained Dummerston soils. Dummerston soils are on backslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and moderately acid to neutral (5.6-7.3) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.0 to 2.0 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 30 inches

Most areas of this map unit are wooded. A few areas are cleared and are used for pastures.

This map unit is unsuited for cultivated crop and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderate for sugar maple. The main limitation in producing and harvesting timber is windthrow. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

The seasonal high water table is the main limitation if this map unit is used as a site for dwellings. A suitable fill material is needed to raise the existing grade of the site if this map unit is used as a site for dwellings. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table and the slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special construction such as mounding the septic tank absorption field with suitable fill material in most places is needed to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 6s.

93C—Buckland silt loam, 8 to 15 percent slopes, very stony

This soil is very deep, strongly sloping, and moderately well drained. It is on footslopes of knolls and hills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves, needles, and twigs

Subsurface layer:
1 to 5 inches, very dark grayish brown silt loam

Subsoil:
5 to 9 inches, olive brown silt loam
9 to 29 inches, olive mottled very fine sandy loam

Substratum:
29 to 61 inches, dark olive brown mottled very fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Vershire soils. Cabot soils are in depressions and drainageways. Vershire soils are on summits and shoulders. These soils make up about 5 percent of this map unit. Also included are small areas of well drained Dummerston soils. Dummerston soils are on backslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and moderately acid to neutral (5.6-7.3) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.0 to 2.0 feet below the surface from November to May
Frost action: high
Shrink-swell: low

Hydrologic Group: C
Depth to dense material: 20 to 30 inches

Most areas of this map unit are wooded. A few areas are cleared and used for pastures.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderate for sugar maple. The main limitation in producing and harvesting timber is windthrow. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

The seasonal high water table and strong slopes are the main limitations if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table, strong slopes, and the slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 6s.

93D—Buckland silt loam, 15 to 35 percent slopes, very stony

This soil is very deep, moderately steep or steep, and moderately well drained. It is on footslopes of hills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves, needles, and twigs

Subsurface layer:
1 to 5 inches, very dark grayish brown silt loam

Subsoil:
5 to 9 inches, olive brown silt loam
9 to 29 inches, olive mottled very fine sandy loam

Substratum:
29 to 61 inches, dark olive brown mottled very fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Vershire soils. Cabot soils are in depressions and drainageways. Vershire soils are on summits and shoulders. These soils make up about 5 percent of this map unit. Also included are small areas of well drained Dummerston soils. Dummerston soils are on backslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum or slopes of greater than 35 percent.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and moderately acid to neutral (5.6-7.3) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.0 to 2.0 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 30 inches

Most areas of this map unit are wooded. A few areas are cleared and used for pastures.

This map unit is unsuited to cultivated crops and hay and poorly suited to pasture because of the stones on the surface and steep slopes. If this map unit is used for unimproved pasture, periodic cutting, and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderately low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited for dwellings in areas of steep slopes. The seasonal high water table and moderately steep slopes are the main limitations if this map unit is used as a site for dwellings. In areas of moderately steep slopes extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent. The seasonal high water table, moderately steep slopes, and the slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 7s.

96D—Peru gravelly fine sandy loam, 15 to 35 percent slopes, extremely bouldery

This soil is very deep, moderately steep or steep, and moderately well drained. It is on backslopes of hills. Boulders cover 3 to 15 percent of the surface. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of the Peru soils are as follows—

Surface layer:

0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inch, moderately decomposed leaves and twigs
2 to 3 inches, black highly decomposed leaves and twigs

Subsurface layer:

3 to 4 inches dark brown gravelly fine sandy loam

Subsoil:

4 to 10 inches, dark brown gravelly fine sandy loam
10 to 19 inches, dark yellowish brown gravelly fine sandy loam
19 to 23 inches, olive brown channery fine sandy loam
23 to 32 inches, olive brown mottled channery fine sandy loam

Substratum:

32 to 67 inches, olive mottled channery fine sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils, somewhat poorly drained Colonel soils, moderately well drained Mundal soils and moderately deep, well drained Tunbridge soils. Cabot soils are on toeslopes and in depressions and drainageways. Colonel soils are on footslopes. Mundal soils are on backslopes. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils. Berkshire soils are on backslopes. This soil makes up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil or silty clay lenses throughout the soil.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to moderately acid (4.5-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.5 to 2.5 feet below the surface from November to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 36 inches

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of the boulders on the surface and steep slopes.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Equipment is limited to special types that can operate along selected routes among the boulders. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited for dwellings in areas of steep slopes. Boulders on the surface, the seasonal high water table, and moderately steep slopes are the main limitations if this map unit is used as a site for dwellings. In areas of moderately steep slopes extensive excavation is needed to prepare nearly level areas for dwellings. Special equipment may be needed to remove the boulders on the surface from the site. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent. Boulders on the surface, the seasonal high water table, moderately steep slopes, and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special equipment may be needed to remove the boulders on the surface from the site. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 7s.

98B—Cabot silt loam, 3 to 8 percent slopes, extremely bouldery

This soil is very deep, gently sloping, and poorly drained. It is on toeslopes of knolls, on till plains and in drainageways. Boulders cover 3 to 15 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch; slightly decomposed leaves, needles and twigs

Subsurface layer:
1 to 9 inches, very dark gray silt loam

Subsoil:
9 to 14 inches, dark olive gray mottled silt loam
14 to 17 inches, dark olive gray mottled channery silt loam

Substratum:
17 to 22 inches, dark olive gray mottled channery fine sandy loam
22 to 61 inches, dark gray mottled channery silt loam

Included with this soil in mapping are small areas of very poorly drained Peacham soils. Peacham soils are in depressions. This soil makes up about 5 percent of this map unit. Also included are small areas of somewhat poorly drained Colonel soils and moderately well drained Peru soils. Colonel soils and Peru soils are on backslopes and footslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum or are somewhat poorly drained.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and slow or very slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, strongly acid to neutral (5.1-7.3) in the subsurface layer and subsoil, and moderately acid to neutral (5.6-7.3) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: at 0 to 1.5 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: D
Depth to dense material: 10 to 20 inches

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, pasture because of the seasonal high water table and the boulders on the surface.

The potential productivity of this map unit is very low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Seedling mortality and windthrow are hazards. Equipment is limited to special types that can operate along selected routes among the boulders. The operation of logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. The use of special planting stock will help minimize seedling mortality during wet spring months. Trees are commonly subject to windthrow because root growth is limited by the seasonal high water table and a firm substratum.

Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited for dwellings and septic tank absorption fields because of boulders on the surface and poorly drained soils.

The capability subclass is 7s.

98C—Cabot silt loam, 8 to 15 percent slopes, extremely bouldery

This soil is very deep, strongly sloping, and poorly drained. It is on toeslopes of knolls and hills, on till plains and in drainageways. Boulders cover 3 to 15 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch; slightly decomposed leaves, needles and twigs

Subsurface layer:
1 to 9 inches, very dark gray silt loam

Subsoil:
9 to 14 inches, dark olive gray mottled silt loam
14 to 17 inches, dark olive gray mottled channery silt loam

Substratum:
17 to 22 inches, dark olive gray mottled channery fine sandy loam
22 to 61 inches, dark gray mottled channery silt loam

Included with this soil in mapping are small areas of very poorly drained Peacham soils. Peacham soils are in depressions. These soils make up about 5 percent of this map unit. Also included are small areas of somewhat poorly drained Colonel soils and moderately well drained Peru soils. Colonel soils and Peru soils are on backslopes and footslopes. These soils make up about 10 percent of this map unit.

Also included are some areas that have a friable substratum or are somewhat poorly drained.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and slow or very slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, strongly acid to neutral (5.1-7.3) in the subsurface layer and subsoil, and moderately acid to neutral (5.6-7.3) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: at 0 to 1.5 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: D
Depth to dense material: 10 to 20 inches

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay and pasture because of the seasonal high water table and the boulders on the surface.

The potential productivity of this map unit is very low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Seedling mortality and windthrow are hazards. Equipment is limited to special types that can operate along selected routes among the boulders. The operation of logging equipment is difficult because of the seasonal high water table. Logging operations are more efficiently carried out when the soil is frozen or during dry seasons. The use of special planting stock will help minimize seedling mortality during wet spring months. Trees are commonly subject to windthrow because root growth is limited by the seasonal high water table and a firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize the windthrow.

This map unit is unsuited as a site for dwellings or septic tank absorption fields because of boulders on the surface and poorly drained soils.

The capability subclass is 7s.

99C—Colonel fine sandy loam, 3 to 15 percent slopes, extremely bouldery

This soil is very deep, gently sloping to strongly sloping and somewhat poorly drained. It is on footslopes of knolls and hills. Boulders cover 3 to 15 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inches, black highly decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, brown fine sandy loam

Subsoil:
4 to 5 inches, dark reddish brown fine sandy loam
5 to 11 inches, strong brown fine sandy loam
11 to 17 inches, yellowish brown mottled fine sandy loam

Substratum:
17 to 66 inches, dark grayish brown mottled gravelly sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Tunbridge soils. Cabot soils are on toeslopes and in depressions and drainageways. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Peru soils. Berkshire soils and Peru soils are on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil, sandy textures in the substratum or a friable substratum.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to slightly acid (4.5-6.5) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 0.5 to 2.0 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 10 to 30 inches

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of the boulders on the surface.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Windthrow is a hazard. Equipment is limited to special types that can operate along selected routes among the boulders. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

Boulders on the surface, the seasonal high water table, and strong slopes are the main limitations if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Special equipment may be needed to remove the boulders on the surface from the site. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

Boulders on the surface, the seasonal high water table, strong slopes, and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special equipment may be needed to remove the boulders on the surface from the site. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 7s.

99D—Colonel fine sandy loam, 15 to 35 percent slopes, extremely bouldery

This soil is very deep, moderately steep or steep, and somewhat poorly drained. It is on footslopes of hills. Boulders cover 3 to 15 percent of the surface. Slopes typically are concave.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inch, black highly decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, brown fine sandy loam

Subsoil:
4 to 5 inches, dark reddish brown fine sandy loam
5 to 11 inches, strong brown fine sandy loam
11 to 17 inches, yellowish brown mottled fine sandy loam

Substratum:
17 to 66 inches, dark grayish brown mottled gravelly sandy loam

Included with this soil in mapping are small areas of poorly drained Cabot soils and moderately deep, well drained Tunbridge soils. Cabot soils are on toeslopes and in depressions and drainageways. Tunbridge soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and moderately well drained Peru soils. Berkshire soils and Peru soils are on backslopes. These soils make up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil, sandy textures in the substratum or a friable substratum.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the firm substratum
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid to slightly acid (4.5-6.5) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 0.5 to 2.0 feet below the surface from October to May
Frost action: high
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 10 to 30 inches

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of the boulders on the surface and steep slopes.

The potential productivity of this map unit is very low for sugar maple. The main problem affecting timberproduction and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Equipment is limited to special types that can operate along selected routes among the boulders. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited for dwellings in areas of steep slopes. Boulders on the surface, the seasonal high water table, and moderately steep slopes are the main limitations if this map unit is used as a site for dwellings. In areas of moderately steep slopes, extensive excavation is needed to prepare nearly level areas for dwellings. Special equipment may be needed to remove the boulders on the surface from the site. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent. Boulders on the surface, the seasonal high water table, moderately steep slopes, and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special equipment may be needed to remove the boulders on the surface from the site. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 7s.

100—Pits, sand and Pits, gravel

This map unit consists of open excavations from which sand and gravel has been removed and used for various types of fill material. These areas are located throughout the county. Little or no vegetation grows in active excavations and abandoned excavations support scattered trees and shrubs.

These areas are unsuited to most uses. Onsite investigation is needed to determine their suitability for any use.

The capability subclass is 8s.

102—Pits, quarry-Dumps, mine complex

This map unit consists of open granite quarries and large mounds of waste rock and soil material. The granite quarries are very deep with vertical sides and the dump mounds have steep or very steep side slopes. These areas are mainly in the Graniteville area. Little or no vegetation grows in the quarries and there is water in the bottom of most quarries. The sides of the dump mounds support scattered trees while the nearly level tops are without vegetation.

Onsite investigation is needed to determine their suitability for any use.

The capability subclass is 8s.

103—Udorthents, loamy

This map unit consists of active land fill operations, airports, and large, unpaved parking lots. The soil material in this map unit has been disturbed or removed. Some areas are covered with loamy fill material that has been trucked in from off the site. Little or no vegetation grows in many of these areas. Some areas are partially covered by weeds and shrubs.

The capability subclass is 8s.

104—Urban land-Udipsamments complex, occasionally flooded

This map unit consists of nearly level soils on flood plains and terraces. These areas are located in the cities of Barre and Montpelier along the Winooski River. This map unit consists of 50 percent Urban land, 25 percent Udipsamments, 15 percent Dumps and 10 percent other soils.

The Urban land is land mostly covered by streets, parking lots, buildings and structures of urban areas.

Udipsamments consist of sandy soil material that has been altered by grading and by cutting and filling.

Dumps are areas of granite blocks, granite dust and pieces of concrete, brick and metal.

Included with these areas in mapping are small areas of very deep, somewhat poorly drained Rumney soils, and very deep, moderately well drained Weider soils. Rumney soils and Weider soils are scattered throughout the map unit. These soils make up about 10 percent of this map unit.

Onsite investigation is needed to determine the suitability of these areas for any use.

The capability subclass is 8s.

116B—Mundal fine sandy loam, 3 to 8 percent slopes, very stony

This soil is very deep, gently sloping, and moderately well drained. It is on backslopes and footslopes of mountains and foothills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 5 inches, moderately decomposed leaves, needles and twigs

Subsurface layer:
5 to 6 inch, dark reddish brown fine sandy loam
6 to 7 inches, dark gray fine sandy loam

Subsoil:
7 to 10 inches, dark reddish brown fine sandy loam
10 to 15 inches, dark brown fine sandy loam
15 to 25 inches, dark yellowish brown fine sandy loam

Substratum:
25 to 70 inches, olive gray mottled fine sandy loam

Included with this soil in mapping are small areas of shallow, well drained Hogback soils; moderately deep, well drained Rawsonville soils; and poorly drained Cabot soils. Hogback soils are on summits. Rawsonville soils are on shoulders. Cabot soils are in depressions and drainageways. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Houghtonville soils. Houghtonville soils are on backslopes. This soil makes up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil or are well drained.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the firm substratum
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil, and strongly acid to slightly acid (5.1-6.5) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.5 to 2.5 feet below the surface from September to May
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 30 inches

Most areas of this map unit are wooded. A few areas are cleared and used for recreation.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is high for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Windthrow is a hazard. When the soils in this map unit are wet the high organic matter content of the surface layer and subsoil gives them a greasy characteristic which sometimes interferes with the operation of logging equipment. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting, or patch cutting helps to minimize the windthrow hazard.

The seasonal high water table is the main limitation if this map unit is used as a site for dwellings. A suitable fill material is needed to raise the existing grade of the site if this map unit is used as a site for dwellings. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 6s.

116C—Mundal fine sandy loam, 8 to 15 percent slopes, very stony

This soil is very deep, strongly sloping, and moderately well drained. It is on backslopes and footslopes of mountains and foothills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 5 inches, moderately decomposed leaves, needles and twigs

Subsurface layer:
5 to 6 inch, dark reddish brown fine sandy loam
6 to 7 inches, dark gray fine sandy loam

Subsoil:
7 to 10 inches, dark reddish brown fine sandy loam
10 to 15 inches, dark brown fine sandy loam
15 to 25 inches, dark yellowish brown fine sandy loam

Substratum:
25 to 70 inches, olive gray mottled fine sandy loam

Included with this soil in mapping are small areas of shallow, well drained Hogback soils; moderately deep, well drained Rawsonville soils; and poorly drained Cabot soils. Hogback soils are on summits. Rawsonville soils are on shoulders. Cabot soils are in depressions and drainageways. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Houghtonville soils. Houghtonville soils are on backslopes. This soil makes up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil or are well drained.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the firm substratum
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil, and strongly acid to slightly acid (5.1-6.5) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.5 to 2.5 feet below the surface from September to May
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 30 inches

Most areas of this map unit are wooded. A few areas are cleared and used for recreation.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is high for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Erosion is a hazard and slope limits the use of equipment. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. When the soils in this map unit are wet, the high organic matter content of the surface layer and subsoil gives them a greasy characteristic which sometimes interferes with the operation of logging equipment. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

The seasonal high water table and strong slopes are the main limitations if this map unit is used as a site for dwellings. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

The seasonal high water table, strong slopes, and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 6s.

116D—Mundal fine sandy loam, 15 to 35 percent slopes, very stony

This soil is very deep, moderately steep or steep, and moderately well drained. It is on backslopes and footslopes of mountains and foothills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave-convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 5 inches, moderately decomposed leaves, needles and twigs

Subsurface layer:
5 to 6 inch, dark reddish brown fine sandy loam
6 to 7 inches, dark gray fine sandy loam

Subsoil:
7 to 10 inches, dark reddish brown fine sandy loam
10 to 15 inches, dark brown fine sandy loam
15 to 25 inches, dark yellowish brown fine sandy loam

Substratum:
25 to 70 inches, olive gray mottled fine sandy loam

Included with this soil in mapping are small areas of shallow, well drained Hogback soils; moderately deep, well drained Rawsonville soils; and poorly drained Cabot soils. Hogback soils are on summits. Rawsonville soils are on shoulders. Cabot soils are in depressions and drainageways. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Houghtonville soils. Houghtonville soils are on backslopes. This soil makes up about 5 percent of this map unit.

Also included are some areas that have silt loam textures throughout the soil, slopes of greater than 35 percent or are well drained.

Soil Properties

Permeability: moderately rapid in the surface layer, moderate in the subsurface layer and subsoil, and moderately slow or slow in the firm substratum
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer, extremely acid to moderately acid (3.6-6.0) in the subsurface layer and subsoil, and strongly acid to slightly acid (5.1-6.5) in the substratum
Depth to bedrock: more than 65 inches
Depth to water table: perched at 1.5 to 2.5 feet below the surface from September to May
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C
Depth to dense material: 20 to 30 inches

Most areas of this map unit are wooded. A few areas are cleared and used for recreation.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderate for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and waterbars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. When the soils in this map unit are wet the high organic matter content of the surface layer and subsoil gives them a greasy characteristic which sometimes interferes with the operation of logging equipment. Trees are commonly subject to windthrow on this map unit because root growth is limited by the firm substratum. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited for dwellings in areas of steep slopes. The seasonal high water table and moderately steep slopes are the main limitations if this map unit is used for dwellings. In areas of moderately steep slopes extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion. Additional waterproofing practices and footing drains are needed to protect basements against water infiltration.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent. The seasonal high water table, moderately steep slopes and the moderately slow or slow permeability of the firm substratum are the main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the seasonal high water table and the firm substratum.

The capability subclass is 7s.

151F—Hogback-Rock outcrop-Rawsonville complex, 35 to 70 percent slopes

This map unit consists of very steep soils on mountains and foothills. The shallow, well drained Hogback soils are on shoulders and backslopes. The areas of rock outcrop are on summits, shoulders, and backslopes. The moderately deep, well drained Rawsonville soils are on back slopes. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave-convex. This map unit consists of 40 percent Hogback soils, 20 percent Rock outcrop, 15 percent Rawsonville soils, and 25 percent other soils. The Hogback soils and Rawsonville soils and areas of rock outcrop are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Hogback soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and needles

Subsurface layer:
1 to 2 inches, black fine sandy loam
2 to 4 inches, gray fine sandy loam

Subsoil:
4 to 6 inches, dark reddish brown fine sandy loam
6 to 15 inches, dark brown fine sandy loam

Bedrock:
15 inches, schist bedrock

Areas of rock outcrop are exposures of schist bedrock.

The typical sequence, depth, and composition of the layers of the Rawsonville soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inches, moderately decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, black fine sandy loam

Subsoil:
4 to 6 inches, dark reddish brown fine sandy loam
6 to 24 inches, reddish brown fine sandy loam
24 to 26 inches, olive brown, fine sandy loam

Bedrock:
26 inches, schist bedrock

Included with these soils in mapping are small areas of very shallow to moderately deep, well drained Ricker soils and excessively drained, very shallow soils. These soils are on summits and shoulders. These soils make up about 15 percent of this map unit. Also included are small areas of well drained Houghtonville soils and moderately well drained Mundal soils. These soils are on shoulders and backslopes. These soils make up about 10 percent of this map unit.

Soil Properties

Hogback soils
Permeability: moderately rapid
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: D

Rawsonville soils
Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer and subsoil
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
*Frost action:*moderate
Shrink-swell: low
Hydrologic Group: C

Most areas of this map unit are wooded. A few areas are cleared and used for recreation.

This map unit is unsuited for cultivated crops, hay and pasture because of the stones on the surface and very steep slopes.

The potential productivity of this map unit is very low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion, seedling mortality and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. Areas of exposed bedrock interfere with operation of logging equipment. When the soils in this map unit are wet the high organic matter content of the surface layer and subsoil gives them a greasy characteristic which sometimes interferes with the operation of logging equipment. The use of special planting stock will minimize seedling mortality during dry summer months. Trees are commonly subject to windthrow on this map unit because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited as a site for dwellings and septic tank absorption fields because of very steep slopes and shallow to very shallow depth to bedrock.

The capability subclass is 7s for Hogback soils and Rawsonville soils and 8s for areas of Rock outcrop.

162D—Houghtonville-Rawsonville complex, 15 to 35 percent slopes, very bouldery

This map unit consists of moderately steep or steep soils on mountains and foothills. The very deep, well drained Houghtonville soils are on backslopes and footslopes and the moderately deep, well drained Rawsonville soils are on shoulders and backslopes. Boulders cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 50 percent Houghtonville soils, 35 percent Rawsonville soils and 15 percent other soils. The Houghtonville soils and Rawsonville soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Houghtonville soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs

Subsurface layer:
1 to 5 inches, black fine sandy loam
5 to 8 inches, reddish gray gravelly fine sandy loam

Subsoil:
8 to 11 inches, dark reddish brown gravelly fine sandy loam
11 to 33 inches, dark brown gravelly fine sandy loam

Substratum:
33 to 66 inches, olive brown gravelly fine sandy loam

The typical sequence, depth, and composition of the layers of the Rawsonville soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inches, moderately decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, black fine sandy loam

Subsoil:
4 to 6 inches, dark reddish brown fine sandy loam
6 to 24 inches, reddish brown fine sandy loam
24 to 26 inches, olive brown, fine sandy loam

Bedrock:
26 inches, schist bedrock

Included with this soil in mapping are small areas of moderately well drained Mundal soils. Mundal soils are on footslopes. This soil makes up about 5 percent of this map unit. Also included are small areas of deep, well drained soils and well drained Berkshire soils. The deep soils and Berkshire soils are on similar landscape positions as Houghtonville soils. These soils make up about 10 percent of this map unit.

Soil Properties

Houghtonville soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: very high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and extremely acid to moderately acid (3.6-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Rawsonville soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer and subsoil
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
*Frost action:*moderate
Shrink-swell: low
Hydrologic Group: C

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of the boulders on the surface and steep slopes.

The potential productivity of this map unit is moderately low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion.

Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. When the soils in this map unit are wet, the high organic matter content of the surface layer and subsoil gives them a greasy characteristic which sometimes interferes with the operation of logging equipment. Areas of exposed bedrock sometimes interfere with the operation of logging equipment. Trees are commonly subject to windthrow on Rawsonville soils because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited for dwellings in areas of steep slopes. Depth to bedrock in Rawsonville soils and moderately steep slopes are the main limitations if this map unit is used as a site for dwellings. Bedrock has to be removed where deep excavations are necessary. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

Depth to bedrock in Rawsonville soils and moderately steep slopes are main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in some places to raise the field the required distance above the bedrock.

The capability subclass is 7s.

162E—Houghtonville-Rawsonville complex, 35 to 60 percent slopes, very bouldery

This map unit consists of very steep soils on mountains and foothills. The very deep, well drained Houghtonville soils are on backslopes and footslopes and the moderately deep, well drained Rawsonville soils are on shoulders and backslopes. Boulders cover 0.1 to 3 percent of the surface. Slopes typically are convex. This map unit consists of 50 percent Houghtonville soils, 35 percent Rawsonville soils, and 15 percent other soils. The Houghtonville soils and Rawsonville soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Houghtonville soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs

Subsurface layer:
1 to 5 inches, black fine sandy loam
5 to 8 inches, reddish gray gravelly fine sandy loam

Subsoil:
8 to 11 inches, dark reddish brown gravelly fine sandy loam
11 to 33 inches, dark brown gravelly fine sandy loam

Substratum:
33 to 66 inches, olive brown gravelly fine sandy loam

The typical sequence, depth, and composition of the layers of the Rawsonville soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inches, moderately decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, black fine sandy loam

Subsoil:
4 to 6 inches, dark reddish brown fine sandy loam
6 to 24 inches, reddish brown fine sandy loam
24 to 26 inches, olive brown, fine sandy loam

Bedrock:
26 inches, schist bedrock

Included with this soil in mapping are small areas of moderately well drained Mundal soils. Mundal soils are on footslopes. This soil makes up about 5 percent of this map unit. Also included are small areas of deep, well drained soils and well drained Berkshire soils. The deep soils and Berkshire soils are on similar landscape positions as Houghtonville soils. These soils make up about 10 percent of this map unit.

Soil Properties

Houghtonville soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: very high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and extremely acid to moderately acid (3.6-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
*Frost action:*moderate
Shrink-swell: low
Hydrologic Group: B

Rawsonville soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer and subsoil

Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
*Frost action:*moderate
Shrink-swell: low
Hydrologic Group: C

Almost all areas are wooded.

This map unit is unsuited for cultivated crops, hay, and pasture because of the boulders on the surface and very steep slopes.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. When the soils in this map unit are wet the high organic matter content of the surface layer and subsoil gives them a greasy characteristic which sometimes interferes with the operation of logging equipment. Trees are commonly subject to windthrow on Rawsonville soils because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited for dwellings and septic tank absorption fields because of very steep slopes.

The capability subclass is 7s.

163C—Houghtonville fine sandy loam, 8 to 15 percent slopes, very stony

This soil is very deep, strongly sloping, and well drained. It is on backslopes and footslopes of mountains and foothills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs

Subsurface layer:
1 to 5 inches, black fine sandy loam
5 to 8 inches, reddish gray gravelly fine sandy loam

Subsoil:
8 to 11 inches, dark reddish brown gravelly fine sandy loam
11 to 33 inches, dark brown gravelly fine sandy loam

Substratum:
33 to 66 inches, olive brown gravelly fine sandy loam

Included with this soil in mapping are small areas of moderately well drained Mundal soils, moderately deep, well drained Rawsonville soils and poorly drained Cabot soils. Mundal soils are on footslopes. Rawsonville soils are on summits and shoulders. Cabot soils are in depressions and drainageways. These soils make up 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and deep, well drained soils. Berkshire soils and the deep soils are on similar landscape positions as Houghtonville soils. These soils make up 5 percent of this map unit.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: very high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and extremely acid to moderately acid (3.6-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are wooded. A few areas are cleared and used for recreation.

This map unit is unsuited for cultivated crops and hay and poorly suited to pasture because of the stones on the surface. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderate for sugar maple. The main problem affecting timber production and harvesting timber is the equipment limitation. Erosion is a hazard and slope limits the use of equipment. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. When the soils in this map unit are wet, the high organic matter content of the surface layer and subsoil gives the soil a greasy characteristic which sometimes interferes with the operation of logging equipment.

A strong slope is the main limitation if this map unit is used for dwellings. Some excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A strong slope is the main limitation if this map unit is used for septic tank absorption fields. Special slope design of septic tank absorption fields is needed in some places for septic tank absorption fields.

The capability subclass is 6s.

163D—Houghtonville fine sandy loam, 15 to 35 percent slopes, very stony

This soil is very deep, moderately steep or steep, and well drained. It is on backslopes of mountains and foothills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs

Subsurface layer:
1 to 5 inches, black fine sandy loam
5 to 8 inches, reddish gray gravelly fine sandy loam

Subsoil:
8 to 11 inches, dark reddish brown gravelly fine sandy loam
11 to 33 inches, dark brown gravelly fine sandy loam

Substratum:
33 to 66 inches, olive brown gravelly fine sandy loam

Included with this soil in mapping are small areas of moderately well drained Mundal soils; moderately deep, well drained Rawsonville soils; and poorly drained Cabot soils. Mundal soils are on footslopes. Rawsonville soils are on summits and shoulders. Cabot soils are in depressions and drainageways. These soils make up 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and deep, well drained soils. Berkshire soils and the deep soils are on similar landscape positions as Houghtonville soils. These soils make up 5 percent of this map unit.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: very high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and extremely acid to moderately acid (3.6-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

Most areas of this map unit are wooded. A few areas are cleared and used for recreation.

This map unit is unsuited to cultivated crops and hay and poorly suited to pasture because of the stones on the surface and steep slopes. If this map unit is used for unimproved pasture, periodic cutting and rotational grazing will help to maintain a good stand of pasture plants.

The potential productivity of this map unit is moderately low for sugar maple. The main problem affecting timber production and harvesting timber is the equipment limitations. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. When the soils in this map unit are wet, the high organic matter content of the surface layer and subsoil gives the soil a greasy characteristic which sometimes interferes with the operation of logging equipment.

This map unit is unsuited for dwellings in areas of steep slopes. The main limitation if this map unit is used as a site for dwellings is the moderately steep slopes. In areas of moderately steep slopes extensive excavation and land grading is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

A moderately steep slope is the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation.

The capability subclass is 7s.

163E—Houghtonville fine sandy loam, 35 to 60 percent slopes, very stony

This soil is very deep, very steep, and well drained. It is on backslopes of mountains and foothills. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex.

The typical sequence, depth, and composition of the layers of this soil are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs

Subsurface layer:
1 to 5 inches, black fine sandy loam
5 to 8 inches, reddish gray gravelly fine sandy loam

Subsoil:
8 to 11 inches, dark reddish brown gravelly fine sandy loam
11 to 33 inches, dark brown gravelly fine sandy loam

Substratum:
33 to 66 inches, olive brown gravelly fine sandy loam

Included with this soil in mapping are small areas of moderately well drained Mundal soils and moderately deep, well drained Rawsonville soils. Mundal soils are on footslopes. Rawsonville soils are on summits and shoulders. These soils make up about 10 percent of this map unit. Also included are small areas of well drained Berkshire soils and deep, well drained soils. Berkshire soils and the deep soils are on similar landscape positions as Houghtonville soils. These soils make up 5 percent of this map unit.

Soil Properties

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer, subsoil, and substratum
Available water capacity: very high
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and extremely acid to moderately acid (3.6-6.0) in the subsurface layer, subsoil, and substratum
Depth to bedrock: more than 65 inches
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: B

This map unit is unsuited for cultivated crops, hay, and pasture because of the stones on the surface and very steep slopes.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion is a hazard. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. When the soils in this map unit are wet, the high organic matter content of the surface layer and subsoil gives the soil a greasy characteristic which sometimes interferes with the operation of logging equipment.

This map unit is unsuited for dwellings and septic tank absorption fields because of very steep slopes.

The capability subclass is 7s.

168C—Hogback-Rawsonville complex, 8 to 15 percent slopes, very rocky

This map unit consists of strongly sloping soils on mountains and foothills. The shallow, well drained Hogback soils are on summits and shoulders and the moderately deep, well drained Rawsonville soils are on shoulders and backslopes. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave-convex. This map unit consists of 45 percent Hogback soils, 35 percent Rawsonville soils and 20 percent other soils and areas of rock outcrop. The Hogback soils and Rawsonville soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Hogback soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and needles

Subsurface layer:
1 to 2 inches, black fine sandy loam
2 to 4 inches, gray fine sandy loam

Subsoil:
4 to 6 inches, dark reddish brown fine sandy loam
6 to 15 inches, dark brown fine sandy loam

Bedrock:
15 inches, schist bedrock

The typical sequence, depth, and composition of the layers of the Rawsonville soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inches, moderately decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, black fine sandy loam

Subsoil:
4 to 6 inches, dark reddish brown fine sandy loam
6 to 24 inches, reddish brown fine sandy loam
24 to 26 inches, olive brown, fine sandy loam

Bedrock:
26 inches, schist bedrock

Included with these soils in mapping are small areas of very shallow, excessively drained soil and very deep, moderately well drained Mundal soils. The very shallow soils are on summits. Mundal soils are on footslopes. These soils make up about 5 percent of this map unit. Also included are small areas of very deep, well drained Houghtonville soils; shallow, somewhat excessively drained Lyman soils; and moderately deep, well drained Tunbridge soils. Houghtonville soils are on backslopes. Lyman soils are on similar landscape positions as Hogback soils.

Tunbridge soils are on similar landscape positions as Rawsonville soils. These soils make up about 10 percent of this map unit.

The areas of rock outcrop are on summits, shoulders and backslopes and cover about 5 percent of this map unit.

Soil Properties

Hogback soils

Permeability: moderately rapid
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to Water Table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: D

Rawsonville soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer and subsoil
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Most areas of this map unit are wooded. A few areas are cleared and used for recreation.

This map unit is unsuited for cultivated crops, hay, and pasture because of the stones on the surface and the bedrock outcrops.

The potential productivity of this map unit is low for sugar maple. The main problems affecting timber production and harvesting is the equipment limitation. Erosion, seedling mortality and windthrow are hazards. Erosion is a hazard and slope limits the use of equipment. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. When the soils in this map unit are wet, the high organic matter content of the surface layer and subsoil gives the soil a greasy characteristic which sometimes interferes with the operation of logging equipment. The use of special planting stock will help minimize seedling mortality during dry summer months on the shallow Hogback soils. Trees are commonly subject to windthrow on this map unit because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

Hogback soils are unsuited to dwellings because of depth to bedrock. Depth to bedrock and strong slopes in Rawsonville soils are the main limitation if this map unit is used as a site for dwellings. Bedrock has to be removed where deep excavations are necessary. Some excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

Hogback soils are unsuited for septic tank absorption fields because of shallow depth to bedrock. Depth to bedrock and strong slopes in Rawsonville soils are the main limitation if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation. Special construction such as mounding the septic tank absorption field with suitable fill material is needed in most places to raise the field the required distance above the bedrock.

The capability subclass is 6s.

168D—Hogback-Rawsonville complex, 15 to 35 percent slopes, very rocky

This map unit consists of moderately steep or steep soils on mountains and foothills. The shallow, well drained Hogback soils are on summits and shoulders and the moderately deep, well drained Rawsonville soils are on shoulders and backslopes. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave-convex. This map unit consists of 45 percent Hogback soils, 35 percent Rawsonville soils and 20 percent other soils and areas of rock outcrop. The Hogback soils and Rawsonville soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Hogback soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and needles

Subsurface layer:
1 to 2 inches, black fine sandy loam
2 to 4 inches, gray fine sandy loam

Subsoil:
4 to 6 inches, dark reddish brown fine sandy loam

6 to 15 inches, dark brown fine sandy loam

Bedrock:
15 inches, schist bedrock

The typical sequence, depth, and composition of the layers of the Rawsonville soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inches, moderately decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, black fine sandy loam

Subsoil:
4 to 6 inches, dark reddish brown fine sandy loam
6 to 24 inches, reddish brown fine sandy loam
24 to 26 inches, olive brown, fine sandy loam

Bedrock:
26 inches, schist bedrock

Included with these soils in mapping are small areas of very shallow, excessively drained soil and very deep, moderately well drained Mundal soils. The very shallow soils are on summits. Mundal soils are on footslopes. These soils make up about 5 percent of this map unit. Also included are small areas of very deep, well drained Houghtonville soils; shallow, somewhat excessively drained Lyman soils; and moderately deep, well drained Tunbridge soils. Houghtonville soils are on backslopes. Lyman soils are on similar landscape positions as Hogback soils. Tunbridge soils are on similar landscape positions as Rawsonville soils. These soils make up about 10 percent of this map unit.

The areas of rock outcrop are on summits, shoulders and backslopes and cover about 5 percent of this map unit.

Soil Properties

Hogback soils

Permeability: moderately rapid
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: D

Rawsonville soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer and subsoil
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Most areas of this map unit are wooded. A few areas are cleared and used for recreation.

This map unit is unsuited to cultivated crops, hay, and pasture because of the stones on the surface and steep slopes.

The potential productivity of this map unit is low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion, seedling mortality and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. When the soils in this map unit are wet, the high organic matter content of the surface layer and subsoil gives the soil a greasy characteristic which sometimes interferes with the operation of logging equipment. The use of special planting stock will help minimize seedling mortality during dry summer months on the Hogback soils. Trees are commonly subject to windthrow on this map unit because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited for dwellings in areas of steep slopes and is unsuited for dwellings with basements in Hogback soils because of shallow depth to bedrock. Depth to bedrock and moderately steep slopes in Rawsonville soils are the main limitation if this map unit is used as a site for dwellings. Bedrock has to be removed where deep excavations are necessary. Extensive excavation is needed to prepare nearly level areas for dwellings. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing plant cover on disturbed areas during or soon after construction will help to control erosion.

This map unit is unsuited for septic tank absorption fields in areas with slopes of greater than 20 percent and in areas of Hogback soils because of shallow depth to bedrock. Depth to bedrock and moderately steep slopes in Rawsonville soils are main limitations if this map unit is used as a site for septic tank absorption fields. Special slope design, such as installing septic system absorption fields on the contour, is needed to overcome the slope limitation.

Special construction such as mounding the septic tank absorption field with suitable fill material in some places is needed to raise the field the required distance above the bedrock.

The capability subclass is 7s.

168E—Hogback-Rawsonville complex, 35 to 60 percent slopes, very rocky

This map unit consists of very steep soils on mountains and foothills. The shallow, well drained Hogback soils are on summits and shoulders and the moderately deep, well drained Rawsonville soils are on shoulders and backslopes. Stones cover 0.1 to 3 percent of the surface. Slopes typically are concave-convex. This map unit consists of 45 percent Hogback soils, 35 percent Rawsonville soils, and 20 percent other soils and areas of rock outcrop. The Hogback soils and Rawsonville soils are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Hogback soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and needles

Subsurface layer:
1 to 2 inches, black fine sandy loam
2 to 4 inches, gray fine sandy loam

Subsoil:
4 to 6 inches, dark reddish brown fine sandy loam
6 to 15 inches, dark brown fine sandy loam

Bedrock:
15 inches, schist bedrock

The typical sequence, depth, and composition of the layers of the Rawsonville soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and twigs
1 to 2 inches, moderately decomposed leaves and twigs

Subsurface layer:
2 to 4 inches, black fine sandy loam

Subsoil:
4 to 6 inches, dark reddish brown fine sandy loam
6 to 24 inches, reddish brown fine sandy loam
24 to 26 inches, olive brown, fine sandy loam

Bedrock:
26 inches, schist bedrock

Included with these soils in mapping are small areas of very shallow, excessively drained soils and very deep, moderately well drained Mundal soils. Mundal soils are on footslopes. The very shallow soils are on summits. These soils make up about 5 percent of this map unit. Also included are small areas of very deep, well drained Houghtonville soils; shallow, somewhat excessively drained Lyman soils; and moderately deep, well drained Tunbridge soils. Houghtonville soils are on backslopes. Lyman soils are on similar landscape positions as Hogback soils. Tunbridge soils are on similar landscape positions as Rawsonville soils. These soils make up about 10 percent of this map unit.

Soil Properties

Hogback soils
Permeability: moderately rapid
Available water capacity: low
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: D

Rawsonville soils
Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer and subsoil
Available water capacity: moderate
Soil reaction: extremely acid to strongly acid (3.6-5.5)
Depth to bedrock: 20 to 40 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: C

Most areas of this map unit are wooded. A few areas are cleared and used for recreation.

This map unit is unsuited for cultivated crops, hay, and pasture because of the stones on the surface and very steep slopes.

The potential productivity of this map unit is very low for sugar maple. The main problem affecting timber production and harvesting is the equipment limitation. Erosion, seedling mortality, and windthrow are hazards. Promptly establishing plant cover on areas disturbed by logging operations and installing culverts and water bars as necessary helps control erosion. Locating skid trails and haul roads across the slope helps to minimize equipment limitations associated with slope. When the soils in this map unit are wet, the high organic matter content of the surface layer and subsoil gives the soil a greasy characteristic which sometimes interferes with the operation of logging equipment. The use of special planting stock will minimize seedling mortality during dry summer months on the Hogback soils. Trees are commonly subject to windthrow on this map unit because root growth is limited by the depth to bedrock. Even-aged management, strip cutting or patch cutting helps to minimize windthrow.

This map unit is unsuited for dwellings and septic tank absorption fields because of very steep slopes and shallow depth to bedrock.

The capability subclass is 7s.

172F—Taconic-Hubbardton-Rock outcrop complex, 60 to 80 percent slopes

This map unit consists of very steep soils on hills. The shallow, somewhat excessively drained Taconic soils are on shoulders and backslopes; the very shallow, excessively drained Hubbardton soils are on summits, shoulders, and near rock outcrops; and the areas of rock outcrop are on backslopes. Stones cover 0.1 to 3 percent of the surface. Slopes typically are convex. Slopes in areas of Taconic soils and Hubbardton soils are typically 60 to 80 percent. This map unit consists of 40 percent Taconic soils, 30 percent Hubbardton soils, 20 percent rock outcrop and 10 percent other soils. The Taconic soils and Hubbardton soils and areas of rock outcrop are so intermingled that it is not practical to map them separately.

The typical sequence, depth, and composition of the layers of the Taconic soils are as follows—

Surface layer:
0 to 2 inches, slightly decomposed leaves and needles

Subsurface layer:
2 to 6 inches, very dark grayish brown very channery silt loam

Subsoil:
6 to 16 inches, dark brown very channery silt loam

Bedrock:
16 inches, phyllite bedrock

The typical sequence, depth, and composition of the layers of the Hubbardton soils are as follows—

Surface layer:
0 to 1 inch, slightly decomposed leaves and needles
1 to 2 inches, moderately decomposed leaves and needles

Subsurface layer:
2 to 4 inches, very dark brown very channery very fine sandy loam
4 to 9 inches, dark yellowish brown very channery very fine sandy loam

Bedrock:
9 inches, phyllite bedrock

Areas of rock outcrop consist of exposures of phyllite bedrock.

Included with these soils in mapping are small areas of very shallow, excessively drained soils with a reddish brown subsoil; shallow, somewhat excessively drained Lyman soils; and areas of moderately deep, well drained Tunbridge soils. The very shallow soils are on similar landscape positions as the Hubbardton soils. The Lyman soils are on similar landscape positions as the Taconic soils. The Tunbridge soils are on lower backslopes. These soils make up about 10 percent of this map unit.

Some areas of rock outcrop have slopes greater than 90 percent.

Soil Properties

Taconic soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer and subsoil
Available water capacity: very low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid or strongly acid (4.5-5.5) in the subsurface layer and subsoil
Depth to bedrock: 10 to 20 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: D

Hubbardton soils

Permeability: moderately rapid in the surface layer and moderate or moderately rapid in the subsurface layer
Available water capacity: very low
Soil reaction: extremely acid to strongly acid (3.6-5.5) in the surface layer and very strongly acid or strongly acid (4.5-5.5) in the subsurface layer
Depth to bedrock: 2 to 10 inches from the top of the mineral soil layers (subsurface layer)
Depth to water table: more than 6.0 feet
Frost action: moderate
Shrink-swell: low
Hydrologic Group: D

Almost all areas are wooded.

This map united is unsuited for most uses because slopes exceed 60 percent and are unstable.

The capability subclass is 7s for Taconic soils and Hubbardton soils and 8s for areas of Rock outcrop.

Prime Farmland

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

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 8 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area 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.

The map units in the survey area that are considered prime farmland are listed in table 5. This list does not constitute a recommendation for a particular land use. On some soils included in the list, 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. The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading "Detailed Soil Map Units."

It should be noted that prime farmland is not the same as primary agricultural soils as defined in Vermont's Land Use and Development Law (ACT 250). For more information on the criteria and definitions of prime farmland or primary agricultural soils contact the local office of the Natural Resources Conservation Service.

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 woodland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and for wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

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

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

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

Crops and Pasture

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

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

About 23,166 acres of Washington County is in crop land. The major crops include alfalfa, corn silage, green crop, and hay. About 13,218 acres are used for pasture (U.S. Department of Commerce, 1983).

Specialty crops grown commercially in the survey area include vegetables, tree fruits, small fruits and nursery plants. Apples are the main tree fruit grown in the county. Sweet corn, tomatoes, potatoes, melons, and squash are some of the vegetables grown. The small fruits grown include strawberries, blueberries, and raspberries.

Very deep, well drained soils that warm up early in the spring are especially well suited to many vegetables and small fruits. The Salmon and Adams soils are examples. Crops can generally be planted and harvested earlier on these soils than on the other soils in the survey area. Soils on low positions, where frost is frequent and air drainage is poor, however, are generally poorly suited to early vegetables, small fruits, and orchard crops.

The latest information and suggestions for growing crops can be obtained from local offices of the Cooperative Extension Service and the Natural Resources Conservation Service.

Most of the arable soils in the county respond well to nitrogen, phosphorus, and potassium. Many soils need periodic applications of lime to raise their pH sufficiently for good growth of alfalfa and other crops that grow well only on slightly acid or neutral soils. On all soils, the amount of lime and fertilizer used should be based on the results of soil tests, on the needs of the crop, and on the expected yield. The Cooperative Extension Service can help determine the amount of fertilizer and lime to apply.

Soil erosion reduces the productivity of the soil by removing the surface layer, which contains most of the available plant nutrients and most of the organic matter. Loss of the surface layer is especially damaging on soils with a dense subsoil or substratum or bedrock that limits the depth of the root zone. The Colonel and Buckland soils, for example, have a dense substratum, and the Vershire and Tunbridge soils have bedrock within 40 inches of the surface.

Soil erosion on cropland in many areas also results in the pollution of streams by sediment, nutrients and pesticides. Controlling erosion minimizes the pollution of streams and improves water quality for municipal use, for recreation, and for fish and wildlife.

Erosion control practices provide protective surface cover, reduce runoff, and increase infiltration. A cropping system that keeps a plant cover on the soil for extended periods reduces erosion and preserves the productive capacity of the soils. Legume and grass forage crops used in the cropping system reduce erosion on sloping land, provide nitrogen for other crops and improve soil tilth.

Stripcropping, a practice in which alternative strips of row crops and grass crops are planted across the slope, is effective for controlling erosion on soils that have long, uniform slopes.

In some areas of Washington County the soils have short, irregular slopes and stripcropping is not practical. On these soils, a cropping system that includes a cover crop or conservation tillage, are required to control erosion. These practices can be used on most soils in the survey area.

Diversions intercept water, reduce the length of slope, and protect fields down slope. They are most practical on very deep soils that have uniform slopes. Some areas of Peru and Buckland soils are suitable for diversions. Soils that have irregular slopes are excessively wet or have bedrock at a depth of less than 40 inches are usually not suited to diversions.

Adequate soil drainage is a management concern for crops and pasture in somewhat poorly drained and poorly drained soils in the survey area. The Colonel and Cabot soils are examples. Some poorly drained soils, such as the Grange soils or very poorly drained soils, such as Peacham soils, do not have adequate outlets for soil drainage systems.

Further information can be obtained at the local office of the Natural Resources Conservation Service.

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 6. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of each map unit also is shown in the table.

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

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

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 6 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 woodland, and for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit. Only class and subclass are used in this survey.

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

Class 1 soils have few limitations that restrict their use.

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

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

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

Class 5 soils are not likely to erode but have other limitations, impractical to remove, that limit their use.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation.

Class 7 soils have very severe limitations that make them unsuitable for cultivation.

Class 8 soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, 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, woodland, wildlife habitat, or recreation.

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

Woodland Management and Productivity

Conrad Motyka, Barre Region District Forester in 1980, helped prepare this section.

Approximately 80 percent of the land in Washington County is forested. About 98 percent of that is classified as commercial forestland.

The commercial forestland can be separated by forest cover type. The 1973 forest survey shows about 38 percent classified as softwood cover type. The softwood cover type includes: eastern white pine, eastern hemlock, red spruce, white spruce, tamarack, balsam fir, and northern white cedar. The survey shows about 62 percent of the commercial forest land classified as hardwood cover type. The majority of this cover type is composed of sugar maple, yellow birch, and beech. Other species include: red maple, aspen, pin cherry, gray birch, white ash, black ash, basswood, black cherry, and elm.

Land ownership of forestland is mostly private and the size of ownership has been steadily decreasing. Public owned forest land includes: the Green Mountain National Forest, 6 state forests and 9 town forests.

Table 7 can be used by woodland owners or forest managers in planning the use of soils for wood crops. Only those soils suitable for wood crops are listed.

The Vermont forest value group rates each map unit for producing and harvesting timber (Natural Resources Conservation Service, VT; 1991). Forest value group 1 has a very high potential productivity; forest value group 2 has a high potential productivity; forest value group 3 has a moderate potential productivity; forest value group 4 has a moderately low potential productivity; forest value group 5 has a low potential productivity; and forest value group 6 has a very low potential productivity for producing and harvesting timber. Map units in forest value group 7 have very limited potential for producing and harvesting timber.

The species that is followed by an asterisk under *common trees* is the indicator species used to generate the Vermont forest value group. Sugar maple was used to represent northern hardwoods and eastern white pine was used to represent softwoods. Map units in forest value group 7 have no indicator species under *common trees*.

In the table, *slight, moderate,* and *severe* indicate the degree of the major soil limitations to be considered in management.

Erosion hazard is the probability that damage will occur as a result of site preparation and cutting where the soil is exposed along roads, skid trails, and fire lanes and in log-handling areas. Forests that have been burned or overgrazed are also subject to erosion. Ratings of the erosion hazard are based on the percent of the slope. A rating of *slight* indicates that no particular prevention measures are needed under ordinary conditions. A rating of *moderate* indicates that erosion-control measures are needed in certain silvicultural activities. A rating of *severe* indicates that special precautions are needed to control erosion in most silvicultural activities.

Equipment limitation reflects the characteristics and conditions of the soil that restrict use of the equipment generally needed in woodland management or harvesting. The chief characteristics and conditions considered in the ratings are slope, stones on the surface, rock outcrops, soil wetness, and texture of the surface layer. A rating of *slight* indicates that under normal conditions the kind of equipment and season of use are not significantly restricted by soil factors. Soil wetness can restrict equipment use, but the wet period does not exceed 1 month. A rating of *moderate* indicates that equipment use is moderately restricted because of one or more soil factors. If the soil is wet, the wetness restricts equipment use for a period of 1 to 3 months. A rating of *severe* indicates that equipment use is severely restricted either as to the kind of equipment that can be used or the season of use. If the soil is wet, the wetness restricts equipment use for more than 3 months.

Seedling mortality refers to the death of naturally occurring or planted tree seedlings, as influenced by the kinds of soil, soil wetness, or topographic conditions. The factors used in rating the soils for seedling mortality are texture of the surface layer, depth to a seasonal high water table and the length of the period when the water table is high, rock fragments in the surface layer, effective rooting depth, and slope aspect. A rating of *slight* indicates that seedling mortality is not likely to be a problem under normal conditions. Expected mortality is less than 25 percent. A rating of *moderate* indicates that some problems from seedling mortality can be expected. Extra precautions are advisable. Expected mortality is 25 to 50 percent. A rating of *severe* indicates that seedling mortality is a serious problem. Extra precautions are important. Replanting may be necessary. Expected mortality is more than 50 percent.

Windthrow hazard is the likelihood that trees will be uprooted by the wind because the soil is not deep enough for adequate root anchorage. The main restrictions that affect rooting are a seasonal high water table and the depth to bedrock, a fragipan, or other limiting layers. A rating of *slight* indicates that under normal conditions no trees are blown down by the wind. Strong winds may damage trees, but they do not uproot them. A rating of *moderate* indicates that some trees can be blown down during periods when the soil is wet and winds are moderate or strong. A rating of *severe* indicates that many trees can be blown down during these periods.

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 woodland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability.

The *volume*, a number, is the yield likely to be produced by the most important trees. This number, expressed as cubic feet per acre per year, indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to plant are those that are suitable for commercial wood production.

Recreation

Recreational use of the land has an impact in Washington County. There are three large ski areas in the Mad River Valley. Vacation homes and condominiums have been developed around each ski area. There are several small cross country ski areas scattered around the county.

There is a system of hiking trails in the western part of the county. This system is part of the Long Trail that runs from Massachusetts to Canada along the Green Mountains.

Vacation homes have been developed around some of the larger ponds and lakes. There are a few camping areas and picnic areas.

Snowmobiling is a popular winter activity in the county. There are extensive trail systems for snowmobiles established throughout the county by several snowmobile clubs.

There are also several golf courses.

The soils of the survey area are rated in table 8 according to limitations that affect their suitability for recreation. The ratings are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation are also important. Soils subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

In the table, the degree of soil limitation is expressed as slight, moderate, or severe. *Slight* means that soil properties are generally favorable and that limitations are minor and easily overcome. *Moderate* means that limitations can be overcome or alleviated by planning, design, or special maintenance. *Severe* means that soil properties are unfavorable and that limitations can be offset only by costly soil reclamation, special design, intensive maintenance, limited use, or a combination of these measures.

The information in the table can be supplemented by other information in this survey, for example, interpretations for septic tank absorption fields in table 11 and interpretations for dwellings without basements and for local roads and streets in table 10.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The best soils have mild slopes and are not wet or subject to flooding during the period of use. The surface has few or no stones or boulders, absorbs rainfall readily but remains firm, and is not dusty when dry. Strong slopes and stones or boulders can greatly increase the cost of constructing campsites.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The best soils for picnic areas are firm when wet, are not dusty when dry, are not subject to flooding during the period of use, and do not have slopes or stones or boulders that increase the cost of shaping sites or of building access roads and parking areas.

Playgrounds require soils that can withstand intensive foot traffic. The best soils are almost level and are not wet or subject to flooding during the season of use. The surface is free of stones and boulders, is firm after rains, and is not dusty when dry. If grading is needed, the depth of the soil over bedrock or a hardpan should be considered.

Paths and trails for hiking and horseback riding should require little or no cutting and filling. The best soils are not wet, are firm after rains, are not dusty when dry, and are not subject to flooding more than once a year during the period of use. They have moderate slopes and few or no stones or boulders on the surface.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. The best soils for use as golf fairways are firm when wet, are not dusty when dry, and are not subject to prolonged flooding during the period of use. They have moderate slopes and no stones or boulders on the surface. The suitability of the soil for tees or greens is not considered in rating the soils.

Wildlife Habitat

The late William Sladyk, Wildlife Habitat Specialist, Vermont Department of Fish and Game, helped prepare this section.

Wildlife in Washington County is of a wide varied nature. Upland game species are predominant. Wetland wildlife species associated with marshes occur in direct proportion to available habitat, which occur along low land stream drainage. Upland soils contribute good quality cover for most types of wildlife. Native trees, shrubs, grasses and weeds provide excellent food sources. Severe weather conditions make survival and management of introduced food sources difficult. Proper management of native food sources can be successfully accomplished when local soil conditions are taken into account.

The most critical wildlife management problem at present is associated with white-tailed deer. Severe temperatures and deep snow from December through March cause the deer to yard in confined areas of mature coniferous cover. When the confinement is held for an extended period of time or too many deer occupy the yard or a combination of both, the available food supply can be seriously depleted. This problem is especially critical in the northern and mountainous sections of the state, where average winter snow depths frequently exceed 24 inches. Public recognition and understanding of this particular aspect of wildlife management is vital to the proper management of deer and vegetation.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 9, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture are also considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture are also considerations. Examples of grasses and legumes are fescue, lovegrass, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture are also considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are Russian-olive, autumn-olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, saltgrass, cordgrass, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, and red fox.

Habitat for woodland wildlife consists of areas of deciduous plants or coniferous plants or both and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, ruffed grouse, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, and bear.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Engineering

Richard Gallo, Natural Resources Conservation Service State Engineer, helped to prepare this section.

The engineering problems associated with the soils of Washington County can be divided into three phases: erosion control, water management, and structural development. For example, many of the soils are erosive, on steep slopes, or low in soil strength which affects their use as engineering materials. Depending on the properties of the specific soils, they may or may not be used because they are high or low in soil strength, porous or watertight, erosive or non-erosive, deep or shallow, etc.

Because of the wide variety of soils and site conditions in the county, the planner or designer that would use the soil as an engineering material cannot make the broad assumptions that they can make for other more homogeneous material such as concrete or steel. The properties described and shown on the following pages are the characteristics that must be evaluated before the soil can be used with any degree of confidence as an engineering material to carry water or support structures.

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

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil within a depth of 5 or 6 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

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

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

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about grain-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 or 6 feet of the surface, soil wetness, depth to a seasonal high water table, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the 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, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

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

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

Building Site Development

Table 10 shows the degree and kind of soil limitations that affect shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are severe.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for basements, graves, utility lines, open ditches, and other purposes. The ratings are based on soil properties, site features, and observed performance of the soils. The ease of digging, filling, and compacting is affected by the depth to bedrock, a cemented pan, or a very firm dense layer; stone content; soil texture; and slope. The time of the year that excavations can be made is affected by the depth to a seasonal high water table and the susceptibility of the soil to flooding. The resistance of the excavation walls or banks to sloughing or caving is affected by soil texture and depth to the water table.

Dwellings and *small commercial buildings* are structures built on shallow foundations on undisturbed soil. The load limit is the same as that for single-family dwellings no higher than three stories. Ratings are made for small commercial buildings without basements, for dwellings with basements, and for dwellings without basements. The ratings are based on soil properties, site features, and observed performance of the soils. A high water table, flooding, shrinking and swelling, and organic layers can cause the movement of footings. A high water table, depth to bedrock or to a cemented pan, large stones, slope, and flooding affect the ease of excavation and construction. Landscaping and grading that require cuts and fills of more than 5 or 6 feet are not considered.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or stabilized soil material; and a flexible or rigid surface. Cuts and fills are generally limited to less than 6 feet. The ratings are based on soil properties, site features, and observed performance of the soils. Depth to bedrock or to a cemented pan, a high water table, flooding, large stones, and slope affect the ease of excavating and grading. Soil strength (as inferred from the engineering classification of the soil), shrink-swell potential, frost action potential, and depth to a high water table affect the traffic-supporting capacity.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. The ratings are based on soil properties, site features, and observed performance of the soils. Soil reaction, a high water table, depth to bedrock or to a cemented pan, the available water capacity in the upper 40 inches, and the content of salts, sodium, and sulfidic materials affect plant growth. Flooding, wetness, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer affect trafficability after vegetation is established.

Sanitary Facilities

Table 11 shows the Vermont Septic System Rating Class and the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, and sanitary landfills. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required.

The table also shows the suitability of the soils for use as daily cover for landfill. A rating of *good* indicates that soil properties and site features are favorable for the use and good performance and low maintenance can be expected; *fair* indicates that soil properties and site features are moderately favorable for the use and one or more soil properties or site features make the soil less desirable than the soils rated good; and *poor* indicates that one or more soil properties or site features are unfavorable for the use and overcoming the unfavorable properties requires special design, extra maintenance, or costly alteration.

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches is evaluated. The ratings are based on soil properties, site features, and observed performance of the soils. Permeability, a high water table, depth to bedrock or to a cemented pan, and flooding, affect absorption of the effluent. Large stones and bedrock or a cemented pan interfere with installation.

Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluent, surfacing of effluent, and hillside seepage, can affect public health. Ground water can be polluted if highly permeable sand and gravel or fractured bedrock is less than 4 feet below the base of the absorption field, if slope is excessive, or if the water table is near the surface. There must be unsaturated soil material beneath the absorption field to filter the effluent effectively. Many local ordinances require that this material be of a certain thickness.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Lagoons generally are designed to hold the sewage within a depth of 2 to 5 feet. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water.

The table gives ratings for the natural soil that makes up the lagoon floor. The surface layer and, generally, 1 or 2 feet of soil material below the surface layer are excavated to provide material for the embankments. The ratings are based on soil properties, site features, and observed performance of the soils. Considered in the ratings are slope, permeability, a high water table, depth to bedrock or to a cemented pan, flooding, large stones, and content of organic matter.

Excessive seepage resulting from rapid permeability in the soil or a water table that is high enough to raise the level of sewage in the lagoon causes a lagoon to function unsatisfactorily. Pollution results if seepage is excessive or if floodwater overtops the lagoon. A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor.

Sanitary landfills are areas where solid waste is disposed of by burying it in soil. There are two types of landfill—trench and area. In a trench landfill, the waste is placed in a trench. It is spread, compacted, and covered daily with a thin layer of soil excavated at the site. In an area landfill, the waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site.

Both types of landfill must be able to bear heavy vehicular traffic. Both types involve a risk of ground-water pollution. Ease of excavation and revegetation should be considered.

The ratings in the table are based on soil properties, site features, and observed performance of the soils. Permeability, depth to bedrock or to a cemented pan, a high water table, slope, and flooding affect both types of landfill. Texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium affect trench landfills. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, a limitation rated slight or moderate may not be valid. Onsite investigation is needed.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste.

Soil texture, wetness, coarse fragments, and slope affect the ease of removing and spreading the material during wet and dry periods. Loamy or silty soils that are free of large stones or excess gravel are the best cover for a landfill. Clayey soils are sticky or cloddy and are difficult to spread; sandy soils are subject to wind erosion.

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. The surface layer generally has the best workability, more organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

Construction Materials

Table 12 gives information about the soils as a source of roadfill, sand, gravel, and topsoil. The soils are rated *good, fair,* or *poor* as a source of roadfill and topsoil. They are rated as a *probable* or *improbable* source of sand and gravel. The ratings are based on soil properties and site features that affect the removal of the soil and its use as construction material. Normal compaction, minor processing, and other standard construction practices are assumed. Each soil is evaluated to a depth of 5 or 6 feet.

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

The ratings are for the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be mixed during excavating and spreading. Many soils have layers of contrasting suitability within their profile. The table showing engineering index properties provides detailed information about each soil layer. This information can help to determine the suitability of each layer for use as roadfill. The performance of soil after it is stabilized with lime or cement is not considered in the ratings.

The ratings are based on soil properties, site features, and observed performance of the soils. The thickness of suitable material is a major consideration. The ease of excavation is affected by large stones, a high water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the engineering classification of the soil) and shrink-swell potential.

Soils rated *good* contain significant amounts of sand or gravel or both. They have at least 5 feet of suitable material, a low shrink-swell potential, few cobbles and stones, and slopes of 15 percent or less. Depth to the water table is more than 3 feet. Soils rated *fair* are more than 35 percent silt- and clay-sized particles and have a plasticity index of less than 10. They have a moderate shrink-swell potential, slopes of 15 to 25 percent, or many stones. Depth to the water table is 1 to 3 feet. Soils rated *poor* have a plasticity index of more than 10, a high shrink-swell potential, many stones, or slopes of more than 25 percent. They are wet and have a water table at a depth of less than 1 foot. They may have layers of suitable material, but the material is less than 3 feet thick.

Sand and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the table, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material.

The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the engineering classification of the soil), the thickness of suitable material, and the content of rock fragments. Kinds of rock, acidity, and stratification are given in the soil series descriptions. Gradation of grain sizes is given in the table on engineering index properties.

A soil rated as a probable source has a layer of clean sand or gravel or a layer of sand or gravel that is up to 12 percent silty fines. This material must be at least 3 feet thick and less than 50 percent, by weight, large stones. All other soils are rated as an improbable source. Coarse fragments of soft bedrock, such as shale and siltstone, are not considered to be sand and gravel.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area.

Plant growth is affected by toxic material and by such properties as soil reaction, available water capacity, and fertility. The ease of excavating, loading, and spreading is affected by rock fragments, slope, a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, a water table, rock fragments, bedrock, and toxic material.

Soils rated *good* have friable, loamy material to a depth of at least 40 inches. They are free of stones and cobbles, have little or no gravel, and have slopes of less than 8 percent. They are low in content of soluble salts, are naturally fertile or respond well to fertilizer, and are not so wet that excavation is difficult.

Soils rated *fair* are sandy soils, loamy soils that have a relatively high content of clay, soils that have only 20 to 40 inches of suitable material, soils that have an appreciable amount of gravel, stones, or soluble salts, or soils that have slopes of 8 to 15 percent. The soils are not so wet that excavation is difficult.

Soils rated *poor* are very sandy or clayey, have less than 20 inches of suitable material, have a large amount of gravel, stones, or soluble salts, have slopes of more than 15 percent, or have a seasonal high water table at or near the surface.

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

Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed.

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

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

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (USDA, 1999) and “Keys to Soil Taxonomy” (USDA, 1998) and in the “Soil Survey Manual” (USDA, 1993).

If soils are wet enough for a long enough period 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 in this survey area are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and others, 1996).

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 list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 1996).

3A Rumney fine sandy loam, 0 to 2 percent slopes
4A Sunny silt loam, 0 to 2 percent slopes
9A Rifle muck, 0 to 2 percent slopes, ponded
17A Cabot silt loam, 0 to 3 percent slopes
17B Cabot silt loam, 3 to 8 percent slopes
17C Cabot silt loam, 8 to 15 percent slopes
18B Cabot silt loam, 0 to 8 percent slopes, very stony
18C Cabot silt loam, 8 to 15 percent slopes, very stony
20A Peacham muck, 0 to 5 percent slopes
45A Scantic silt loam, 0 to 3 percent slopes
58A Grange silt loam, 0 to 3 percent slopes
79A Markey and wonsqueak mucks, 0 to 2 percent slopes, ponded
82A Peacham muck, 0 to 5 percent slopes, extremely bouldery
98B Cabot silt loam, 3 to 8 percent slopes, extremely bouldery
98C Cabot silt loam, 8 to 15 percent slopes, extremely bouldery

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units 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 Ondawa fine sandy loam, 0 to 3 percent slopes
14B Colonel fine sandy loam, 3 to 8 percent slopes
14C Colonel fine sandy loam, 8 to 15 percent slopes
14D Colonel fine sandy loam, 15 to 25 percent slopes
19B Colonel fine sandy loam, 3 to 8 percent slopes, very stony
19C Colonel fine sandy loam, 8 to 15 percent slopes, very stony
19D Colonel fine sandy loam, 15 to 35 percent slopes, very stony
21A Sunday fine sand, 0 to 3 percent slopes
33A Machias fine sandy loam, 0 to 3 percent slopes
33B Machias fine sandy loam, 3 to 8 percent slopes
33C Machias fine sandy loam, 8 to 15 percent slopes
41D Buxton silt loam, 15 to 25 percent slopes
41E Buxton silt loam, 25 to 45 percent slopes
44B Lamoine silt loam, 3 to 8 percent slopes
44C Lamoine silt loam, 8 to 15 percent slopes
55B Nicholville silt loam, 3 to 8 percent slopes
59A Waitsfield silt loam, 0 to 3 percent slopes
60A Weider very fine sandy loam, 0 to 3 percent slopes
62B Berkshire fine sandy loam, 3 to 8 percent slopes
62C Berkshire fine sandy loam, 8 to 15 percent slopes
62D Berkshire fine sandy loam, 15 to 25 percent slopes
63B Berkshire fine sandy loam, 3 to 8 percent slopes, very stony
63C Berkshire fine sandy loam, 8 to 15 percent slopes, very stony
63D Berkshire fine sandy loam, 15 to 35 percent slopes, very stony
66B Vershire-Dummerston complex, 3 to 8 percent slopes, rocky

66C Vershire-Dummerston complex, 8 to 15 percent slopes, rocky
66D Vershire-Dummerston complex, 15 to 25 percent slopes, rocky
67C Glover-Vershire complex, 8 to 15 percent slopes, very rocky
67D Glover-Vershire complex, 15 to 35 percent slopes, very rocky
71C Tunbridge-Lyman complex, 3 to 15 percent slopes, rocky
72B Tunbridge-Lyman complex, 3 to 8 percent slopes, very rocky
72C Tunbridge-Lyman complex, 8 to 15 percent slopes, very rocky
72D Tunbridge-Lyman complex, 15 to 35 percent slopes, very rocky
76C Berkshire fine sandy loam, 8 to 15 percent slopes, very bouldery
76D Berkshire fine sandy loam, 15 to 35 percent slopes, very bouldery
77B Peru gravelly fine sandy loam, 3 to 8 percent slopes
77C Peru gravelly fine sandy loam, 8 to 15 percent slopes
77D Peru gravelly fine sandy loam, 15 to 25 percent slopes
78C Peru gravelly fine sandy loam, 8 to 15 percent slopes, very stony
78D Peru gravelly fine sandy loam, 15 to 35 percent slopes, very stony
88D Houghtonville fine sandy loam, 15 to 35 percent slopes, very bouldery
89E Houghtonville fine sandy loam, 15 to 60 percent slopes, rubbly
90B Dummerston fine sandy loam, 3 to 8 percent slopes
90C Dummerston fine sandy loam, 8 to 15 percent slopes
90D Dummerston fine sandy loam, 15 to 25 percent slopes
91C Dummerston fine sandy loam, 8 to 15 percent slopes, very stony
91D Dummerston fine sandy loam, 15 to 35 percent slopes, very stony
92B Buckland silt loam, 3 to 8 percent slopes
92C Buckland silt loam, 8 to 15 percent slopes
92D Buckland silt loam, 15 to 25 percent slopes
93B Buckland silt loam, 3 to 8 percent slopes, very stony
93C Buckland silt loam, 8 to 15 percent slopes, very stony
93D Buckland silt loam, 15 to 35 percent slopes, very stony
96D Peru gravelly fine sandy loam, 15 to 35 percent slopes, extremely bouldery
99C Colonel fine sandy loam, 3 to 15 percent slopes, extremely bouldery
99D Colonel fine sandy loam, 15 to 35 percent slopes, extremely bouldery
116B Mundal fine sandy loam, 3 to 8 percent slopes, very stony
116C Mundal fine sandy loam, 8 to 15 percent slopes, very stony
116D Mundal fine sandy loam, 15 to 35 percent slopes, very stony
163C Houghtonville fine sandy loam, 8 to 15 percent slopes, very stony
163D Houghtonville fine sandy loam, 15 to 35 percent slopes, very stony

Water Management

Table 13 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and are easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increase in construction costs, and possibly increased maintenance are required.

This table also gives for each soil the restrictive features that affect drainage, irrigation, terraces and diversions, and grassed waterways.

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

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth 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.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or to a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or to a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock or to a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features, listed in the tables, are explained on the following pages.

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

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

The estimates of soil properties shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classification, and the physical and chemical properties of the major layers of each soil. Pertinent soil and water features also are given.

Engineering Index Properties

Table 14 gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each soil series under the heading "Soil Series and Their Morphology."

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

Classification of the soils is determined according to the Unified soil classification system (ASTM 1998) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO 1998).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, 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 grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

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.

The estimates of grain-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is omitted in the table.

Physical and Chemical Properties

Table 15 shows estimates of some physical and chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

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

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In table 15, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In table 15, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 15, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

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

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

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

Permeability (K_{sat}) 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 inches per hour, 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. The available water capacity for each map unit is calculated to a depth of 60 inches, to bedrock, or to a densic contact. A representative value of each layer is multiplied by the thickness of the layer to give a representative available water capacity value in inches per inch per layer. The values for each layer are summed to give a value for the soil. A representative value of 0 to 3 is very low available water capacity, 3 to 6 is low, 6 to 9 is moderate, 9 to 12 is high, and greater than 12 is very high.

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 table 15, 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 table 15 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 several 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.

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.

Soil Features

Table 16 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 and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

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.

Water Features

Table 17 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.

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. Table 17 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. Table 17 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.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (USDA 1999). 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 18 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Eleven 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 Spodosol.

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 Orthod (*Orth*, meaning true, plus *od*, from Spodosol).

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 Haplorthod (*Hapl*, meaning minimal horizonation, plus *orthod*, the suborder of the Spodisols 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 Haplorthods.

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, mineral content, soil temperature regime, soil depth, and reaction. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is coarse-loamy, mixed, frigid Typic Haplorthods.

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” (USDA 1993). Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” (USDA 1999) and in “Keys to Soil Taxonomy” (USDA 1998). 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.

The map units of each soil series are described in the section “Detailed Soil Map Units.”

Adamant Series

The Adamant series consists of moderately deep, well drained soils on dissected lake plains. They formed in loamy glaciolacustrine deposits derived mainly from phyllite and schist. Slopes range from 8 to 50 percent.

The Adamant soils, in most places, are near the very deep, moderately well drained Buxton soils; very deep, somewhat poorly drained Colonel soils; shallow, somewhat excessively drained Lyman soils; very deep, well drained Salmon soils; and moderately deep, well drained Tunbridge soils. The Adamant soils are shallower than the Buxton soils and Salmon soils. The Adamant soils are deeper than the Lyman soils. The Adamant soils have less rock fragments than the Tunbridge soils throughout the soil. The Adamant soils only occur in a complex with the Salmon soils in this survey area.

A typical pedon of Adamant very fine sandy loam, in an area of Salmon-Adamant complex, 15 to 25 percent slopes, very rocky, in the town of Waterbury, 2,600 feet west of Vermont Route 100 and 1,300 feet south of Waterbury lake:

Oi—0 to 1 inch; slightly decomposed leaves and twigs.

Oa—1 to 4 inches; highly decomposed litter.

E—4 to 9 inches; grayish brown (10YR 5/2) very fine sandy loam; weak fine granular structure; friable; many fine and medium roots; very strongly acid; abrupt broken boundary.

Bs1—9 to 14 inches; brown (7.5YR 4/4) very fine sandy loam; weak fine granular structure; friable; common fine and few medium roots; very strongly acid; abrupt broken boundary.

Bs2—14 to 22 inches; dark yellowish brown (10YR 4/4) very fine sandy loam; weak fine subangular blocky structure; friable; common fine roots; very strongly acid; clear smooth boundary.

C—22 to 28 inches; dark grayish brown (2.5Y 4/2) very fine sandy loam; massive; friable; strongly acid; abrupt smooth boundary.

R—28 inches; slightly weathered schist bedrock.

The depth to bedrock ranges from 20 to 40 inches below the top of the mineral layers. The thickness of the mineral part of the solum ranges from 15 to 30 inches. The content of rock fragments ranges from 0 to 5 percent throughout the soil. Reaction ranges from extremely acid to strongly acid in the organic layers and very strongly acid to moderately acid in the mineral part of the solum and substratum.

Some pedons have an A horizon that has hue of 10YR, value of 2 or 3, and chroma of 2 or 3. It is silt loam or very fine sandy loam.

The E horizon is neutral or has hue of 5YR to 10YR, value of 4 to 7, and chroma of 0 to 2. It is silt loam or very fine sandy loam.

The Bs horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 6.

Some pedons have a BC horizon with a hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 3 or 4.

The Bs and BC horizons are silt loam or very fine sandy loam.

The C horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is silt loam or very fine sandy loam. Some pedons have thin subhorizons of fine sandy loam.

Adams Series

The Adams series consists of very deep, somewhat excessively drained soils on terraces. They formed in sandy glaciofluvial deposits derived mainly from phyllite and schist. Slopes range from 0 to 60 percent.

The Adams soils, in most places, are near the moderately well drained Buxton soils, excessively drained Colton soils, and well drained Salmon soils. The Adams soils are coarser textured than the Buxton soils and Salmon soils. The Adams soils have less rock fragments than the Colton soils throughout the soil.

A typical pedon of Adams loamy fine sand, 0 to 3 percent slopes, in the town of Roxbury, 2,500 feet northeast of Roxbury Village and 200 feet east of Vermont Route 12A, in a field:

A—0 to 1 inch; very dark brown (10YR 2/2) loamy fine sand; single grain; loose; common very fine and few fine, medium, and coarse roots; very strongly acid; abrupt wavy boundary.

E—1 to 3 inches; pinkish gray (7.5YR 6/2) loamy fine sand; single grain; loose; common very fine and few fine, medium, and coarse roots; very strongly acid; abrupt wavy boundary.

Bhs—3 to 5 inches; dark reddish brown (5YR 3/2) loamy fine sand; single grain; loose; common very fine and few fine, medium, and coarse roots; very strongly acid; clear wavy boundary.

Bs1—5 to 8 inches; reddish brown (5YR 4/4) sand; single grain; loose; 5 percent gravel; common very fine and few fine, medium, and coarse roots; very strongly acid; clear wavy boundary.

Bs2—8 to 16 inches; brown (7.5YR 4/4) sand; single grain; loose; 5 percent gravel; few very fine roots; strongly acid; clear wavy boundary.

Bs3—16 to 31 inches; yellowish brown (10YR 5/6) sand; single grain; loose; 5 percent rock fragments; strongly acid; abrupt wavy boundary.

C—31 to 65 inches; light olive brown (2.5Y 4/4) coarse sand; single grain; loose; strongly acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 16 to 32 inches. The content of rock fragments is mostly gravel and ranges from 0 to 5 percent in the upper part of the solum and from 0 to 20 percent in the lower part of the solum and the substratum. Reaction ranges from very strongly acid to strongly acid in the solum and very strongly acid to moderately acid in the substratum.

Cultivated areas have an Ap horizon with a hue of 10YR, value of 3 or 4, and chroma of 2 or 3. It is loamy fine sand.

The A horizon has hue of 10YR, value of 2 or 3, and chroma of 2 or 3. It is loamy fine sand or loamy sand.

The E horizon has hue of 5YR to 10YR, value of 5 or 6, and chroma of 1 or 2. It is loamy fine sand or loamy sand.

The Bhs horizon has hue of 5YR to 7.5YR and value of 3, and chroma of 2 or 3. It is loamy fine sand or loamy sand.

The Bs horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 6. It is loamy fine sand, loamy sand, fine sand, sand or their gravelly analogs.

Some pedons have a BC horizon with a hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 4. It is fine sand, sand or their gravelly analogs.

The C horizon has hue of 2.5Y or 5Y, value of 4 to 6 and chroma of 2 to 4. It is fine sand, sand, coarse sand or their gravelly analogs.

Berkshire Series

The Berkshire series consists of very deep, well drained soils on hills, knolls, and till plains. They formed in loamy glacial till derived mainly from granite, phyllite, and schist. Slopes range from 3 to 60 percent.

The Berkshire soils, in most places, are near the very deep, poorly drained Cabot soils; very deep, somewhat poorly drained Colonel soils; very deep, moderately well drained Peru soils; shallow, somewhat excessively drained Lyman soils; and moderately deep, well drained Tunbridge soils. The Berkshire soils have a friable substratum and the Cabot soils, Colonel soils, and Peru soils have a firm substratum. The Berkshire soils are deeper than the Lyman soils and Tunbridge soils.

A typical pedon of Berkshire fine sandy loam, 35 to 60 percent slopes, very stony, in the town of Warren, 3,960 feet northwest of Vermont Route 100 and 660 feet north of Bradley Brook:

Oi—0 to 2 inches; slightly decomposed leaves and twigs.

A—2 to 3 inch; very dark gray (10YR 3/1) fine sandy loam; weak fine granular structure; friable; many very fine and fine roots; very strongly acid; abrupt broken boundary.

E—3 to 6 inches; light brownish gray (10YR 6/2) fine sandy loam; weak fine granular and subangular blocky structure; friable; many fine and medium roots; 5 percent rock fragments; very strongly acid; abrupt smooth boundary.

Bhs—6 to 8 inches; dark reddish brown (5YR 3/3) fine sandy loam; moderate very fine granular structure; friable; many fine and medium roots; 5 percent rock fragments; weakly smeary; very strongly acid; abrupt smooth boundary.

Bs1—8 to 12 inches; reddish brown (5YR 4/4) channery fine sandy loam; weak fine and very fine granular structure; friable; many fine and medium roots; 15 percent rock fragments; very strongly acid; abrupt smooth boundary.

Bs2—12 to 23 inches; dark yellowish brown (10YR 4/4) and olive brown (2.5Y 4/4) channery fine sandy loam; weak fine subangular blocky structure; friable; common fine and medium roots; 15 percent rock fragments; strongly acid; clear smooth boundary.

BC—23 to 38 inches; olive brown (2.5Y 4/4) channery fine sandy loam; weak fine subangular blocky structure; friable; few fine and medium roots; 15 percent rock fragments; strongly acid; clear smooth boundary.

C—38 to 67 inches; olive (5Y 5/3) channery fine sandy loam; weak thin platy structure; firm in place; 20 percent rock fragments; strongly acid.

The depth to bedrock is more than 65 inches. The thickness of the mineral part of the solum ranges from 16 to 36 inches. The content of rock fragments ranges from 5 to 20 percent in the in the mineral part of the solum and 10 to 30 percent in the substratum. Reaction ranges from extremely acid to strongly acid in the organic layers and very strongly acid to moderately acid in the mineral part of the solum and substratum.

The A horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 to 3.

Cultivated pedons have an Ap horizon with a hue of 10YR, value of 3 or 4, and chroma of 2 or 3.

The A and Ap horizons are silt loam, loam, fine sandy loam or their gravelly or channery analogs.

The E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. It is silt loam, loam, fine sandy loam or their gravelly or channery analogs.

Some pedons have a thin Bh horizon with a hue of 5YR or 7.5YR, value of 3, and chroma of 2 or 3.

The Bhs horizon has hue of 5YR or 7.5YR, value of 3, and chroma of 2 or 3.

The Bs horizon has hue of 5YR to 2.5Y, value of 4 or 5, and chroma of 4 to 8.

The Bhs and Bs horizons are loam, fine sandy loam, sandy loam or their gravelly or channery analogs. Their combined thickness is 16 inches or less.

Some pedons have a BC horizon with a hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 4. It is fine sandy loam, gravelly fine sandy loam or channery fine sandy loam.

The C horizon has hue of 2.5Y or 5Y, value of 3 to 5, and chroma of 2 to 4. It is fine sandy loam, sandy loam or their gravelly or channery analogs.

Buckland Series

Buckland series consists of moderately well drained soils on hills, knolls, and till plains. The soils are moderately deep to dense basal till and very deep to bedrock. They formed in compact loamy glacial till derived mainly from phyllite and metamorphosed limestone. Slopes range from 3 to 35 percent.

The Buckland soils, in most places, are near the very deep, poorly drained Cabot soils; very deep, well drained Dummerston soils; shallow, very deep and very poorly drained Peacham soils; and moderately deep, well drained Vershire soils. The Buckland soils are free of redoximorphic features in the upper part of the solum and the Cabot soils and Peacham soils have redoximorphic features in the upper part of the solum. The Buckland soils have a firm substratum and the Dummerston soils have a friable substratum. The Buckland soils are deeper than the Vershire soils.

A typical pedon of Buckland silt loam, 3 to 8 percent slopes, in the town of East Montpelier, 1,125 feet east of County Road and 10,000 feet north of the Montpelier city line.

Ap—0 to 5 inches; very dark grayish brown (10YR 3/2) silt loam; light brownish gray (10YR 6/2) dry; weak fine and very fine granular structure; friable; many fine and medium roots; 5 percent rock fragments; moderately acid; clear smooth boundary.

Bw1—5 to 10 inches, very dark grayish brown (2.5Y 3/2) silt loam; weak fine granular and subangular blocky structure; friable; common fine roots; 10 percent rock fragments; moderately acid; clear smooth boundary.

Bw2—10 to 20 inches; olive (5Y 4/3) channery silt loam; weak fine subangular blocky structure; friable; common fine roots; common fine distinct dark grayish brown (2.5Y 4/2) and common fine prominent very dark grayish brown (10YR 3/2) iron depletions; 15 percent rock fragments; slightly acid; abrupt smooth boundary.

Cd—20 to 65 inches; dark olive gray (5Y 3/2) channery silt loam; massive; firm; common fine distinct dark grayish brown (2.5Y 4/2) iron depletions; 20 percent rock fragments; slightly acid.

The depth to bedrock is more than 65 inches. The solum ranges from 20 to 30 inches. The content of rock fragments ranges from 5 to 25 percent throughout the soil. Reaction ranges from moderately acid to neutral throughout the soil. Some uncultivated pedons have an O horizon where the reaction ranges from extremely acid to strongly acid.

The Ap horizon has hue of 10YR or 2.5Y, value of 3, and chroma of 2 or 3. It is silt loam, very fine sandy loam, loam or their channery or gravelly analogs. Some uncultivated pedons have an A horizon.

The Bw1 horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 to 4.

The Bw2 horizon has hue of 2.5Y or 5Y, value of 3 or 4, and chroma of 2 to 4.

The Bw horizon is silt loam, very fine sandy loam or their channery or gravelly analogs.

The Cd horizon has hue of 2.5Y or 5Y, value of 3 or 4, and chroma of 2 or 3. It is silt loam, very fine sandy loam or their channery or gravelly analogs. It is massive or has platy structure and is firm or very firm.

Buxton Series

The Buxton series consists of very deep, moderately well drained soils on dissected lake plains. They formed in loamy glaciolacustrine deposits derived mainly from phyllite and metamorphosed limestone. Slopes range from 15 to 45 percent.

The Buxton soils, in most places, are near the somewhat excessively drained Adams soils, excessively drained Colton soils, somewhat poorly drained Lamoine soils, well drained Salmon soils, and poorly drained Scantic soils. The Buxton soils are finer textured than the Adams soils and Colton soils throughout the soil. The Buxton soils have chroma 3 or greater throughout the upper 20 inches and the Lamoine soils have chroma less then 3 in some horizon above 20 inches. The Buxton soils are finer textured than the Salmon soils in the substratum. The Buxton soils are free of redoximorphic features in the upper part of the solum and the Scantic soils have redoximorphic features in the upper part of the solum.

A typical pedon of Buxton silt loam, 25 to 45 percent slopes, in the town of East Montpelier, 1,100 feet southeast of the Winooski River and 900 feet north of the Barre town line:

Oi—0 to 1 inch; slightly decomposed leaves and needles.

A—1 to 3 inches; dark brown (10YR 3/3) silt loam; weak fine granular structure; very friable; many fine and common very fine and medium roots; moderately acid; abrupt wavy boundary.

Bw1—3 to 9 inches; olive brown (2.5Y 4/4) silt loam; weak medium subangular blocky structure; friable; common fine and few medium roots; moderately acid; abrupt wavy boundary.

Bw2—9 to 13 inches; olive (5Y 5/3) silt loam; weak medium subangular blocky structure; friable; few fine roots; moderately acid; clear wavy boundary.

BC1—13 to 16 inches; olive (5Y 4/3) silty clay loam; weak medium subangular blocky structure; firm; few fine roots; common fine faint olive gray (5Y 5/2) iron depletions; slightly acid; abrupt wavy boundary.

BC2—16 to 26 inches; olive (5Y 4/3) silty clay loam; weak thick platy structure; firm; few fine faint olive gray (5Y 5/2) iron depletions and few, fine, distinct olive brown (2.5Y 4/4) masses of iron accumulation; neutral; clear wavy boundary.

C—26 to 66 inches; olive (5Y 4/3) silty clay; massive; firm; few medium distinct olive brown (2.5Y 4/4) masses of iron accumulation; very dusky red (2.5YR 2/2) manganese stains on ped faces; neutral.

The depth to bedrock is more than 65 inches. The thickness of the mineral part of the solum ranges from 18 to 30 inches. The content of rock fragments ranges from 0 to 5 percent throughout the soil. Reaction ranges from extremely acid to strongly acid in the organic layers, strongly acid to slightly acid in the subsurface layer, and moderately acid to neutral in the subsoil and substratum.

The A horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 to 4. It is silty clay loam or silt loam.

The Bw horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is silty clay, silt clay loam or silt loam.

The BC horizon has hue of 2.5Y or 5Y, value of 4 to 6, and chroma of 2 to 4. It is silty clay or silty clay loam.

The C horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is clay, silty clay or silty clay loam.

Cabot Series

The Cabot series consists of poorly drained soils on hills, knolls, and till plains. The soils are shallow to dense basal till and very deep to bedrock. They formed in compact loamy glacial till derived mainly from phyllite, schist, granite, and metamorphosed limestone. Slopes range from 0 to 15 percent.

The Cabot soils, in most places, are near the moderately well drained Buckland soils, somewhat poorly drained Colonel soils, and very poorly drained Peacham soils. The Cabot soils have redoximorphic features that are not in the upper part of the solum of the Buckland soils and Colonel soils. The Cabot soils have a mineral surface layer or an organic surface layer less than 8 inches thick and the Peacham soils have an organic surface layer more than 8 inches thick.

A typical pedon of Cabot silt loam, 0 to 8 percent slopes, very stony, in the town of East Montpelier, 300 feet east of Chappel pond and 6,750 feet south of the Calais town line:

Oi—0 to 1 inch; slightly decomposed leaves, needles, and twigs.

A—1 to 9 inches; very dark gray (5Y 3/1) silt loam, dark grayish brown (2.5Y 4/2) dry; weak medium subangular blocky structure; friable; common fine and medium roots; 5 percent rock fragments; strongly acid; abrupt wavy boundary.

Bg—9 to 14 inches; dark olive gray (5Y 3/2) silt loam; common fine distinct dark grayish brown (2.5Y 4/2); weak medium subangular blocky structure; friable; few fine roots; 10 percent rock fragments; strongly acid; clear wavy boundary.

BCg—14 to 17 inches; dark olive gray (5Y 3/2) channery silt loam; massive; friable; many fine prominent dark yellowish brown (10YR 3/4) and dark yellowish brown (10YR 4/6) masses of iron accumulation; 15 percent rock fragments; strongly acid; clear wavy boundary.

Cd1—17 to 22 inches; dark olive gray (5Y 3/2) channery fine sandy loam; massive; firm; many fine prominent dark yellowish brown (10YR 3/4) and dark yellowish brown (10YR 4/6) masses of iron accumulation; 20 percent rock fragments; strongly acid.

Cd2—22 to 61 inches; dark gray (N4/) channery silt loam; massive; firm; many fine prominent dark yellowish brown (10YR 3/4) and dark yellowish brown (10YR 4/6) masses of iron accumulation; 20 percent rock fragments; moderately acid.

The depth to bedrock is more than 65 inches. The thickness of the mineral part of the solum ranges from 10 to 20 inches. The content of rock fragments ranges from 5 to 30 percent throughout the soil. Reaction ranges from extremely acid to strongly acid in the organic layers, strongly acid to neutral in the mineral part of the solum, and moderately acid to neutral in the substratum.

The A horizon has hue of 10YR to 5Y, value of 2 to 4, and chroma of 1 or 2. It is silt loam, very fine sandy loam, loam, fine sandy loam or their channery or gravelly analogs. Cultivated pedons have an Ap horizon.

The Bg horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 1 to 4. It is silt loam, very fine sandy loam, loam, fine sandy loam or their gravelly or channery analogs.

The BC horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 1 to 4. It is silt loam, very fine sandy loam, loam, fine sandy loam or their gravelly or channery analogs.

The Cd horizon is neutral or has hue of 2.5Y or 5Y, value of 3 to 5, and chroma of 1 to 4. It is silt loam, very fine sandy loam, loam, fine sandy loam or their gravelly or channery analogs. It has platy structure or is massive and is firm or very firm.

Colonel Series

The Colonel series consists of somewhat poorly drained soils on hills, knolls, and till plains. The soils are shallow or moderately deep to dense basal till and very deep to bedrock. They formed in compact loamy glacial till derived mainly from granite, phyllite, and schist. Slopes range from 3 to 35 percent.

The Colonel soils, in most places, are near the very deep, well drained Berkshire soils; very deep, poorly drained Cabot soils; very deep, moderately well drained Peru soils; and moderately deep, well drained Tunbridge soils. The Colonel soils have a firm substratum and the Berkshire soils have a friable substratum. The Colonel soils are free of redoximorphic features in the upper part of the solum and the Cabot soils have redoximorphic features in the upper part of the solum. The Colonel soils have gray redoximorphic features above 16 inches that are not in the Peru soils. The Colonel soils are deeper than the Tunbridge soils.

A typical pedon of Colonel fine sandy loam, 3 to 15 percent slopes, extremely bouldery, in the town of Marshfield, 2,000 feet southeast of Marshfield Pond and 4,000 feet southwest of Marshfield Mountain:

Oi—0 to 1 inch; slightly decomposed leaves and twigs.

Oa—1 to 2 inch; black (10YR 2/1) highly decomposed leaves and twigs; weak fine granular structure; very friable; many very fine and common fine roots; very strongly acid; abrupt wavy boundary.

E—2 to 4 inches; brown (7.5YR 5/2) fine sandy loam; weak fine granular structure; very friable; common fine roots; 10 percent rock fragments; very strongly acid; abrupt wavy boundary.

Bh-4 to 5 inches; dark reddish brown (5YR 3/3) fine sandy loam; weak fine granular structure; very friable; common fine roots; 10 percent rock fragments; weakly smeary; very strongly acid; abrupt wavy boundary.

Bs1—5 to 11 inches; strong brown (7.5YR 5/6) fine sandy loam; weak medium granular structure; very friable; few fine roots; 10 percent rock fragments; very strongly acid; clear wavy boundary.

Bs2—11 to 13 inches; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; very friable; few fine roots; common fine prominent red (2.5YR 4/6) masses of iron accumulation; 10 percent rock fragments; very strongly acid; clear wavy boundary.

Bs3—13 to 17 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; very friable; few fine roots; few fine prominent red (2.5YR 4/6) masses of iron accumulation and few fine prominent grayish brown (2.5Y 5/2) and common fine prominent dark brown (7.5YR 3/2) iron depletions; 10 percent rock fragments; very strongly acid; abrupt wavy boundary.

Cd—17 to 66 inches; dark grayish brown (2.5Y 4/2) gravelly sandy loam; massive; firm; common fine prominent dark brown (7.5YR 3/2) iron depletions and common fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation; 20 percent rock fragments; strongly acid.

The depth to bedrock is more than 65 inches. The thickness of the mineral part of the solum ranges from 10 to 30 inches. The content of rock fragments ranges from 5 to 30 percent throughout the soil. Reaction ranges from extremely acid to strongly acid in the organic layers and very strongly acid to slightly acid in the mineral part of the solum and substratum.

Some pedons have an A horizon with hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 2 or 3. It is fine sandy loam, sandy loam or their channery or gravelly analogs. Cultivated pedons have an Ap horizon.

The E horizon has hue of 5YR to 10YR, value of 5 or 6, and chroma of 2. It is fine sandy loam, sandy loam or their channery or gravelly analogs.

The Bh has hue of 5YR or 7.5YR, value of 3 or 4, and chroma of 2 or 3.

The Bs horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 8.

The BC horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4.

The Bh, Bs and BC horizons are fine sandy loam, sandy loam, or their channery or gravelly analogs.

The Cd horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is fine sandy loam, sandy loam or their channery or gravelly analogs. It has platy structure or it is massive and is firm or very firm.

Colton Series

The Colton series consists of very deep, excessively drained soils on kames and terraces. They formed in sandy glaciofluvial deposits derived mainly from granite and schist. Slopes range from 0 to 60 percent.

The Colton soils, in most places, are near the somewhat excessively drained Adams soils, moderately well drained Buxton soils, somewhat poorly drained Lamoine soils, moderately well drained Machias soils, and well drained Salmon soils. The Colton soils have more rock fragments than the Adams soils throughout the soil. The Colton soils are free of redoximorphic features in the solum and the Machias soils have redoximorphic features in the solum. The Colton soils are coarser textured than the Buxton soils, Lamoine soils, and Salmon soils throughout the soil.

A typical pedon of Colton gravelly loamy sand, 8 to 15 percent slopes, in the town of Warren, 9,240 feet southwest of Warren Village and 1,500 feet north of the Lincoln Gap Road:

A—0 to 4 inches; dark brown (7.5YR 3/2) gravelly loamy sand, pale brown (10YR 6/3) dry; weak medium granular structure; very friable; many very fine and fine roots; 25 percent rock fragments; moderately acid; abrupt smooth boundary.

E—4 to 7 inches; grayish brown (10YR 5/2) gravelly loamy sand; weak medium granular structure; very friable; many very fine and fine roots; 30 percent rock fragments; moderately acid; abrupt broken boundary.

Bhs—7 to 10 inches; dark reddish brown (5YR 3/3) gravelly loamy sand; weak medium granular structure; very friable; many very fine and fine roots; 30 percent rock fragments; strongly acid; abrupt wavy boundary.

Bs1—10 to 20 inches; dark reddish brown (5YR 3/4) gravelly sand; single grain; loose; common very fine and fine roots; 30 percent rock fragments; moderately acid; clear smooth boundary.

Bs2—20 to 30 inches; dark yellowish brown (10YR 4/4) very gravelly sand; single grain; loose; few very fine and fine roots; 40 percent rock fragments; moderately acid; abrupt wavy boundary.

C—30 to 65 inches; dark grayish brown (2.5Y 4/2) very gravelly sand; single grain; loose; 60 percent rock fragments; moderately acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 18 to 36 inches. The content of rock fragments ranges from 15 to 50 percent in the solum and 35 to 70 percent in the substratum. Reaction ranges from extremely acid to moderately acid in the solum and very strongly acid to slightly acid in the substratum.

Some uncultivated pedons have an A horizon with a hue of 5YR to 10YR, value of 3, and chroma of 2.

Cultivated pedons have an Ap horizon with a hue of 10YR, value of 3 or 4, and chroma of 2 or 3.

The Ap and A horizons are fine sandy loam, sandy loam, loamy fine sand, loamy sand and their gravelly or very gravelly analogs.

The E horizon has hue of 5YR to 10YR, value of 5 or 6, and chroma of 1 or 2. It is loamy fine sand, loamy sand and their gravelly or very gravelly analogs.

Some pedons have a Bh horizon with a hue of 2.5YR to 7.5YR, value of 3, and chroma of 2. It is gravelly loamy sand or very gravelly loamy sand.

The Bhs horizon has hue of 2.5YR to 7.5YR and value and chroma of 3. It is loamy sand, sand and their gravelly or very gravelly analogs.

The Bs horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 8. It is loamy sand, sand and their gravelly or very gravelly analogs.

The C horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 to 6. It is gravelly, very gravelly, or extremely gravelly sand.

Dummerston Series

The Dummerston series consists of very deep, well drained soils on hills, knolls, and till plains. They formed in loamy glacial till derived mainly from phyllite and metamorphosed limestone. Slopes range from 3 to 60 percent.

The Dummerston soils, in most places, are near the very deep, poorly drained Cabot soils; very deep, moderately well drained Buckland soils; very deep, very poorly drained Peacham soils; and moderately deep, well drained Vershire soils. The Dummerston soils have a friable substratum and the Buckland soils, Cabot soils, and Peacham soils have a firm substratum. The Dummerston soils are deeper than the Vershire soils.

The Dummerston series is a taxadjunct in Washington County because it has a dark colored Ap horizon with a moist value of 3 or less and dry value of 5 or less. The official series type location is classified as a Typic Dystrochrept, coarse-loamy, mixed, frigid and the typical pedon in Washington County is classified as an Umbric Dystrochrept, coarse-loamy, mixed, frigid.

A typical pedon of Dummerston fine sandy loam, in an area of Vershire-Dummerston Complex, 25 to 60 percent slopes, rocky, in the town of East Montpelier, 2,400 feet south of U.S. Route 2 and 3,495 feet northwest of the Plainfield town line:

Ap—0 to 4 inches; very dark grayish brown (10YR 3/2) fine sandy loam, grayish brown (10YR 5/2) dry; weak fine granular structure; very friable; many fine, medium and coarse roots; 10 percent rock fragments; strongly acid; abrupt wavy boundary.

Bw1—4 to 15 inches; olive brown (2.5Y 4/4) fine sandy loam; weak fine granular structure; very friable; common fine and very fine roots; 10 percent rock fragments; moderately acid; clear wavy boundary.

Bw2—15 to 26 inches; olive brown (2.5Y 4/4) gravelly fine sandy loam; weak fine granular structure; very friable; common very fine and fine roots; 20 percent rock fragments; moderately acid; abrupt wavy boundary.

C1—26 to 39 inches; dark grayish brown (2.5Y 4/2) gravelly fine sandy loam; weak medium granular structure; friable; few very fine and fine roots; 25 percent rock fragments; moderately acid, clear wavy boundary.

C2—39 to 65 inches; olive gray (5Y 4/2) gravelly fine sandy loam; massive; friable; few very fine and fine roots; 25 percent rock fragments; slightly acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 20 to 40 inches. The content of rock fragments ranges from 5 to 30 percent in the solum and from 10 to 30 percent in the substratum. Reaction ranges from very strongly acid to slightly acid throughout the soil. Some uncultivated pedons have an O horizon where the reaction ranges from extremely acid to strongly acid.

Cultivated pedons have an Ap horizon with a hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 or 3.

The A horizon has hue of 10YR or 2.5Y, value of 2 to 3, and chroma of 1 to 3.

The Ap and A horizons are silt loam, loam, very fine sandy loam, fine sandy loam or their channery or gravelly analogs.

The upper part of the Bw horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 to 4. The lower part of the Bw horizon has hue of 10YR to 5Y, value of 3 or 4, and chroma of 2 to 4. The Bw horizon is silt loam, loam, very fine sandy loam, fine sandy loam or their channery or gravelly analogs.

The C horizon has hue of 2.5Y or 5Y, value of 3 or 4, and chroma of 2 or 3. It is silt loam, very fine sandy loam, fine sandy loam or their channery or gravelly analogs.

Glebe Series

The Glebe series consists of moderately deep, well drained soils on mountains. They formed in loamy glacial till derived mainly from schist. Slopes range from 15 to 60 percent.

The Glebe soils, in most places, are near the very shallow, well drained Londonderry soils; very shallow to moderately deep, well drained Ricker soils; very deep, well drained Sisk soils; and shallow, well drained Stratton soils. The Glebe soils are deeper than the Londonderry soils and Stratton soils. The Glebe soils are shallower than the Sisk soils. The Glebe soils differ from the Ricker soils in having thick mineral layers. The Glebe soils only occur in a complex with the Sisk soils or Stratton soils in this survey area.

A typical pedon of Glebe very fine sandy loam, in an area of Stratton-Glebe complex, 35 to 60 percent slopes, very rocky, in the town of Fayston, 2,100 feet north of Vermont Route 17 and 350 feet east of the Chittenden County line:

Oi—0 to 1 inch; slightly decomposed leaves, needles, and twigs.

A—1 to 2 inches; black (5YR 2/1) very fine sandy loam; weak very fine and fine granular structure; very friable; many very fine, fine, medium and coarse roots; 5 percent rock fragments; extremely acid; clear smooth boundary.

Bhs1—2 to 18 inches; dark reddish brown (5YR 3/2) fine sandy loam; weak fine granular structure; very friable; common very fine and fine roots; 5 percent rock fragments; moderately smeary; very strongly acid; gradual smooth boundary.

Bhs2—18 to 34 inches; dark reddish brown (5YR 3/3) fine sandy loam; weak fine granular structure; very friable; 5 percent rock fragments; moderately smeary; extremely acid; abrupt smooth boundary.

R—34 inches; schist bedrock.

The depth to bedrock ranges from 20 to 40 inches below the top of the mineral layers. The thickness of the mineral part of the solum ranges from 14 to 38 inches. The content of rock fragments ranges from 5 to 35 percent throughout the solum. Reaction ranges from extremely acid to strongly acid throughout the soil.

The A horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. It is silt loam, very fine sandy loam, fine sandy loam or their gravelly or very gravelly analogs.

Some pedons have an E horizon with a hue of 5YR to 10YR, value of 4 or 5, and chroma of 1 or 2. It is silt loam, very fine sandy loam, fine sandy loam or their gravelly or very gravelly analogs.

Some pedons have a Bh horizon with a hue of 2.5YR to 7.5YR, value of 2 or 3, and chroma of 1 or 2.

The Bhs horizon has hue of 5YR or 7.5YR, and value and chroma of 3 or less.

Some pedons have a Bs horizon with a hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 6.

The Bh, Bhs and Bs horizons are silt loam, very fine sandy loam, fine sandy loam or their gravelly or very gravelly analogs. It is moderately smeary.

Some pedons have a C horizon with a hue of 10YR to 5Y, value of 3 or 4, and chroma of 2 to 4. It is fine sandy loam, sandy loam or their gravelly or very gravelly analogs.

Glover Series

The Glover series consists of shallow, somewhat excessively drained soils on hills and knolls. They formed in loamy glacial till derived mainly from phyllite and metamorphosed limestone. Slopes range from 8 to 60 percent.

The Glover soils, in most places, are near the very deep, moderately well drained Buckland soils; very deep, well drained Dummerston soils; and moderately deep, well drained Vershire soils. The Glover soils are shallower than the Buckland soils, Dummerston soils, and Vershire soils. The Glover soils only occur in a complex with the Dummerston soils or Vershire soils in this survey area.

A typical pedon of Glover silt loam in an area of Glover-Vershire complex, 8 to 15 percent slopes, very rocky, in the town of East Montpelier, 5,280 feet south of East Montpelier Center and 1,320 feet east of Blass Road:

Oa—0 to 2 inches; highly decomposed needles and twigs.

A—2 to 4 inches; very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; friable; many fine and common medium roots; 5 percent rock fragments; moderately acid; clear wavy boundary.

Bw—4 to 17 inches; dark brown (10YR 3/3) silt loam; weak fine granular structure; friable; many fine and common medium roots; 10 percent rock fragments; moderately acid; abrupt wavy boundary.

R—17 inches; metamorphosed limestone bedrock.

The depth to bedrock ranges from 10 to 20 inches below the top of the mineral layers. The thickness of the mineral part of the solum ranges from 10 to 20 inches. The content of rock fragments ranges from 5 to 25 percent throughout the solum. Reaction ranges from extremely acid to strongly acid in the organic layers and very strongly acid to moderately acid in the mineral part of the solum and substratum.

The A horizon has hue of 10YR, value of 2 or 3, and chroma of 1 or 2. It is silt loam, very fine sandy loam, fine sandy loam or their channery analogs. Cultivated pedons have an Ap horizon.

The Bw horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 to 4. It is silt loam, very fine sandy loam, fine sandy loam or their channery analogs.

Some pedons have a Cr horizon. It has hue of 5YR to 2.5Y, value of 2 or 3, and chroma of 1 or 2. Texture is fine sand, loamy fine sand or fine sandy loam.

Grange Series

The Grange series consists of very deep, poorly drained soils on terraces. They formed in loamy glaciofluvial deposits underlain by sandy glaciofluvial deposits derived mainly from phyllite and schist. Slopes range from 0 to 3 percent.

The Grange soils, in most places, are near the poorly drained Cabot soils, excessively drained Colton soils, somewhat poorly drained Lamoine soils; and poorly drained Scantic soils. The Grange soils are coarser textured than the Cabot soils, Lamoine soils, and Scantic soils in the substratum. The Grange soils have redoximorphic features that are not in the profile of the Colton soils.

A typical pedon of Grange silt loam, 0 to 3 percent slopes, in the town of Waitsfield, 150 feet southeast of the junction of town highways 8 and 3 and 2,850 feet south of the junction of state Route 100 and town highway 2.

Ap—0 to 8 inches; dark grayish brown (2.5Y 4/2) silt loam; moderate fine angular blocky structure; friable; many very fine and fine roots; slightly acid; many fine prominent dark yellowish brown (10YR 4/4) masses of iron accumulation; abrupt smooth boundary.

Bw1—8 to 14 inches; olive (5Y 4/3) silt loam; weak coarse subangular blocky structure; friable; common very fine and fine roots; many fine prominent dark yellowish brown (10YR 4/4) masses of iron accumulation; 5 percent rock fragments; slightly acid; clear wavy boundary.

Bg—14 to 17 inches; gray (5Y 5/1) very fine sandy loam; weak thick platy structure; friable; few very fine and fine roots; many fine and medium prominent dark reddish brown (5YR 3/2) iron depletions and brown (7.5YR 4/4) masses of iron accumulation; 2 percent rock fragments; slightly acid; abrupt broken boundary.

Bw2—17 to 22 inches; olive (5Y 4/3) very fine sandy loam; weak medium subangular blocky structure; friable; few very fine and fine roots; common fine and medium prominent yellowish red (5YR 4/6) masses of iron accumulation; 5 percent rock fragments; slightly acid; abrupt smooth boundary.

2C1—22 to 41 inches; olive (5Y 4/3) stratified fine sand and sand; massive; friable; few medium faint olive gray (5Y 5/2) and common fine and medium distinct olive brown (2.5Y 4/4) masses of iron accumulation; 10 percent rock fragments; moderately acid; abrupt smooth boundary.

2C2—41 to 65 inches; olive (5Y 4/3) gravelly sand; single grain; loose; 15 percent rock fragments; moderately acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 18 to 33 inches. The content of rock fragments ranges from 0 to 5 percent in the solum and 0 to 45 percent in the substratum. Reaction ranges from strongly acid to slightly acid in the solum and moderately acid to slightly acid in the substratum.

The Ap horizon has hue of 2.5Y or 5Y, value of 3 or 4, and chroma of 1 or 2. It is silt loam, very fine sandy loam or fine sandy loam.

The Bw horizon has hue of 2.5Y or 5Y, value of 3 to 5, and chroma of 2 to 4. It is silt loam, very fine sandy loam or fine sandy loam.

The Bg horizon is neutral or has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 0 to 2. It is silt loam, very fine sandy loam or fine sandy loam.

The 2C horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 1 to 6. It is fine sand, sand, coarse sand or their gravelly or very gravelly analogs.

Hogback Series

The Hogback series consists of shallow, well drained soils on foothills and mountains. They formed in loamy glacial till derived mainly from granite and schist. Slopes range from 8 to 70 percent.

The Hogback soils, in most places, are near the very deep, well drained Houghtonville soils; very deep, moderately well drained Mundal soils; and moderately deep, well drained Rawsonville soils. The Hogback soils are shallower than the Houghtonville soils, Mundal soils, and Rawsonville soils. The Hogback soils only occur in a complex with the Rawsonville soils in this survey area.

A typical pedon of Hogback fine sandy loam, in an area of Hogback-Rock outcrop-Rawsonville complex, 35 to 70 percent slopes, in the town of Duxbury, 800 feet southeast of the Chittenden County line and 6,100 southwest of the Winooski River:

Oi—0 to 1 inch; slightly decomposed leaves and needles.

A—1 to 2 inch; black (10YR 2/1) fine sandy loam; weak fine granular structure; very friable; many very fine and common fine roots; 10 percent rock fragments; very strongly acid; abrupt wavy boundary.

E—2 to 4 inches; gray (10YR 5/1) fine sandy loam; weak fine granular structure; very friable; many very fine and common fine roots; 10 percent rock fragments; very strongly acid; abrupt wavy boundary.

Bhs—4 to 6 inches; dark reddish brown (5YR 3/3) fine sandy loam; weak fine granular structure; very friable; common fine roots; 10 percent rock fragments; moderately smeary; extremely acid; clear wavy boundary.

Bs—6 to 15 inches; brown (7.5YR 4/4) fine sandy loam; weak fine granular structure; very friable; common fine roots; 10 percent rock fragments; moderately smeary; very strongly acid; abrupt smooth boundary.

R—15 inches; schist bedrock.

The depth to bedrock ranges from 10 to 20 inches below the top of the mineral layers. The thickness of the mineral part of the solum ranges from 10 to 20 inches. The content of rock fragments ranges from 5 to 30 percent throughout the soil. Reaction ranges from extremely acid to strongly acid throughout the soil.

The A horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. It is loam, fine sandy loam or their gravelly or channery analogs.

The E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. It is fine sandy loam or its gravelly or channery analogs.

Some pedons have a Bh horizon with a hue of 2.5YR to 7.5YR, value of 2 to 4, and chroma of 2 to 6. It is greater than or equal to 4 inches thick.

The Bhs horizon has a hue of 5YR or 7.5YR, and value and chroma of 3 or less.

The Bs horizon has a hue of 5YR or 7.5YR, value of 4 or 5, and chroma of 4 to 6.

The Bh, Bhs and Bs horizons are loam, fine sandy loam or their gravelly or channery analogs. They are moderately smeary or weakly smeary.

Houghtonville Series

The Houghtonville series consists of very deep, well drained soils on foothills and mountains. They formed in loamy glacial till derived mainly from granite and schist. Slopes range from 8 to 60 percent.

The Houghtonville soils, in most places, are near the shallow, well drained Hogback soils; very deep, moderately well drained Mundal soils; and moderately deep, well drained Rawsonville soils. The Houghtonville soils are deeper than the Hogback soils and Rawsonville soils. The Houghtonville soils have a friable substratum and the Mundal soils have a firm substratum.

A typical pedon of Houghtonville fine sandy loam, 35 to 60 percent slopes, very stony, in the town of

Duxbury, 3,000 feet northeast of Crouching Lion Farm parking lot and 10,000 feet east of the Chittenden County line:

Oi—0 to 1 inch; slightly decomposed leaves and twigs.

A—1 to 5 inches; black (N 2/0) fine sandy loam; weak fine granular structure; very friable; many very fine and fine and common medium roots; 5 percent rock fragments; extremely acid; abrupt smooth boundary.

E—5 to 8 inches; reddish gray (5YR 5/2) gravelly fine sandy loam; weak fine granular structure; very friable; many very fine and fine and common medium roots; 20 percent rock fragments; very strongly acid; abrupt smooth boundary.

Bhs—8 to 11 inches; dark reddish brown (5YR 3/3 and 5YR 3/2) gravelly fine sandy loam; weak fine granular structure; very friable; common fine and medium roots; 15 percent rock fragments; weakly smeary; very strongly acid; abrupt smooth boundary.

Bs—11 to 33 inches; brown (7.5YR 4/4) gravelly fine sandy loam; weak fine granular structure; very friable; few fine and medium roots; 20 percent rock fragments; weakly smeary; very strongly acid; abrupt smooth boundary.

C—33 to 66 inches; olive brown (2.5Y 4/4) gravelly fine sandy loam; massive; very friable; 25 percent rock fragments; strongly acid.

The depth to bedrock is more than 65 inches. The thickness of the mineral part of the solum ranges from 18 to 36 inches. The content of rock fragments ranges from 5 to 20 percent in the solum and 10 to 30 percent in the substratum. Reaction ranges from extremely acid to strongly acid in the organic layers and extremely acid to moderately acid in the mineral part of the solum and substratum.

The A horizon is neutral or has hue of 5YR to 10YR, value of 2 or 3, and chroma of 0 to 2. It is loam, fine sandy loam, or their gravelly analogs.

The E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. It is fine sandy loam or gravelly fine sandy loam. Some pedons do not have an E horizon.

Some pedons have a Bh horizon with a hue of 2.5YR or 5YR, value of 2 or 3, and chroma of 2.

The Bhs horizon has hue of 5YR to 10YR, and value and chroma of 3 or less.

The Bs horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 6.

The Bh, Bhs and Bs horizons are fine sandy loam, sandy loam or their gravelly analogs. They are moderately smeary or weakly smeary. The combined thickness of the Bh, Bhs, and Bs horizons is more than 16 inches.

Some pedons have a BC horizon with a hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 3 or 4. It is fine sandy loam or gravelly fine sandy loam.

The C horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 3 or 4. It is fine sandy loam, sandy loam or their gravelly analogs.

Hubbardton Series

The Hubbardton series consists of very shallow, excessively drained soils on hills. They formed in loamy glacial till derived mainly from phyllite and schist. Slopes range from 60 to 80 percent.

The Hubbardton series, in most places, are near the shallow, somewhat excessively drained Lyman soils; shallow, somewhat excessively drained Taconic soils; and moderately deep, well drained Tunbridge soils. The Hubbardton soils are shallower than the Lyman soils, Taconic soils, and Tunbridge soils. The Hubbardton soils only occur in a complex with the Taconic soils in this survey area.

A typical pedon of Hubbardton very channery, very fine sandy loam in an area of Taconic-Hubbardton-Rock outcrop complex, 60 to 80 percent slope, in the town of Woodbury, 1,350 feet northwest of Dobson Pond and 1,250 feet west of Valley Lake:

Oi—0 to 1 inch; slightly decomposed leaves and needles.

Oe—1 to 2 inch; moderately decomposed leaves and needles.

A—2 to 4 inches; very dark brown (7.5YR 2/2) very channery very fine sandy loam; weak fine granular structure; very friable; many very fine and few fine, medium and coarse roots; 35 percent rock fragments; strongly acid; abrupt wavy boundary.

Bw—4 to 9 inches; dark yellowish brown (10YR 4/4) very channery very fine sandy loam; weak fine granular structure; very friable; many very fine and few fine, medium and coarse roots; 45 percent rock fragments; strongly acid; abrupt smooth boundary.

R—9 inches; phyllite bedrock.

The depth to bedrock ranges from 2 to 10 inches below the top of the mineral soil layers. The content of rock fragments ranges from 35 to 55 percent throughout the soil. Reaction ranges from extremely acid to strongly acid in the organic layers and very strongly acid to strongly acid in the mineral part of the solum.

The A horizon has hue of 7.5YR to 10YR, value of 2 to 4, and chroma of 1 or 2. It is very gravelly or very channery silt loam, very fine sandy loam or fine sandy loam.

The Bw horizon has hue of 5YR to 10YR, value of 3 or 4, and chroma of 2 to 6. It is very gravelly or very channery silt loam, very fine sandy loam or fine sandy loam.

Lamoine Series

The Lamoine series consists of very deep, somewhat poorly drained soils on dissected lake plains. They formed in loamy glaciolacustrine deposits derived mainly from phyllite and metamorphosed limestone. Slopes range from 3 to 15 percent.

The Lamoine soils, in most places, are near the moderately well drained Buxton soils, moderately well drained Nicholville soils, well drained Salmon soils, and poorly drained Scantic soils. The Lamoine soils have chroma less than 3 in some horizon above 20 inches and the Buxton soils have chroma 3 or greater throughout the upper 20 inches. The Lamoine soils are finer textured than the Nicholville soils and Salmon soils in the substratum. The Lamoine soils are free of redoximorphic features in the upper part of the solum and the Scantic soils have redoximorphic features in the upper part of the solum.

A typical pedon of Lamoine silt loam, 8 to 15 percent slopes, in the town of Plainfield, 4,000 feet east of Plainfield Village and 600 feet north of U.S. Route 2:

Ap—0 to 10 inches; dark brown (10YR 3/3) silt loam, light gray (10 YR 7/2) dry; weak medium granular structure; friable; common very fine and fine roots; moderately acid; abrupt smooth boundary.

Bw1—10 to 14 inches; olive brown (2.5Y 4/4) silt loam; weak medium granular structure; friable; few very fine and fine roots; moderately acid; clear smooth boundary.

Bw2—14 to 17 inches; dark grayish brown (2.5Y 4/2) silt clay loam; weak medium granular structure; friable; few very fine roots; common fine distinct light olive gray (5Y 6/2) iron depletions and common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation; moderately acid; clear smooth boundary.

Cg1—17 to 30 inches; dark grayish brown (2.5Y 4/2) silt clay; massive; friable; many medium distinct gray (5Y 6/1) iron depletions and many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; moderately acid; clear smooth boundary.

Cg2—30 to 65 inches; olive gray (5Y 4/2) silty clay; massive; friable; many medium distinct gray (5Y 6/1) iron depletions and many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; yellowish red (5YR 5/6) manganese stains on the ped faces; moderately acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 16 to 30 inches. The content of rock fragments ranges from 0 to 5 percent throughout the soil. Reaction ranges from strongly acid to slightly acid in the surface layer, moderately acid to neutral in the subsoil and substratum.

The Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 to 4. It is silt clay loam or silt loam.

The Bw horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is silty clay, silt clay loam or silt loam. Some pedons have a Bg horizon.

The C horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is clay, silty clay or silty clay loam.

Londonderry Series

The Londonderry series consists of very shallow, well drained soils on mountains. They formed in loamy glacial till derived mainly from schist. Slopes range from 35 to 70 percent.

The Londonderry soils, in most places, are near the moderately deep, well drained Glebe soils; very shallow to moderately deep, well drained Ricker soils; and shallow, well drained Stratton soils. The Londonderry soils are shallower than the Glebe soils and Stratton soils. The Londonderry soils differ from the Ricker soils in having mineral soil layers above bedrock more than 4 inches thick or more than one half the thickness of the overlying organic soil layers. The Londonderry soils only occur in a complex with the Ricker soils or Stratton soils in this survey area.

A typical pedon of Londonderry gravelly fine sandy loam, in an area of Ricker-Londonderry-Stratton complex, 35 to 70 percent slopes, very rocky, in the town of Fayston, 1,600 feet north of Vermont Route 17 and 250 feet east of the Chittenden County line:

Oi—0 to 1 inch; slightly decomposed leaves, needles, and twigs.

Oe—1 to 3 inches; moderately decomposed litter.

E—3 to 8 inches; gray (N 6/0) gravelly fine sandy loam; weak fine granular structure; very friable; many very fine, fine and medium and few coarse roots; 15 percent rock fragments; very strongly acid; abrupt smooth boundary.

R—8 inches; schist bedrock.

The depth to bedrock ranges from 2 to 10 inches below the top of the mineral layers. The thickness of the mineral part of the solum ranges from 2 to 10 inches. The content of rock fragments ranges from 5 to 20 percent throughout the soil. Reaction ranges from extremely acid to very strongly acid throughout the soil.

Some pedons have an A horizon with a hue of 10YR, value of 2, and chroma of 1 or 2. It is very fine sandy loam, fine sandy loam or their gravelly analogs.

The E horizon is neutral or has hue of 10YR, value of 4 to 6, and chroma of 0 to 2. It is very fine sandy loam, fine sandy loam or their gravelly analogs.

Lyman Series

The Lyman series consists of shallow, somewhat excessively drained soils on hills and knolls. They formed in loamy glacial till derived mainly from granite, phyllite, and schist. Slopes range from 3 to 60 percent.

The Lyman soils, in most places, are near the very deep, well drained Berkshire soils; very deep, somewhat poorly drained Colonel soils; very deep, moderately well drained Peru soils; and moderately deep, well drained Tunbridge soils. The Lyman soils are shallower then Berkshire soils, Colonel soils, Peru soils, and Tunbridge soils. The Lyman soils only occur in a complex with the Tunbridge soils in this survey area.

A typical pedon of Lyman fine sandy loam, in an area of Tunbridge-Lyman complex, 15 to 35 percent slopes, very rocky, in the town of Moretown, 1,575 feet southwest of Moretown Common 5 Corners and 4,950 feet northeast of the bridge over Mad River on Vermont Route 100B:

Oe—0 to 1 inch; moderately decomposed leaves, needles, and twigs.

A—1 to 2 inches; black (5YR 2.5/1) fine sandy loam; weak fine granular structure; friable; many very fine and common fine and medium roots; 5 percent rock fragments; very strongly acid; clear smooth boundary.

Bhs—2 to 4 inches; dark reddish brown (5YR 3/2) fine sandy loam; weak fine granular structure; friable; many very fine and common fine and few medium roots; 10 percent rock fragments; very strongly acid; clear smooth boundary.

Bs1—4 to 8 inches; brown (7.5YR 4/4) fine sandy loam; weak fine granular structure; friable; many very fine and common fine and medium roots; 10 percent rock fragments; strongly acid; clear wavy boundary.

Bs2—8 to 15 inches; dark yellowish brown (10YR 4/4) gravelly fine sandy loam; weak fine granular structure; friable; common fine and medium roots; 20 percent rock fragments; strongly acid; abrupt smooth boundary.

R—15 inches; schist bedrock.

The depth to bedrock ranges from 10 to 20 inches below the top of the mineral layers. The thickness of the mineral part of the solum ranges from 10 to 20 inches. The content of rock fragments ranges from 5 to 30 percent throughout the soil. Reaction ranges from extremely acid to strongly acid in the organic layers and extremely acid to moderately acid in the mineral part of the solum and substratum. Silt content is less than 40 percent and clay is less tan 10 percent in the particle size control section.

The A horizon is neutral or has hue of 5YR to 10YR, value of 2 or 3, and chroma or 0 to 2. It is very fine sandy loam, fine sandy loam or their gravelly or channery analogs. Cultivated pedons have an Ap horizon.

Some pedons have an E horizon with a hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. It is very fine sandy loam, fine sandy loam or their gravelly or channery analogs.

Some pedons have a Bh horizon with a hue of 2.5YR to 10YR, value of 2 to 4, and chroma of 2 to 6. It is very fine sandy loam, loam, fine sandy loam or their gravelly or channery analogs. It is weakly smeary or not smeary. It is less than 4 inches thick.

The Bhs horizon has hue of 5YR to 10YR, and value and chroma of 3 or less. It is very fine sandy loam, loam, fine sandy loam or their gravelly or channery analogs. It is weakly smeary or not smeary.

The Bs horizon has hue of 5YR to 10YR, value of 3 to 5, and chroma of 3 to 6. It is very fine sandy loam, loam, fine sandy loam or their gravelly or channery analogs. It is weakly smeary or not smeary.

Some pedons have a BC horizon with a hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 4. It is very fine sandy loam, fine sandy loam or their gravelly or channery analogs.

Machias Series

The Machias series consists of very deep, moderately well drained soils on kames and terraces. They formed in loamy glaciofluvial deposits underlain by sandy glaciofluvial deposits derived mainly from phyllite and schist. Slopes range from 0 to 15 percent.

The Machias soils, in most places, are near the somewhat excessively drained Adams soils; somewhat poorly drained Colonel soils; excessively drained Colton soils, and moderately well drained Peru soils. The Machias soils have redoximorphic features that are not in the solum of the Adams soils and

Colton soils. The Machias soils have a loose substratum and the Colonel soils and Peru soils have a firm substratum.

The Machias series is a taxadjunct in Washington County because it does not have a spodic horizon. The official series type location is classified as an Aquic Haplorthod, coarse-loamy over sandy or sandy-skeletal, mixed, frigid and the typical pedon in Washington County is classified as a Oxyaquic Dystrochrept, coarse-loamy over sandy or sandy-skeletal, mixed, frigid. The typical pedon has redoximorphic features within 30 inches which fits the concept of the Machias series.

A typical pedon on Machias fine sandy loam, 0 to 3 percent slopes, in the town of Waterbury, 750 feet southeast of Maple Street and 375 feet southwest of the Maple Street cemetery:

Ap—0 to 8 inches; dark brown (10YR 3/3) fine sandy loam; weak fine granular structure; friable; many very fine and fine roots; 5 percent rock fragments; moderately acid; abrupt smooth boundary.

Bs—8 to 12 inches; yellowish brown (10YR 5/8) fine sandy loam; weak fine granular structure; friable; many fine and very fine roots; 5 percent rock fragments; moderately acid; abrupt smooth boundary.

BC—12 to 22 inches; olive brown (2.5Y 4/4) fine sandy loam; weak fine subangular blocky structure; friable; common fine roots; few fine, faint dark yellowish brown (10YR 4/4) masses of iron accumulation; 5 percent rock fragments; moderately acid; abrupt wavy boundary.

2C1—22 to 28 inches; dark grayish brown (2.5Y 4/2) very gravelly loamy sand; single grain; loose; common fine roots; common fine prominent yellowish brown (10YR 5/8) masses of iron accumulation; 35 percent rock fragments; moderately acid; clear wavy boundary.

2C2—28 to 65 inches; dark grayish brown (2.5Y 4/2) very gravelly sand; single grain; loose; few fine roots; 50 percent rock fragments; very strongly acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 17 to 33 inches. The content of rock fragments ranges from 0 to 20 percent in the solum and 5 to 55 percent in the substratum. Reaction ranges from very strongly acid to strongly acid in the surface layer and very strongly acid to moderately acid in the subsoil and substratum. The depth to contrasting material is greater than 18 inches.

The Ap horizon has hue of 10YR or 2.5Y, value of 2 or 3, and chroma of 2 or 3. It is silt loam, very fine sandy loam, fine sandy loam or their gravelly analogs. Uncultivated pedons have an A horizon.

The Bs horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 4 to 8. It is silt loam, very fine sandy loam or fine sandy loam. Some pedons have a 2B horizon that is loamy fine sand, fine sand or their gravelly analogs.

The BC horizon has hue of 2.5Y or 5Y, value of 3 to 5, and chroma of 2 to 4. It is very fine sandy loam, fine sandy loam, loamy fine sand or their gravelly analogs.

The 2C horizon has hue of 2.5Y or 5Y, value of 3 to 5, and chroma of 2 to 4. It is loamy sand, fine sand, sand, coarse sand or their gravelly or very gravelly analogs.

Markey Series

The Markey series consists of very deep, very poorly drained organic soils in marshes and swamps. They formed in highly decomposed herbaceous materials, 16 to 50 inches thick, underlain by sandy glaciofluvial deposits derived mainly from phyllite and schist. Slopes range from 0 to 2 percent.

The Markey soils, in most places, are near the poorly drained Cabot soils, very poorly drained Peacham soils, very poorly drained Rifle soils, poorly drained Rumney soils, and very poorly drained Wonsqueak soils. The Markey soils differ from the Cabot soils, Peacham soils, and Rumney soils in having organic soil layers more than 16 inches thick. The Markey soils differ from the Rifle soils in having organic soil layers less than 51 inches thick. The Markey soils have a coarser textured substratum than the Wonsqueak soils. The Markey soils only occur in an undifferentiated unit with the Wonsqueak soils in this survey area.

A typical pedon of Markey muck in an area of Markey and Wonsqueak mucks, 0 to 2 percent slopes, in the town of Waterbury, 200 feet west of Vermont Route 100 and 3,500 feet south of Waterbury Center:

Oa1—0 to 22 inches; black (5YR 2/1) broken face and rubbed and dark reddish brown (5YR 2/2) pressed muck; about 33 percent fiber unrubbed, 12 percent rubbed; weak medium granular structure; slightly sticky; primarily herbaceous fibers; moderately acid in water; clear smooth boundary.

Oa2—22 to 29 inches; dark brown (7.5YR 3/2) broken face, rubbed and pressed muck; about 12 percent fiber unrubbed, 5 percent rubbed; weak medium granular structure; slightly sticky; primarily herbaceous fibers; moderately acid in water; clear smooth boundary.

Oa3—29 to 35 inches; very dark gray (10YR 3/1) broken face and very dark grayish brown (10YR

3/2) rubbed and pressed muck; about 50 percent fiber unrubbed, 10 percent rubbed; weak coarse granular structure; slightly sticky; primarily herbaceous fibers; slightly acid in water; clear smooth boundary.

Oa4—35 to 42 inches; very dark brown (10YR 2/2) broken face, rubbed and pressed muck; about 50 percent fiber unrubbed, 16 percent rubbed; weak coarse granular structure; slightly sticky; primarily herbaceous fibers; slightly acid in water; clear smooth boundary.

C—42 to 65 inches; olive gray (5Y 4/2) fine sand; massive; non-sticky; moderately acid.

The depth to bedrock is more than 65 inches. The organic layers are 16 to 50 inches thick. The content of woody fragments ranges from 0 to 15 percent in the organic layers. The content of rock fragments ranges from 0 to 10 percent in the mineral layers. Reaction ranges from moderately acid to slightly acid throughout the soil.

The broken face, rubbed and pressed colors of the organic materials are neutral or have hue of 5YR to 10YR, value of 2 to 4 and chroma of 0 to 2. Rubbed and pressed colors may vary from broken face colors one unit in value or chroma or both. The surface tier is dominantly muck but may include thin layers of mucky peat. The subsurface and bottom tiers are muck.

The 2C horizon is neutral or has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 0 to 4. It is fine sand or sand.

Mundal Series

The Mundal series consists of moderately well drained soils on foothills and mountains. The soils are moderately deep to dense basal till and very deep to bedrock. They formed in compact loamy glacial till derived mainly from granite and schist. Slopes range from 3 to 35 percent.

The Mundal soils, in most places, are near the poorly drained Cabot soils; shallow, well drained Hogback soils; well drained Houghtonville soils; and moderately deep, well drained Rawsonville soils. The Mundal soils are deeper to bedrock than the Hogback soils and Rawsonville soils. The Mundal soils have a firm substratum and the Houghtonville soils have a friable substratum. The Mundal soils are free of redoximorphic features in the upper part of the solum and Cabot soils have redoximorphic features in the upper part of the solum.

A typical pedon of Mundal fine sandy loam, 15 to 35 percent slopes, very stony, in the town of Warren, 3,225 feet southwest of the junction of Lincoln Gap Road and the National Forest Highway and 100 feet west of the National Forest Highway:

Oe—0 to 5 inches; moderately decomposed leaves, needles, and twigs.

A—5 to 6 inches; dark reddish brown (5YR 3/2) fine sandy loam; moderate very fine granular structure; many very fine and fine and common medium roots; 5 percent rock fragments; very strongly acid; abrupt wavy boundary.

E—6 to 7 inches; dark gray (5YR 4/1) fine sandy loam; moderate very fine and fine granular structure; friable; many very fine and fine and common medium roots; 5 percent rock fragments; very strongly acid; abrupt broken boundary.

Bhs—7 to 10 inches; dark reddish brown (5YR 3/3) fine sandy loam; weak very fine granular structure; friable; many very fine and fine and common medium roots; 5 percent rock fragments; moderately smeary; very strongly acid; abrupt broken boundary.

Bs1—10 to 15 inches; brown (7.5YR 4/4) fine sandy loam; weak very fine granular structure; friable; many very fine and fine and common medium roots; 10 percent rock fragments; moderately smeary; very strongly acid; clear wavy boundary.

Bs2—15 to 25 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak fine subangular blocky structure; friable; common very fine and fine roots; 10 percent rock fragments; weakly smeary; very strongly acid; abrupt smooth boundary.

Cd1—25 to 34 inches; olive gray (5Y 4/2) fine sandy loam; massive; firm; few fine prominent olive brown (2.5Y 4/4) masses of iron accumulation; 5 percent rock fragments; strongly acid; clear smooth boundary.

Cd2—34 to 70 inches; olive gray (5Y 5/2) fine sandy loam; moderate thick platy structure; firm; common fine prominent dark yellowish brown (10YR 4/4) and brown (7.5YR 4/4) masses of iron accumulation; 10 percent rock fragments; strongly acid.

The depth to bedrock is more than 65 inches. The thickness of the mineral part of the solum ranges from 20 to 30 inches. The content of rock fragments ranges from 0 to 25 percent in the solum and 5 to 30 percent in the substratum. Reaction ranges from extremely acid to strongly acid in the organic layers, extremely acid to moderately acid in the mineral part of the solum, and strongly acid to slightly acid in the substratum.

The A horizon is neutral or has hue of 5YR to 10YR, value of 2 or 3, and chroma of 0 to 2. It is loam, fine sandy loam or their gravelly analogs.

The E horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 1 or 2. It is fine sandy loam or gravelly fine sandy loam. Some pedons do not have an E horizon.

Some pedons have a Bh horizon with a hue of 5YR or 7.5YR, value of 2 or 3 and chroma of 1 or 2. It is moderately smeary.

The Bhs horizon has hue of 5YR to 10YR and value and chroma of 3 or less. It is moderately or weakly smeary. Some pedons do not have a Bhs horizon.

The Bs horizon has hue of 7.5YR or 10YR, value of 4 or 5 and chroma of 4. It is moderately or weakly smeary.

The Bh, Bhs and Bs horizons are loam, fine sandy loam or their gravelly analogs. The combined thickness of the Bh, Bhs, and Bs horizons is more than 18 inches.

The Cd horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is loam, fine sandy loam or their gravelly analogs. It has platy structure or it is massive and is firm or very firm.

Nicholville Series

The Nicholville series consists of very deep, moderately well drained soils on dissected lake plains. They formed in loamy glaciolacustrine deposits derived mainly from phyllite and schist. Slopes range from 3 to 8 percent.

The Nicholville soils, in most places, are near the moderately deep, well drained Adamant soils; poorly drained Grange soils; somewhat poorly drained Lamoine soils; and well drained Salmon soils. The Nicholville soils have redoximorphic features that are not in the substratum of the Adamant soils and Salmon soils. The Nicholville soils are free of redoximorphic features in the upper part of the solum and the Grange soils have redoximorphic features in the upper part of the solum. The Nicholville soils are coarser textured than the Lamoine soils in the substratum.

The Nicholville series is a taxadjunct in Washington County because it does not have a spodic horizon. The official series type location is classified as an Aquic Haplorthod, coarse-silty, mixed, frigid and the typical pedon is classified as an Aquic Dystrochrept, coarse-silty, mixed, frigid.

A typical pedon of Nicholville silt loam, 3 to 8 percent slopes, in the town of Moretown, 375 feet west of the Winooski River and 900 feet southwest of the intersection of U.S. Route 2, the Winooski River and the Middlesex town line:

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, light brownish gray (10YR 6/2) dry; weak and moderate fine granular structure; friable; many very fine and fine roots; very strongly acid; abrupt smooth boundary.

Bw—8 to 14 inches; olive brown (2.5Y 4/4) silt loam; weak fine subangular blocky structure; friable; common very fine and fine roots; very strongly acid; clear smooth boundary.

C1—14 to 24 inches; olive (5Y 4/3) silt loam; weak thick platy structure; friable; common very fine roots; many medium prominent gray (10YR 5/1) iron depletions and dark yellowish brown (10YR 4/4) masses of iron accumulation; very strongly acid; clear smooth boundary.

C2—24 to 33 inches; olive (5Y 4/3) silt loam and very fine sandy loam; moderate thick platy structure; friable; few very fine roots; many medium prominent gray (10YR 5/1) iron depletions and dark yellowish brown (10YR 4/4) masses of iron accumulation; very strongly acid; clear smooth boundary.

C3—33 to 65 inches; olive (5Y 4/4) silt loam; weak thick platy structure; friable; few very fine roots; few fine distinct grayish brown (2.5Y 5/2) iron depletions; very strongly acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 12 to 30 inches. The content of rock fragments ranges from 0 to 5 percent throughout the soil. Reaction ranges from very strongly acid to moderately acid throughout the soil.

The Ap horizon has hue of 10YR, value of 3 or 4, and chroma of 2. It is silt loam or very fine sandy loam. Uncultivated pedons have an A horizon.

The Bw horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 4 to 6. It is silt loam or very fine sandy loam.

The C horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is silt loam or very fine sandy loam.

Ondawa Series

The Ondawa series consists of very deep, well drained soils on floodplains. They formed in loamy alluvium underlain by sandy alluvium, derived mainly from phyllite and schist. Slopes range from 0 to 3 percent.

The Ondawa soils, in most places, are near the poorly drained Rumney soils, excessively drained Sunday soils, poorly drained Sunny soils, well drained Waitsfield soils, and moderately well drained Weider soils. The Ondawa soils are free of redoximorphic features in the solum and the Rumney soils, Sunny soils, and Weider soils have redoximorphic features in the solum. The Ondawa soils have finer textures in the solum than the Sunday soils. The Ondawa soils differ from the Waitsfield soils in having more than 50 percent fine sand or coarser in the solum.

A typical pedon of Ondawa fine sandy loam, 0 to 3 percent slopes, in the city of Montpelier, 375 feet west of the North Branch of the Winooski River and 1,500 feet north of the intersection of Vermont Route 12 and Gould Hill Road:

Ap—0 to 8 inches; very dark grayish brown (2.5Y 3/2) fine sandy loam; weak fine granular structure; friable; many very fine and fine roots; 2 percent rock fragments; strongly acid; abrupt smooth boundary.

Bw1—8 to 14 inches; dark grayish brown (2.5Y 4/2) fine sandy loam; weak fine granular structure; friable; many very fine and fine roots; 2 percent rock fragments; moderately acid; clear smooth boundary.

Bw2—14 to 24 inches; olive brown (2.5Y 4/4) fine sandy loam; weak fine granular structure; friable; common very fine and fine roots; 2 percent rock fragments; moderately acid; clear smooth boundary.

C1—24 to 30 inches; olive brown (2.5Y 4/4) loamy fine sand; single grain; loose; common very fine roots; 2 percent rock fragments; moderately acid; clear smooth boundary.

C2—30 to 38 inches; olive brown (2.5Y 4/4) fine sand; single grain; loose; few very fine roots; 2 percent rock fragments; moderately acid; clear smooth boundary.

C3—38 to 65 inches; olive brown (2.5Y 4/4) loamy fine sand; single grain; loose; few very fine roots; 5 percent rock fragments; moderately acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 20 to 40 inches. The content of rock fragments ranges from 0 to 5 percent in the solum and 0 to 40 percent in the substratum. Reaction ranges from very strongly acid to moderately acid throughout the soil.

The Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2. It is fine sandy loam.

The Bw horizon has hue of 2.5Y, value of 3 to 5, and chroma of 2 to 4. It is loam, fine sandy loam or sandy loam.

The C horizon has hue of 2.5Y or 5Y, value of 4, and chroma of 2 to 4. It is loamy fine sand, loamy sand, fine sand, sand, coarse sand or their gravelly or very gravelly analogs.

Peacham Series

The Peacham series consists of very poorly drained soils on knolls and till plains. The soils are shallow to dense basal till and very deep to bedrock. They formed in organic deposits less than 16 inches thick and compact loamy glacial till derived mainly from phyllite, schist, and metamorphosed limestone. Slopes range from 0 to 5 percent.

The Peacham soils, in most places, are near the poorly drained Cabot soils, very poorly drained Markey soils, very poorly drained Rifle soils, poorly drained Scantic soils, and very poorly drained Wonsqueak soils. The Peacham soils differ from the Cabot soils and Scantic soils in having organic soil layers more than 8 inches thick. The Peacham soils differ from the Markey soils, Rifle soils, and Wonsqueak soils in having organic soil layers less than 16 inches thick.

A typical pedon of Peacham muck, 0 to 5 percent slopes, in the town of Warren, 7,260 feet west of Vermont Route 100 and 5,200 feet north of Lincoln Gap Road:

Oe—0 to 2 inches; moderately decomposed leaves and needles.

Oa—2 to 12 inches; black (10YR 2/1) muck; weak fine granular structure; very friable; common fine and very fine roots; extremely acid; abrupt smooth boundary.

Bg1—12 to 19 inches; dark grayish brown (2.5Y 4/2) fine sandy loam; weak fine granular structure; friable; few very fine and fine roots; many fine and medium prominent brown (7.5YR 4/4) and dark reddish brown (5YR 3/3) masses of iron accumulation; 10 percent rock fragments; moderately acid; clear smooth boundary.

Bg2—19 to 28 inches; dark grayish brown (2.5Y 4/2) fine sandy loam; weak fine subangular blocky structure; friable; many medium prominent strong brown (7.5YR 5/6) masses of iron accumulation; 10 percent rock fragments; slightly acid; abrupt smooth boundary.

Cdg1—28 to 35 inches; olive gray (5Y 4/2) gravelly silt loam; massive; firm; common fine prominent dark yellowish brown (10YR 4/4) masses of iron accumulation and common fine faint gray (5Y 5/1) iron depletions; 15 percent rock fragments; slightly acid; clear smooth boundary.

Cdg2—35 to 67 inches; olive gray (5Y 4/2) silt loam; massive; firm; many fine prominent yellowish brown (10YR 5/6) masses of iron accumulation and many fine faint very dark gray (5Y 3/1) iron depletions; 10 percent rock fragments; slightly acid.

The depth to bedrock is more than 65 inches. The thickness of the mineral part of the solum ranges from 10 to 20 inches. The content of rock fragments ranges from 5 to 25 percent in the mineral horizons. Reaction ranges from extremely acid to strongly acid in the organic layers and strongly acid to slightly acid in the mineral part of the solum and substratum.

The Oa is neutral or has hue of 10YR, value of 2, and chroma of 0 to 2. It is muck or mucky peat.

Some pedons have an A horizon with a hue of 10YR to 5Y, value of 3 or 4, and chroma of 2. It is silt loam, loam, fine sandy loam or their gravelly or channery analogs.

The Bg horizon is neutral or has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 0 to 2. It is silt loam, loam, fine sandy loam or their gravelly or channery analogs.

The Cdg horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 1 or 2. It is silt loam, loam, fine sandy loam or their gravelly or channery analogs. It is massive or has platy structure and is firm or very firm.

Peru Series

The Peru series consists of moderately well drained soils on hills, knolls, and till plains. The soils are moderately deep to dense basal till and very deep to bedrock. They formed in compact loamy glacial till derived mainly from granite, phyllite, and schist. Slopes range from 3 to 60 percent.

The Peru soils, in most places, are near the well drained Berkshire soils; poorly drained Cabot soils; somewhat poorly drained Colonel soils; and moderately deep, well drained Tunbridge soils. The Peru soils have a firm substratum and the Berkshire soils have a friable substratum. The Peru soils are free of redoximorphic features in the upper part of the solum and the Cabot soils have redoximorphic features in the lower part of the solum. Peru soils differ from the Colonel soils in not having gray redoximorphic features above 16 inches. The Peru soils are deeper than the Tunbridge soils.

A typical pedon of Peru gravelly fine sandy loam, 15 to 35 percent slopes, very stony, in the town of Middlesex, 1,650 feet southwest of Wrightsville Beach parking lot and 200 feet west of Vermont Route 12:

Oi—0 to 1 inch; slightly decomposed leaves and needles.

Oe—1 to 2 inches; moderately decomposed leaves and needles.

Oa—2 to 3 inches; black (10YR 2/1) highly decomposed leaves and needles; weak medium granular structure; very friable; many very fine and common fine roots; 20 percent rock fragments; very strongly acid; abrupt wavy boundary.

A—3 to 4 inches; dark brown (7.5YR 3/2) gravelly fine sandy loam; weak fine granular structure; very friable; many very fine and common fine roots; 20 percent rock fragments; very strongly acid; abrupt wavy boundary.

Bs1—4 to 10 inches; brown (7.5YR 4/4) gravelly fine sandy loam; weak fine subangular blocky structure; friable; common fine and few medium and coarse roots; 20 percent rock fragments; moderately smeary; strongly acid; clear wavy boundary.

Bs2—10 to 19 inches; dark yellowish brown (10YR 4/4) gravelly fine sandy loam; weak fine subangular blocky structure; friable; common fine roots; 20 percent rock fragments; weakly smeary; moderately acid; clear wavy boundary.

BC1—19 to 23 inches; olive brown (2.5Y 4/4) channery fine sandy loam; weak fine subangular blocky structure; friable; common fine roots; 20 percent rock fragments; moderately acid; clear wavy boundary.

BC2—23 to 32 inches; olive brown (2.5Y 4/4) channery fine sandy loam; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation; weak fine subangular blocky structure; friable; common fine roots; 20 percent rock fragments; moderately acid; abrupt wavy boundary.

Cd—32 to 67 inches; olive (5Y 4/3) channery fine sandy loam; massive; firm; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation and common fine faint olive gray (5Y 5/2) iron depletions; 20 percent rock fragments; moderately acid.

The depth to bedrock is more than 65 inches. The thickness of the mineral part of the solum ranges from 20 to 36 inches. The content of rock fragments ranges from 5 to 30 percent throughout the soil. Reaction ranges from extremely acid to strongly acid in the organic layers and very strongly acid to moderately acid in the mineral part of the solum and substratum.

The A horizon has hue of 7.5YR or 10YR, value of 3, and chroma of 2 or 3. It is loam, fine sandy loam or their gravelly or channery analogs.

Some pedons have an E horizon with a hue of 10YR, value of 5 or 6, and chroma of 2. It is loam or fine sandy loam.

The Bs horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 8. It is loam, fine sandy loam or their gravelly or channery analogs.

The BC horizon has hue of 2.5Y or 5Y, value of 4 to 6, and chroma of 2 to 4. It is fine sandy loam, sandy loam or their channery or gravelly analogs.

The Cd horizon has hue of 2.5Y or 5Y, value of 3 to 5, and chroma of 2 to 4. It is fine sandy loam, sandy loam or their channery or gravelly analogs. It has platy structure or it is massive and is firm or very firm.

Rawsonville Series

The Rawsonville series consists of moderately deep, well drained soils on foothills and mountains. They formed in loamy glacial till derived mainly from granite and schist. Slopes range from 8 to 70 percent.

The Rawsonville soils, in most places, are near the poorly drained Cabot soils; shallow, well drained Hogback soils; very deep, well drained Houghtonville soils; very deep, moderately well drained Mundal soils; and very deep, well drained Sisk soils. The Rawsonville soils are deeper to bedrock than the Hogback soils. The Rawsonville soils are shallower to bedrock than the Cabot soils, Houghtonville soils, Mundal soils, and Sisk soils. The Rawsonville soils only occur in a complex with the Hogback soils or Houghtonville soils in this survey area.

A typical pedon of Rawsonville fine sandy loam, in an area of Hogback-Rawsonville complex, 15 to 35 percent slopes, very rocky, in the town of Roxbury, 3,700 feet southeast of Beaver Pond and 7,500 feet east of Vermont Route 12A:

Oi—0 to 1 inch; slightly decomposed leaves and twigs.

Oe—1 to 2 inches; moderately decomposed leaves and twigs.

A—2 to 4 inches; black (5YR 2/1) fine sandy loam; weak very fine granular structure; very friable; many very fine, common fine and few medium roots; 10 percent rock fragments; extremely strongly acid; abrupt wavy boundary.

Bhs—4 to 6 inches; dark reddish brown (5YR 3/3) fine sandy loam; weak medium granular structure; very friable; many very fine, common fine and few medium roots; 10 percent rock fragments; moderately smeary; extremely acid; clear wavy boundary.

Bs—6 to 24 inches; reddish brown (5YR 4/4) fine sandy loam; weak medium granular structure; very friable; common very fine and few fine and medium roots; 10 percent rock fragments; moderately smeary; very strongly acid; abrupt wavy boundary.

BC—24 to 26 inches; olive brown (2.5Y 4/4) fine sandy loam; weak medium granular structure; very friable; 10 percent rock fragments; very strongly acid; abrupt wavy boundary.

R—26 inches; schist bedrock.

The depth to bedrock ranges from 20 to 40 inches below the top of the mineral layers. The thickness of the mineral part of the solum ranges from 20 to 38 inches. The content of rock fragments ranges from 5 to 20 percent in the upper part of the solum and from 10 to 30 percent in the lower part of the solum and the substratum. Reaction ranges from extremely acid to strongly acid throughout the soil.

The A horizon is neutral or has hue of 5YR to 10YR, value of 2 or 3, and chroma of 0 to 2. It is silt loam, fine sandy loam or their gravelly analogs.

Some pedons have an E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. It is fine sandy loam or gravelly fine sandy loam.

Some pedons have a Bh horizon with a hue of 2.5YR to 7.5YR, value of 2 or 3, and chroma of 1 or 2. It is silt loam, loam, fine sandy loam or their gravelly analogs. It is moderately smeary or weakly smeary.

The Bhs horizon has hue of 5YR to 10YR and value and chroma of 3 or less. It is silt loam, loam, fine sandy loam or their gravelly analogs. It is moderately smeary or weakly smeary.

The Bs horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 6. It is fine sandy loam or gravelly fine sandy loam. It is moderately smeary or weakly smeary.

The combined thickness of the Bh, Bhs and Bs horizons is more than 16 inches.

The BC horizon has hue of 7.5YR to 2.5Y, value of 3 or 4, and chroma of 3 or 4. It is fine sandy loam or gravelly fine sandy loam.

Some pedons have a C horizon with a hue of 2.5Y or 5Y, value of 3 to 5, and chroma of 2 to 4. It is fine sandy loam, channery fine sandy loam or gravelly fine sandy loam.

Ricker Series

The Ricker series consists of very shallow to moderately deep, well drained soils on mountains. They formed in organic materials derived from leaf litter, twigs, and branches, over bedrock. Slopes range from 35 to 70 percent.

The Ricker soils, in most places, are near the moderately deep, well drained Glebe soils; very shallow, well drained Londonderry soils; and shallow, well drained Stratton soils. The Ricker soils differ from the Glebe soils and Stratton soils in having very thin or no mineral soil layers. The Ricker soils differ from the Londonderry soils in having mineral soil layers above the bedrock less than 2 inches thick or less than one half the thickness of the overlying organic soil layers, if the mineral soil layers are 2 to 4 inches thick. The Ricker soils only occur in a complex with the Londonderry soils or Stratton soils in this survey area.

A typical pedon of Ricker peat, in an area of Ricker-Londonderry-Rock Outcrop complex, 35 to 70 percent slopes, in the town of Duxbury, 100 feet south of the north summit of Mount Ethan Allen and 6,000 feet east of the Chittenden County line:

Oi—0 to 2 inches; dark reddish brown (5YR 2/2) broken faced, rubbed and pressed slightly decomposed plant material; about 95 percent fiber unrubbed, 75 percent rubbed; massive; very friable; many very fine roots; extremely acid in H2O; abrupt smooth boundary.

Oe—2 to 8 inches; dark reddish brown (5YR 2/2) broken faced, rubbed and pressed moderately decomposed plant material; about 50 percent fiber unrubbed, 20 percent rubbed; massive; very friable; many very fine roots; extremely acid in water; abrupt smooth boundary.

R—8 inches; schist bedrock.

The depth to bedrock ranges from 2 to 26 inches. The organic layers are 2 to 18 inches thick. The organic material is extremely acid in water. Some pedons have thin mineral layers above the bedrock. The content of rock fragments ranges from 0 to 20 percent in the mineral horizons. Reaction is extremely acid throughout the soil.

The organic materials are slightly, moderately, or highly decomposed plant material. The broken face, rubbed and pressed colors have hue of 2.5YR or 5YR, value of 2 or 3, and chroma of 1 or 2. Rubbed or pressed colors may vary from broken face colors one unit in value or chroma or both.

Some pedons have an E horizon up to 4 inches thick with a hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. It is fine sandy loam or gravelly fine sandy loam.

Rifle Series

The Rifle series consists of very deep, very poorly drained organic soils in marshes and swamps. They formed in moderately decomposed herbaceous material more than 51 inches thick. Slopes range from 0 to 2 percent.

The Rifle soils, in most places, are near the poorly drained Cabot soils, very poorly drained Markey soils, very poorly drained Peacham soils, and very poorly drained Wonsqueak soils. The Rifle soils differ from the Cabot soils, Markey soils, Peacham soils, and Wonsqueak soils in having organic soil layers more than 51 inches thick.

A typical pedon of Rifle muck, 0 to 2 percent slopes, in the town of Calais, 4,600 feet northwest of Sodom Pond and 50 feet north of the East Montpelier town line:

Oa—0 to 6 inches; black (5YR 2/1) broken face, dark reddish brown (5YR 2/2) rubbed and dark reddish brown (5YR 3/2) pressed muck; about 56 percent fiber unrubbed, 16 percent rubbed; massive; slightly sticky; primarily herbaceous fibers; slightly acid in water; clear smooth boundary.

Oe—6 to 65 inches; dark brown (7.5YR 3/2) broken face, dark reddish brown (5YR 2/2) rubbed and dark reddish brown (5YR 3/2) pressed mucky peat; about 60 percent fiber unrubbed, 20 percent rubbed; moderate coarse subangular blocky structure; slightly sticky; primarily herbaceous fibers; slightly acid in water.

The depth to bedrock is more than 65 inches. The thickness of the organic soil layers is greater than 51 inches. The content of woody fragments is less than 15 percent. Reaction ranges from moderately acid to neutral in water.

The broken face, rubbed and pressed colors of the organic materials have hue of 5YR to 10YR and value of 2 to 4. Chromas range from 1 to 4 in the surface tier and from 2 to 4 in the subsurface and bottom tiers. Rubbed and pressed colors may vary from broken face colors 2.5 units in hue and one unit in value, chroma or both. The surface tier is muck, mucky peat or peat. The subsurface and bottom tiers are dominantly mucky peat but can include thin layers of muck.

Rumney Series

The Rumney series consists of very deep, poorly drained soils on floodplains. They formed in loamy alluvium underlain by sandy alluvium derived mainly from phyllite and schist. Slopes range from 0 to 2 percent.

The Rumney soils, in most places, are near the very poorly drained Markey soils, well drained Ondawa soils, excessively drained Sunday soils, poorly drained Sunny soils, well drained Waitsfield soils, and moderately well drained Weider soils. The Rumney soils differ from the Markey soils in having organic soil layers less than 16 inches thick. The Rumney soils have redoximorphic features that are not in the solum of the Ondawa soils and Sunday soils. The Rumney soils are coarser textured than the Sunny soils in the solum. The Rumney soils have redoximorphic features in the solum and the Waitsfield soils are free of redoximorphic features in the solum. The Rumney soils have redoximorphic features that are not in the upper part of the solum of the Weider soils.

A typical pedon of Rumney fine sandy loam, 0 to 2 percent slopes, in the town of Middlesex, 1,500 feet west of the North Branch and 300 feet northwest of Wrightsville Beach parking lot:

The surface is covered by a thin layer of leaves.

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry; weak medium granular structure; very friable; many very fine roots; moderately acid; clear smooth boundary.

Bg—7 to 27 inches; very dark grayish brown (10YR 3/2) fine sandy loam; weak medium subangular blocky structure; very friable; few fine and medium roots; common fine prominent grayish brown (2.5Y 5/2) iron depletions; moderately acid; abrupt smooth boundary.

C—27 to 65 inches; dark grayish brown (2.5Y 4/2) gravelly sand; single grain; loose; common fine roots; few fine prominent gray (5Y 5/1) iron accumulation and common medium prominent reddish brown (2.5YR 4/4) and (5YR 4/4) masses of iron accumulation; 30 percent rock fragments; moderately acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 20 to 30 inches. The content of rock fragments ranges from 0 to 10 percent in the solum and from 0 to 40 percent in the substratum. Reaction ranges from very strongly acid to slightly acid throughout the soil.

The Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2. It is fine sandy loam or sandy loam.

The Bg horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 to 4. It is loam, fine sandy loam or sandy loam.

The C horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 4. It is loamy fine sand, loamy sand, fine sand, sand, coarse sand or their gravelly or very gravelly analogs.

Salmon Series

The Salmon series consists of very deep, well drained soils on dissected lake plains and terraces. They formed in loamy glaciolacustrine deposits derived mainly from phyllite and schist. Slopes range from 3 to 50 percent.

The Salmon soils, in most places, are near the moderately deep, well drained Adamant soils, somewhat excessively drained Adams soils, moderately well drained Buxton soils, excessively drained Colton soils, somewhat poorly drained Lamoine soils, moderately well drained Nicholville soils, and well drained Stetson soils. The Salmon soils are deeper to bedrock than the Adamant soils. The Salmon soils are finer textured than the Adams soils throughout the soil. The Salmon soils have less rock fragments than the Colton soils and Stetson soils throughout the soil. The Salmon soils are coarser textured than the Buxton soils and Lamoine soils in the substratum. The Salmon soils are free of redoximorphic features in the substratum and the Nicholville soils have redoximorphic features in the substratum.

A typical pedon of Salmon very fine sandy loam, 25 to 50 percent slopes, in the town of Waterbury, 380 feet east of Waterbury Reservoir and 1,560 feet south of the Lamoille County line:

Oi—0 to 1 inch; slightly decomposed leaves, needles, and twigs.

Oe—1 to 3 inches; moderately decomposed litter.

E—3 to 7 inches; gray (10YR 5/1) very fine sandy loam; weak fine granular structure; friable; many very fine and fine and common medium roots; very strongly acid; abrupt smooth boundary.

Bs1—7 to 11 inches; strong brown (7.5YR 5/6) very fine sandy loam; weak very fine and fine granular structure; friable; many very fine and fine and common medium roots; very strongly acid; clear smooth boundary.

Bs2—11 to 19 inches; yellowish brown (10YR 5/6) very fine sandy loam; weak fine granular structure; friable; many very fine and fine roots; very strongly acid; abrupt smooth boundary.

BC—19 to 33 inches; dark grayish brown (2.5Y 4/2) very fine sandy loam; weak fine granular structure; friable; common very fine and fine roots; very strongly acid; abrupt smooth boundary.

C—33 to 68 inches; olive (5Y 4/3) silt loam; massive; friable; few very fine and fine roots; strongly acid.

The depth to bedrock is more than 65 inches. The thickness of the mineral part of the solum ranges from 20 to 30 inches. Rock fragments are dominantly lacking in the soil but can range from 0 to 5 percent throughout the soil. Reaction ranges from extremely acid to strongly acid in the organic layers, extremely acid to moderately acid in the mineral part of the solum, and strongly acid to moderately acid in the substratum.

Some pedons have an A or Ap horizon with a hue of 10YR, value of 2 to 4, and chroma of 2. It is dominantly very fine sandy loam but includes silt loam.

The E horizon has hue of 7.5YR of 10YR, value of 5 or 6, and chroma of 1 or 2. It is very fine sandy loam. Some pedons do not have an E horizon.

The Bs horizon has hue of 7.5YR to 10YR, value of 4 or 5, and chroma of 4 to 6.

The BC horizon has hue of 2.5Y, value of 4 or 5, and chroma of 2 to 4.

The Bs and BC horizons are dominantly very fine sandy loam, but include silt loam.

The C horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 or 3. It is silt loam or very fine sandy loam.

Scantic Series

The Scantic series consists of very deep, poorly drained soils on dissected lake plains. They formed in loamy glaciolacustrine deposits derived mainly from metamorphosed limestone and phyllite. Slopes range from 0 to 3 percent.

The Scantic soils, in most places, are near the moderately well drained Buxton soils, poorly drained Grange soils, somewhat poorly drained Lamoine soils, very poorly drained Peacham soils, and very poorly drained Wonsqueak soils. The Scantic soils are finer textured than the Grange soils in the substratum. The Scantic soils have redoximorphic features that are not in the upper part of the solum of the Buxton soils and Lamoine soils. The Scantic soils differ from the Peacham soils and Wonsqueak soils in having organic soil layers less than 8 inches thick.

A typical pedon of Scantic silt loam, 0 to 3 percent slopes, in the town of East Montpelier, 750 feet northwest of the intersection of Kelton Road and Snow Hill Road and 1,875 feet northeast of where Snow Hill Road crosses Sodom Pond Brook:

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam; moderate fine and medium granular structure; friable; many very fine roots; moderately acid; many fine prominent strong brown (7.5YR 5/8) masses of iron accumulation; abrupt smooth boundary.

Bg1—8 to 12 inches; olive gray (5Y 4/2) silty clay loam; moderate very fine subangular blocky structure; friable; few very fine roots; many fine prominent strong brown (7.5YR 5/8) masses of iron accumulation; moderately acid; clear wavy boundary.

Bg2—12 to 30 inches; gray (5Y 5/1) silty clay loam; moderate very fine subangular blocky structure; friable; few very fine roots; many medium prominent brown (7.5YR 4/4) and strong brown (7.5YR 5/6) masses of iron accumulation; moderately acid; clear wavy boundary.

Cg—30 to 65 inches; gray (N 5/0) silty clay; massive; friable; common fine prominent brown (7.5YR 4/4) and dark yellowish brown (10YR 4/4) masses of iron accumulation; moderately acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 25 to 36 inches. Rock fragments are dominantly lacking in the soil but can range from 0 to 3 percent throughout the soil. Reaction ranges from strongly acid to slightly acid in the A horizon and upper part of the B horizon and moderately acid to slightly acid in the lower part of the B horizon and substratum.

The Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2. The Ap horizon is silt loam or silty clay loam. Uncultivated pedons have an A horizon.

The Bg horizon has hue of 2.5Y or 5Y value of 4 or 5, and chroma of 1 or 2. It is silt loam or silty clay loam in the upper part and silty clay loam or silty clay in the lower part.

The Cg horizon is neutral or has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 0 to 2. It is silty clay loam, silty clay or clay.

Sisk Series

The Sisk series consists of well drained soils on mountains. The soils are moderately deep to dense basal till and very deep to bedrock. They formed in compact loamy glacial till derived mainly from schist. Slopes range from 15 to 60 percent.

The Sisk soils, in most places, are near the moderately deep, well drained Glebe soils; shallow, well drained Hogback soils; moderately deep, well drained Rawsonville soils; and shallow, well drained Stratton soils. The Sisk soils are deeper to bedrock than the Glebes soils, Hogback soils, Rawsonville soils, and Stratton soils. The Sisk soils only occur in a complex with the Glebe soils in this survey area.

A typical pedon of Sisk gravelly very fine sandy loam, in an area of Sisk-Glebe complex, 15 to 35 percent slopes, very bouldery, in the town of Duxbury, 3,700 feet northwest of the Couching Lion Farm parking lot and 7,800 feet east of the Chittenden County line:

Oi—0 to 1 inch; slightly decomposed leaves, needles, and twigs.

Oe—1 to 2 inches; moderately decomposed leaves, needles, and twigs.

A—2 to 5 inches; dark reddish brown (5YR 2/2) gravelly very fine sandy loam; weak fine granular structure; very friable; many very fine and fine and common medium roots; 20 percent rock fragments; very strongly acid; abrupt broken boundary.

E—5 to 6 inches; reddish gray (5YR 5/2) gravelly fine sandy loam; weak fine granular structure; very friable; many very fine and fine and common medium roots; 20 percent rock fragments; very strongly acid; abrupt broken boundary.

Bh—6 to 12 inches; dark reddish brown (5YR 3/3) gravelly fine sandy loam; weak fine granular structure; very friable; common very fine and fine roots; 20 percent rock fragments; moderately smeary; very strongly acid; clear wavy boundary.

Bs—12 to 26 inches; brown (7.5YR 4/4) gravelly fine sandy loam; weak fine granular structure; very friable; few very fine and fine roots; 15 percent rock fragments; moderately smeary; very strongly acid; clear wavy boundary.

Cd1—26 to 33 inches; olive brown (2.5Y 4/4) gravelly fine sandy loam; massive; firm; 30 percent rock fragments; very strongly acid; clear wavy boundary.

Cd2—33 to 67 inches; olive brown (2.5Y 4/4) and light olive brown (2.5Y 5/4) gravelly fine sandy loam; massive; firm; 30 percent rock fragments; strongly acid.

The depth to bedrock is more than 65 inches. The thickness of the mineral part of the solum ranges from 20 to 36 inches. The content of rock fragments ranges from 5 to 30 percent throughout the soil. Reaction is extremely acid or very strongly acid in the solum and very strongly acid or strongly acid in the substratum.

The A horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. It is very fine sandy loam, fine sandy loam or their gravelly analogs.

The E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. It is fine sandy loam or gravelly fine sandy loam.

The Bh has hue of 2.5YR to 7.5YR, value of 2 to 4, and chroma of 2 to 4. It is moderately smeary.

Some pedons have a Bhs horizon with a hue of 5YR value of 3 and chroma of 2 or 3. It is moderately smeary or weakly smeary.

The Bs horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 6.

The Bh, Bhs and Bs horizons are fine sandy loam or gravelly fine sandy loam. They are moderately smeary or weakly smeary.

The Cd horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is fine sandy loam or gravelly fine sandy loam. It has platy structure or is massive and is firm or very firm.

Stetson Series

The Stetson series consists of very deep, well drained soils on kames and terraces. They formed in sandy glaciofluvial deposits derived mainly from phyllite and schist. Slopes range from 3 to 60 percent.

The Stetson soils, in most places, are near the somewhat excessively drained Adams soils, moderately well drained Buxton soils, excessively drained Colton soils, and very deep, well drained Salmon soils. The Stetson soils have more rock fragments than the Adams soils, Buxton soils, and Salmon soils in the substratum. The Stetson soils are finer textured than the Colton soils in the upper part of the solum.

A typical pedon of Stetson loam, 3 to 8 percent slopes, in the town of Northfield, 3,600 feet north of intersection of Vermont Route 12 and the Dog River in Northfield Village, in a gravel pit:

Ap—0 to 8 inches; very dark brown (7.5YR 2.5/2) loam, dark gray (10YR 4/1) dry; weak fine granular structure; friable; 10 percent rock fragments; moderately acid; abrupt smooth boundary.

Bhs—8 to 20 inches; very dark brown (7.5YR 2.5/3) gravelly fine sandy loam; weak fine and very fine subangular blocky structure; friable; 15 percent rock fragments; moderately acid; clear wavy boundary.

BC—20 to 25 inches; dark yellowish brown (10YR 3/6) very gravelly loamy sand; weak fine and very fine subangular blocky structure; friable; 40 percent rock fragments; moderately acid; clear wavy boundary.

C—25 to 65 inches; dark yellowish brown (10YR 3/6) very gravelly sand; single grain; loose; 50 percent rock fragments; slightly acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 18 to 30 inches. The content of rock fragments ranges from 5 to 40 percent in the solum and 35 to 60 percent in the substratum. Reaction is moderately acid or slightly acid throughout the soil.

Uncultivated pedons have an A horizon with a hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 2 or 3.

The Ap horizon has hue of 7.5YR or 10YR, value of 2 to 3, and chroma of 1 to 3.

The A and Ap horizons are loam, fine sandy loam, sandy loam or their gravelly or very gravelly analogs.

Some pedons have an E horizon with a hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 1 or 2. It is fine sandy loam, sandy loam or their gravelly or very gravelly analogs.

The Bhs horizon has hue of 2.5YR to 7.5YR, value and chroma of 3 or less.

Some pedons have a Bs horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 6.

The Bh, Bhs and Bs horizons are fine sandy loam, sandy loam or their gravelly or very gravelly analogs.

The BC horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 6. It is very gravelly or extremely gravelly loamy fine sand, loamy sand, fine sand, sand or coarse sand.

The C horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 6. It is very gravelly or extremely gravelly loamy fine sand, loamy sand, fine sand, sand or coarse sand.

Stratton Series

The Stratton series consists of shallow, well drained soils on mountains. They formed in loamy glacial till derived mainly from schist. Slopes range from 15 to 70 percent.

The Stratton soils, in most places, are near the moderately deep, well drained Glebe soils; very shallow, well drained Londonderry soils; very shallow to moderately deep, well drained Ricker soils; and very deep, well drained Sisk soils. The Stratton soils are shallower to bedrock than the Glebe and Sisk soils. The Stratton soils are deeper to bedrock than the Londonderry soils. The Stratton soils differ from the Ricker soils in having thicker mineral layers. The Stratton soils only occur in a complex with the Londonderry soils, Ricker soils or Glebe soils in this survey area.

A typical pedon of Stratton fine sandy loam in an area of Ricker-Londonderry-Stratton Complex, 35 to 70 percent slopes, very rocky, in the town of Duxbury, 1,500 feet northeast of the summit of Mt. Eathan Allen and 6,700 feet eat of the county line:

Oi—0 to 1 inch; slightly decomposed needles and twigs.

A—1 to 2 inch; dark reddish brown (5YR 2/2) fine sandy loam; weak fine and medium granular structure; very friable; many very fine, fine and medium roots; 10 percent rock fragments; very strongly acid; clear wavy boundary.

Bhs1—2 to 4 inches; dark reddish brown (5YR 3/2) gravelly fine sandy loam; weak fine and medium granular structure; very friable; many very fine, fine and medium roots; 20 percent rock fragments; moderately smeary; very strongly acid; abrupt wavy boundary.

Bhs2—4 to 18 inches; dark reddish brown (5YR 3/3) very gravelly fine sandy loam; weak fine granular structure; very friable; few fine roots; 40 percent rock fragments; moderately smeary; very strongly acid; abrupt wavy boundary.

R—18 inches; schist bedrock.

The depth to bedrock ranges from 10 to 20 inches below the top of the mineral layers. The thickness of the mineral part of the solum ranges from 10 to 20 inches. The content of rock fragments ranges from 35 to 55 percent throughout the particle size control section. Individual horizons range from 10 to 55 percent rock fragments throughout the soil. Reaction ranges from extremely acid to strongly acid throughout the soil.

Some pedons have an A horizon with a hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. It is fine sandy loam or its gravelly, very gravelly, cobbly, very cobbly, channery or very channery analogs.

The E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. It is silt loam, fine sandy loam or their gravelly, very gravelly, cobbly, very cobbly, channery or very channery analogs. Some pedons do not have an E horizon.

The Bh horizon has hue of 2.5YR or 5YR, value of 2 or 3, and chroma of 1 or 2.

Some pedons have a Bhs horizon with a hue of 5YR or 7.5YR and value and chroma of 3 of less.

Some pedons have a Bs horizon with a hue of 5YR or 7.5YR, value of 4 or 5, and chroma of 4 to 6.

The Bh, Bhs and Bs horizons are silt loam, fine sandy loam or their gravelly, very gravelly, cobbly, very cobbly, channery or very channery analogs. They are strongly smeary or moderately smeary.

Sunday Series

The Sunday series consists of very deep, excessively drained soils on floodplains. They formed in sandy alluvium derived mainly from phyllite and schist. Slopes range from 0 to 3 percent.

The Sunday soils, in most places, are near the well drained Ondawa soils, poorly drained Rumney soils, poorly drained Sunny soils, well drained Waitsfield soils, and moderately well drained Weider soils. The Sunday soils are coarser textured than the Ondawa soils, Rumney soils, Sunny soils, Waitsfield soils, and Weider soils in the solum.

A typical pedon of Sunday fine sand, 0 to 3 percent slopes, in the town of East Montpelier, 300 feet northwest of the Plainfield town line and 1,125 feet north of U.S. Route 2:

Ap—0 to 10 inches; very dark grayish brown (10YR 3/2) and dark grayish brown (2.5Y 4/2) fine sand, light brownish gray (2.5Y 6/2) dry; weak fine granular structure; very friable; many fine and medium roots; slightly acid; clear smooth boundary.

C1—10 to 28 inches; olive brown (2.5Y 4/4) fine sand; massive; very friable; few fine roots; slightly acid; clear smooth boundary.

C2—28 to 65 inches; dark grayish brown (2.5Y 4/2) fine sand; massive; very friable; 5 percent rock fragments; slightly acid.

The depth to bedrock is more than 65 inches. Most pedons are free of rock fragments above 20 inches. The content of rock fragments ranges from 0 to 5 percent below 20 inches. Reaction ranges from very strongly acid to slightly acid throughout the soil.

The Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 or 3. It is loamy fine sand, fine sand or sand.

The C horizon has hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 2 to 4. It is loamy fine sand, fine sand or sand.

Sunny Series

The Sunny series consists of very deep, poorly drained soils on floodplains. They formed in loamy alluvium underlain by sandy alluvium derived mainly from phyllite and schist. Slopes range from 0 to 2 percent.

The Sunny soils, in most places, are near the well drained Ondawa soils, poorly drained Rumney soils, excessively drained Sunday soils, well drained Waitsfield soils, and moderately well drained Weider soils. The Sunny soils have redoximorphic features that are not in the solum of the Ondawa soils, Sunday soils, and Waitsfield soils. The Sunny soils have finer textures than the Rumney soils in the solum. The Sunny soils have redoximorphic features that are not in the upper part of the solum of the Weider soils.

A typical pedon of Sunny silt loam, 0 to 2 percent slopes, in the town of Waitsfield, 250 feet southeast of the Mad River and 3,350 feet east of the Fayston town line:

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine subangular blocky structure; friable; many very fine and common fine roots; moderately acid; abrupt smooth boundary.

Cg1—8 to 14 inches; dark gray (5Y 4/1) silt loam; massive; friable; common very fine and fine roots; many fine and medium prominent dark reddish brown (5YR 3/4) masses of iron accumulation; slightly acid; abrupt smooth boundary.

Cg2—14 to 28 inches; olive gray (5Y 4/2) silt loam; massive; friable; few very fine and fine roots; common fine and medium prominent dark brown (7.5YR 3/2) iron depletions; slightly acid; abrupt smooth boundary.

Cg3—28 to 34 inches; olive gray (5Y 4/2) silt loam; massive; friable; few very fine roots; common fine and medium prominent brown (7.5YR 4/4) masses of iron accumulation; slightly acid; abrupt smooth boundary.

Cg4—34 to 49 inches; olive gray (5Y 4/2) loamy sand; single grain; loose; few very fine roots; common fine and medium prominent dark yellowish brown (10YR 4/4) masses of iron accumulation; slightly acid; abrupt smooth boundary.

Cg5—49 to 65 inches; olive gray (5Y 4/2) gravelly sand; single grain; loose; 25 percent rock fragments; slightly acid.

The depth to bedrock is more than 65 inches. The depth to the underlying sandy material ranges from 20 to 35 inches. The content of rock fragments ranges from 0 to 5 percent in the Ap and upper part of the Cg horizons and 0 to 50 percent in the lower part of the Cg horizon. Reaction ranges from strongly acid to slightly acid throughout the soil.

The Ap horizon has hue of 10YR to 5Y, value of 3 or 4, and chroma of 2. It is silt loam or very fine sandy loam.

The upper part of the Cg horizon has hue of 2.5Y or 5Y, value of 3 to 5, and chroma of 1 or 2. It is silt loam or very fine sandy loam.

The lower part of the Cg horizon has hue of 2.5Y or 5Y, value of 3 or 4, and chroma of 1 or 2. It is loamy fine sand, loamy sand, fine sand, sand or their gravelly or very gravelly analogs.

Taconic Series

The Taconic series consists of shallow, somewhat excessively drained soils on hills. They formed in loamy glacial till derived mainly from phyllite and schist. Slopes range from 60 to 80 percent.

The Taconic series, in most places are near the very shallow, excessively drained Hubbardton soils; somewhat excessively drained Lyman soils; and moderately deep, well drained Tunbridge soils. The Taconic soils are deeper to bedrock than the Hubbardton soils. The Taconic soils have more rock fragments than the Lyman soils throughout the soil. The Taconic soils are shallower to bedrock than the Tunbridge soils. The Taconic soils only occur in a complex with the Hubbardton soils in this survey area.

A typical pedon of Taconic very channery silt loam in an area of Taconic-Hubbardton-Rock outcrop complex, 60 to 80 percent slopes, in the town of Woodbury, 1,750 feet northwest of Dobson pond and 1,650 feet west of Valley Lake:

Oi—0 to 2 inches; slightly decomposed leaves and needles.

A—2 to 6 inches; very dark grayish brown (10YR 3/2) very channery silt loam; weak fine granular structure; very friable; many very fine, common fine and few coarse roots; 35 percent rock fragments; strongly acid; abrupt wavy boundary.

Bw—6 to 16 inches; dark brown (10YR 3/3) very channery silt loam; weak medium granular structure; very friable; common fine roots; 40 percent rock fragments; strongly acid; abrupt smooth boundary.

R—16 inches; phyllite bedrock.

The depth to bedrock ranges from 10 to 20 inches below the top of the mineral layers. The thickness of the solum ranges from 10 to 20 inches. The content of rock fragments ranges from 10 to 35 percent in the surface layer and 30 to 55 percent in the subsoil, averaging greater than 35 percent in the particle size control section. Reaction ranges from extremely acid to strongly acid in the organic layers and very strongly acid to strongly acid in the mineral part of the solum.

The A horizon has hue of 7.5YR to 10YR, value of 2 to 4, and chroma of 2 or 3. It is silt loam or loam or their gravelly, very gravelly, channery or very channery analogs.

The Bw horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 to 6. It is silt loam or loam or their gravelly, very gravelly, channery or very channery analogs.

Tunbridge Series

The Tunbridge series consists of moderately deep, well drained soils on hills and knolls. They formed in loamy glacial till derived mainly from granite, phyllite, and schist. Slopes range from 3 to 60 percent.

The Tunbridge soils, in most places, are near very deep, well drained Berkshire soils; very deep, somewhat poorly drained Colonel soils; very deep, moderately well drained Peru soils; very shallow, excessively drained Hubbardton soils; shallow, somewhat excessively drained Lyman soils; and shallow, somewhat excessively drained Taconic soils. The Tunbridge soils are shallower to bedrock than the Berkshire soils, Colonel soils, and Peru soils. The Tunbridge soils are deeper to bedrock than the Hubbardton soils, Lyman soils, and Taconic soils. The Tunbridge soils only occur in a complex with the Lyman soils in this survey area.

A typical pedon of Tunbridge very fine sandy loam, in an area of Tunbridge-Lyman complex, 15 to 35 percent slopes, very rocky, in the town of Waterbury, 2,300 feet northwest of the Waterbury Reservoir and 3,200 feet southwest of Stevenson Brook:

Oi—0 to 1 inch; slightly decomposed leaves and twigs.

Oe—1 to 2 inch; moderately decomposed leaves and twigs.

Oa—2 to 3 inches; black (5YR 2/1) highly decomposed leaves and twigs.

E—3 to 4 inches; dark gray (5YR 4/1) very fine sandy loam; weak very fine granular structure; very friable; common very fine and fine roots; 5 percent rock fragments; extremely acid; abrupt wavy boundary.

Bhs—4 to 5 inches; dark reddish brown (5YR 3/3) very fine sandy loam; weak fine granular structure; very friable; common very fine and fine roots; 5 percent rock fragments; weakly smeary; very strongly acid; abrupt wavy boundary.

Bs1—5 to 10 inches; dark reddish brown (5YR 3/4) very fine sandy loam; weak fine granular structure; very friable; common fine and few very fine roots; 10 percent rock fragments; weakly smeary; very strongly acid; clear wavy boundary.

Bs2—10 to 17 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak fine subangular blocky structure; very friable; few fine roots; 10 percent rock fragments; weakly smeary; very strongly acid; clear wavy boundary.

C—17 to 25 inches; olive brown (2.5Y 4/4) channery fine sandy loam; massive; friable; few fine roots; 15 percent rock fragments; strongly acid; abrupt smooth boundary.

R—25 inches; phyllite bedrock.

The depth to bedrock ranges from 20 to 40 inches below the top of the mineral layers. The thickness of the mineral part of the solum ranges from 16 to 38 inches. The content of rock fragments ranges from 5 to 30 percent throughout the soil. Reaction ranges from extremely acid to strongly acid in the organic layers, extremely acid to moderately acid in the mineral part of the solum, and strongly acid to slightly acid in the substratum. Silt content is less than 40 percent and clay content is less than 10 percent in the particle size control section.

Some pedons have an A horizon that is neutral or has hue of 10YR, value of 2 or 3, and chroma of 0 to 3. It is silt loam, very fine sandy loam, fine sandy loam or their gravelly or channery analogs. Cultivated pedons have an Ap horizon.

The E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. It is very fine sandy loam, fine sandy loam or their gravelly or channery analogs.

The Bhs horizon has hue of 5YR or 7.5YR and value and chroma of approximately 3 or less.

The Bs horizon has hue of 5YR to 10YR, value of 3 to 5, and chroma of 4 to 8.

Some pedons have a BC horizon with a hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 3 or 4.

The Bhs, Bs and BC horizons are fine sandy loam, loam, very fine sandy loam or their gravelly or channery analogs. The combined thickness of the Bhs and Bs horizons is less than 16 inches.

The C horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is very fine sandy loam, fine sandy loam or their gravelly or channery analogs.

Vershire Series

The Vershire series consist of moderately deep, well drained soils on hills and knolls. They formed in loamy glacial till derived mainly from phyllite and metamorphosed limestone. Slopes range from 3 to 60 percent.

The Vershire soils, in most places, are near the very deep, moderately well drained Buckland soils; very deep, well drained Dummerston soils; and shallow, somewhat excessively drained Glover soils. The Vershire soils are shallower to bedrock than the Buckland soils and Dummerston soils. The Vershire soils are deeper to bedrock than the Glover soils. The Vershire soils only occur in a complex with the Dummerston soils or Glover soils in this survey area.

A typical pedon of Vershire very fine sandy loam, in an area of Vershire-Dummerston complex, 15 to 25 percent slopes, rocky, in the town of Plainfield, 6,500 feet north of the Barre town line and 4,750 west of Great Brook:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) very fine sandy loam, grayish brown (10YR 5/2) dry; weak medium granular structure; very friable; common fine and few medium roots; 5 percent rock fragments; slightly acid; abrupt wavy boundary.

Bw—9 to 17 inches; dark brown (10YR 3/3) very fine sandy loam; weak fine granular structure; very friable; few fine roots; 5 percent rock fragments; slightly acid; clear wavy boundary.

C—17 to 36 inches; dark olive (5Y 3/3) fine sandy loam; massive; friable; few fine roots; 10 percent rock fragments; slightly acid; abrupt wavy boundary.

R—36 inches; phyllite bedrock.

The depth to bedrock ranges from 20 to 40 inches below the top of the mineral layers. The thickness of the solum ranges from 14 to 30 inches. The content of rock fragments ranges from 5 to 30 percent throughout the soil. Reaction ranges from very strongly acid to slightly acid throughout the soil. Some uncultivated pedons have an O horizon where the reaction ranges from extremely acid to strongly acid.

The Ap horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3.

Uncultivated pedons have an A horizon with a hue of 10YR, value of 3 or 4, and chroma of 2 or 3.

The Ap and A horizons are silt loam, very fine sandy loam, fine sandy loam or their channery analogs.

The Bw horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 to 4. It is silt loam, very fine sandy loam, fine sandy loam or their channery analogs.

The C horizon has hue of 2.5Y or 5Y, value of 3 or 4, and chroma of 2 or 3. It is silt loam, very fine sandy loam, fine sandy loam or their channery analogs.

Some pedons have a Cr horizon. It has hue of 5YR to 2.5Y, value of 2 or 3, and chroma of 1 or 2. Texture is fine sand, loamy fine sand or fine sandy loam.

Waitsfield Series

The Waitsfield series consists of very deep, well drained soils on floodplains. They formed in loamy alluvium underlain by sandy alluvium, derived mainly from phyllite and schist. Slopes range from 0 to 3 percent.

The Waitsfield soils, in most places, are near the well drained Ondawa soils; poorly drained Rumney soils; excessively drained Sunday soils; poorly drained Sunny soils; and moderately well drained Weider soils. The Waitsfield soils differ from the Ondawa soils in having less than 50 percent fine sand or coarser in the solum. The Waitsfield soils are free of redoximorphic features in the solum and the Rumney soils, Sunny soils, and Weider soils have redoximorphic features in the solum. The Waitsfield soils are finer textured than the Sunday soils in the solum.

A typical pedon of Waitsfield silt loam, 0 to 3 percent slopes, in the town of East Montpelier, 2,000 feet east of the junction of U.S. Route 2 and Vermont Route 14 and 300 feet south of the Winooski River:

Ap—0 to 9 inches; dark grayish brown (2.5Y 4/2) silt loam, light gray (10YR 7/2) dry; weak fine subangular blocky structure; friable; many very fine and common fine roots; slightly acid; clear smooth boundary.

Bw—9 to 20 inches; olive brown (2.5Y 4/4) very fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; slightly acid; clear smooth boundary.

C—20 to 65 inches; olive brown (2.5Y 4/4) fine sand; single grain; loose; slightly acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 18 to 36 inches. The content of rock fragments ranges from 0 to 10 percent in the solum and 0 to 50 percent in the substratum. Reaction ranges from strongly acid to slightly acid throughout the soil.

The Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 or 3. It is silt loam, very fine sandy loam or fine sandy loam.

The Bw horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 to 4. It is silt loam, very fine sandy loam or fine sandy loam.

Some pedons have a BC horizon with a hue of 2.5Y, value of 4 or 5, and chroma of 2 to 4. It is silt loam, very fine sandy loam or fine sandy loam.

The C horizon is neutral or has hue of 2.5Y or 5Y, value of 4 to 6, and chroma of 0 to 4. It is loamy fine sand, loamy sand, fine sand, sand, coarse sand or their gravelly, very gravelly or extremely gravelly analogs. Some pedons have a thin layer of very fine sandy loam or fine sandy loam below the solum.

Weider Series

The Weider series consists of very deep, moderately well drained soils on floodplains. They formed in loamy alluvium underlain by sandy alluvium derived mainly from phyllite and schist. Slopes range from 0 to 3 percent.

The Weider soils, in most places, are near the well drained Ondawa soils, poorly drained Rumney soils, excessively drained Sunday soils, poorly drained Sunny soils and well drained Waitsfield soils. The Weider soils have redoximorphic features that are not in the solum of the Ondawa soils, Sunday soils and Waitsfield soils. The Weider soils are free of redoximorphic features in the upper part of the solum and Rumney soils and Sunny soils have redoximorphic features in the upper part of the solum.

A typical pedon of Weider very fine sandy loam, 0 to 3 percent slopes, in the town of Waterbury, 3,000 feet northeast of the junction of Vermont Route 100 and Guptil Road and 200 feet east of Guptil Road:

Ap—0 to 6 inches; dark grayish brown (2.5Y 4/2) very fine sandy loam; weak fine granular structure; friable; many very fine and common fine roots; moderately acid; clear smooth boundary.

Bw1—6 to 18 inches; olive brown (2.5Y 4/4) very fine sandy loam; weak fine granular structure; friable; common very fine and fine roots; strongly acid; clear smooth boundary.

Bw2—18 to 25 inches; olive brown (2.5Y 4/4) very fine sandy loam; weak fine granular structure; friable; common very fine and fine roots; many medium distinct light brownish gray (2.5Y 6/2) and many medium faint dark yellowish brown (10YR 4/4) masses of iron accumulation; strongly acid; abrupt wavy boundary.

C1—25 to 38 inches; olive brown (2.5Y 4/4) loamy sand; massive; friable; few very fine roots; many fine and medium prominent reddish brown (5YR 4/4) masses of iron accumulation and many medium prominent gray (10YR 5/1) iron depletions; very strongly acid; clear wavy boundary.

C2—38 to 42 inches; grayish brown (2.5Y 5/2) sand; single grain; loose; many medium prominent brown (7.5YR 4/4) masses of iron accumulation; 1 percent rock fragments; very strongly acid; clear wavy boundary.

C3—42 to 65 inches; olive (5Y 5/3) very gravelly sand; single grain; loose; 40 percent rock fragments; very strongly acid.

The depth to bedrock is more than 65 inches. The thickness of the solum ranges from 19 to 30 inches. The content of rock fragments ranges from 0 to 10 percent in the solum and 0 to 50 percent in the substratum. Reaction ranges from very strongly acid to slightly acid throughout the soil.

The Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2. It is silt loam, very fine sandy loam or fine sandy loam.

The Bw horizon has hue of 2.5Y or 5Y, value of 3 to 5, and chroma of 2 to 4. It is silt loam, very fine sandy loam or fine sandy loam. Some pedons have a thin BC horizon with color and texture similar to the Bw horizon.

The C horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is loamy sand, sand, coarse sand or their gravelly or very gravelly analogs.

Wonsqueak Series

The Wonsqueak series consists of very deep, very poorly drained organic soils in marshes and swamps. They formed in highly decomposed herbaceous materials, 16 to 51 inches thick, underlain by loamy glaciolacustrine deposits or glacial till, derived mainly from phyllite, schist, and metamorphosed limestone. Slopes range from 0 to 2 percent.

The Wonsqueak soils, in most places, are near the poorly drained Cabot soils, very poorly drained Markey soils, very poorly drained Peacham soils, very poorly drained Rifle soils, and poorly drained Scantic soils. The Wonsqueak soils differ from the Cabot soils, Peacham soils, and Scantic soils in having organic soil layers more than 16 inches thick. The Wonsqueak soils have a finer textured substratum than the Markey soils. The Wonsqueak soils differ from the Rifle soils in having organic soil layers less than 51 inches thick. The Wonsqueak soils only occur in an undifferentiated unit with the Markey soils in this survey area.

A typical pedon of Wonsqueak muck, in an area of Markey and Wonsqueak mucks, 0 to 2 percent slope, in the town of East Montpelier, 450 feet south of the Calais town line and 4,050 feet northwest of North Montpelier village:

Oa1—0 to 9 inches; very dark brown (10YR 2/2) broken face and rubbed and black (10YR 2/1) pressed muck; about 20 percent fiber unrubbed, 5 percent rubbed; weak fine granular structure; slightly sticky; primarily herbaceous fibers; moderately acid in water; clear smooth boundary.

Oa2—9 to 15 inches; very dark brown (10YR 2/2) broken face, very dark gray (10YR 3/1) rubbed and black (10YR 2/1) pressed muck; about 37 percent fiber unrubbed, 9 percent rubbed; weak fine granular structure; non-sticky; primarily woody and herbaceous fibers; moderately acid in water; clear smooth boundary.

Oa3—15 to 42 inches; very dark brown (10YR 2/2) broken face and rubbed and black (10YR 2/1) pressed muck; about 29 percent fiber unrubbed, 9 percent rubbed; weak fine granular structure; non-sticky; primarily herbaceous fibers; slightly acid in water; abrupt smooth boundary.

C—42 to 65 inches; dark gray (N 4/0) silty clay loam; massive; slightly sticky; slightly acid.

The depth to bedrock is more than 65 inches. The organic layers are 16 to 51 inches thick. The content of woody fragments ranges from 0 to 5 percent in the organic layers. The content of rock fragments ranges from 0 to 20 percent in the substratum. Reaction ranges from moderately acid to slightly acid, in water, throughout the soil.

The broken face, rubbed and pressed colors of the organic materials have hue of 10YR, value of 2 or 3, and chroma of 1 or 2. Rubbed and pressed colors may vary from broken face colors one unit in value or chroma or both. The surface tier is dominantly muck, but some pedons have a mucky peat layer in the surface tier. The subsurface and bottom tiers are muck.

The C horizon is neutral or has hue of 5Y, value of 4 or 5, and chroma of 0 to 4. It is silty clay loam, silt loam, very fine sandy loam, fine sandy loam or their gravelly analogs.

Formation of the Soils

Soil forms through the interaction of five major factors: the physical, chemical and mineral composition of the parent material; the climate under which the soil material has accumulated and existed since accumulation; the plant and animal life on and in the soil; the relief or lay of the land; and the length of time the processes of soil formation have acted on the parent material (Hans, 1941).

Climate and plant and animal life are the active forces in soil formation. They slowly change the parent material into a natural body of soil that has genetically related layers called horizons. The effects of climate and plant and animal life are conditioned by relief. The nature of the parent material also affects the kind of soil profile that is formed and in extreme cases, determines it almost entirely. Finally, time is needed for changing the parent material into a soil profile. It may be a long or short time, but some time is required for differentiation of soil horizons. Generally, a long time is required for the formation of distinct horizons.

The factors of soil formation are so closely interrelated that few generalizations can be made regarding the effect on any one factor unless conditions are specified for the other four. Many of the processes of soil formation are unknown.

Climate

Climate influences soil development by directly affecting the soil formation factors. The climate in Washington County is discussed in detail in the section “General Nature of the Survey Area.”

Rainfall leaches material down through the soil. Surface runoff erodes the soil. Cool soil temperatures affect the activity of microorganisms. Frost action breaks down soil structure and rock fragments. Flooding deposits new soil material on the flood plains.

Much has been said recently about the effects of acid rain on soils and plant growth. At this time it seems to be the opinion of many experts that acid rain is having an adverse effect on the forest; however, more research remains before all the answers are known.

Time

Soil formation is a continuing process. The soil in Washington County began forming after the glaciers left the area about 14,000 years ago. This is a very short period in geologic time.

Soils that formed in materials deposited as the glacier and glacial lakes receded, exhibit profile development. Profiles develop as materials leach down through the soil. Sandy soils such as Adams soils develop faster than loamy soils such as Berkshire soils. This is because sandy soils have a faster infiltration rate. Soils at higher elevations such as Stratton soils are more highly developed than soils at lower elevations such as Lyman soils. This is generally thought to be caused by cooler soil and air temperatures and more acid forest litter. Cooler temperatures retard the breakdown of organic matter and acid soil conditions speed up the leeching of bases.

Soils that form in materials being deposited since the glacier receded show little or no profile development. Ondawa soils form in alluvium and Rifle soils form in organic deposits.

Parent Material

Parent material has a direct affect on all soil characteristics. The soils in Washington County formed in several kinds of parent material. They are glacial till, glaciofluvial deposits, glaciolacustrine deposits, alluvial deposits, and organic deposits.

There are two distinct types of glacial till in Washington County. The characteristics of glacial till depend on the bedrock from which it was derived.

The till in the western part of the county was derived from light colored acidic schist and phyllite. The soils formed are brightly colored and acidic. Some examples are Berkshire and Tunbridge soils. The till in the eastern part of the county was derived from dark colored basic limestone and phyllite. The soils formed are dark-colored and non-acidic. Some examples are Dummerston and Vershire soils.

Some areas of till were laid down in the direction that the glacier was moving. The soils formed in this till tend to have dense substratums. Some examples are Colonel and Peru soils.

The soils that formed in glaciofluvial deposits are coarse textured, sandy soils or stratified sand and gravel. Some examples are Adams and Colton soils.

Glaciolacustrine soils formed in old glacial lake sediments. These soils are medium textured to moderately fine textured. Some examples are Buxton and Salmon soils. These soils are generally devoid of rock fragments.

Soils that are forming in alluvial deposits show little evidence of development. These soils range from medium textured to coarse textured. Some examples are Ondawa and Waitsfield soils.

A few soils formed in organic deposits. They are Rifle, Markey, and Wonsqueak soils. Rifle soils formed in deep organic deposits, Markey soils formed in shallow organic deposits overlying glaciofluvial deposits, and Wonsqueak soils formed in shallow organic deposits overlying glaciolacustrine or glacial till deposits.

Plant and Animal Life

All living things influence soil development. Man has greatly changed the soil through his activities. Construction, farming, woodland production, and paving are a few of the ways man changes soil. These practices tend to accelerate soil erosion and remove or create wetland areas by affecting drainage. Farming practices tend to alter the physical and chemical properties of soil through tillage and additions of lime and fertilizer.

Larger animals, when they burrow in the ground, tend to aerate and mix the soil and change the physical characteristics. Waste products add organic matter to the soil. Some microorganisms aid in the decomposition of organic matter, others tend to make the soil more acidic.

Decaying plant materials add large amounts of organic matter to the surface layer. Soils tend to be more acidic under conifers than hardwoods because conifer litter is more acidic. Higher acid levels tend to promote the leaching of bases. The growth of tree roots tends to alter the physical characteristics of soil.

Relief

Washington County has a wide range of landscapes. In the western part of the county there are the Green Mountains which are characterized by high, rugged mountain ridges and very narrow river valleys. The central part of the county contains lesser mountain ranges, notably the Worcester and Northfield mountains and narrow river valleys. The landscape in the eastern part of the county is characteristically hills, knolls and ridges, and river valleys.

Soils that form in the same parent material under the some conditions can show differences directly related to relief. Soils that form on summits, shoulders, and backslopes generally have moderate to rapid surface runoff and very little rainfall infiltrates into the soil.

These soils tend to be well drained. Soils that form on footslopes and toeslopes have slow surface runoff and a lot of rainfall will infiltrate into the soil. The soil will generally be mottled in the subsoil and moderately well drained to somewhat poorly drained. Soils that form in depressions and drainageways where runoff collects are typically mottled to the surface or have low chroma in the subsoil and are poorly drained or very poorly drained.

Relief also affects the soil temperature. Higher elevation soils tend to have the lowest soil temperatures.

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

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.

Aspect. The direction in which a slope faces.

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.

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.

Basal till. Compact glacial till deposited beneath the ice.

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.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

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.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity.

The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Channery soil material(cn). 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. Very channery(cnv) soil material has 35 to 60 percent of these rock fragments, and extremely channery(cnx) soil material has more than 60 percent.

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.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

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. Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

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.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

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.

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.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is nearly flat and fan shaped; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

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.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

Drainage, surface. Runoff, or surface flow of water, from an area.

Drumlin. A low, smooth, elongated oval hill, mound, or ridge of compact glacial till. The longer axis is parallel to the path of the glacier and commonly has a blunt nose pointing in the direction from which the ice approached.

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.

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.

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.

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. Synonym: scarp.

Esker. A narrow, winding ridge of stratified gravelly and sandy drift deposited by a stream flowing in a tunnel beneath a glacier.

Extrusive rock. Igneous rock derived from deepseated 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.

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*.

Fine textured soil. Sandy clay, silty clay, or clay.

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. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.

Foothill. A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. 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.

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.

Glacial drift. Pulverized and other rock material transported by glacial ice and then deposited. Also, the sorted and unsorted material deposited by streams flowing from glaciers.

Glacial outwash. Gravel, sand, and silt, commonly stratified, deposited by glacial meltwater.

Glacial till. Unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice.

Glaciofluvial deposits. Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur as kames, eskers, deltas, and outwash plains.

Glaciolacustrine deposits. Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are interbedded or laminated.

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. Very gravelly soil material has 35 to 60 percent of these rock fragments, and extremely gravelly soil material has more than 60 percent.

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 miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. 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.

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 natural elevation 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; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

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 formed by solidification from a molten or partially molten state. Major varieties include plutonic and volcanic rock. Examples are andesite, basalt, and granite.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time.

Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Kame. An irregular, short ridge or hill of stratified glacial drift.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

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-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.

Low strength. The soil is not strong enough to support loads.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

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. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

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.

Moraine. An accumulation of earth, stones, and other debris deposited by a glacier. Some types are terminal, lateral, medial, and ground.

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 natural elevation of the land surface, rising more than 1,000 feet 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.

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

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. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

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

Outwash plain. A landform of mainly sandy or coarse textured material of glaciofluvial origin. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

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.

Pedon. The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permafrost. Layers of soil, or even bedrock, occurring in arctic or subarctic regions, in which a temperature below freezing has existed continuously for a long time.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in inches per hour, are as follows:

Extremely slow	0.0 to 0.01 inch
Very slow	0.01 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

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.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Relief. The elevations or inequalities of a land surface, considered collectively.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saprolite. Unconsolidated residual material underlying the soil and grading to hard bedrock below.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

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 position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

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. Sedimentary rock made up of dominantly silt-sized particles.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Nearly level	0 to 3 percent
Gently sloping	3 to 8 percent
Strongly sloping	_8 to 15 percent
Moderately steep	15 to 25 percent
Steep	25 to 35 percent
Very steep	35 percent and higher

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil 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. A concentration of coarse fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

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 grained* (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. Fragments of rock and other soil material accumulated by gravity at the foot of cliffs or steep slopes.

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.

Terminal moraine. A belt of thick glacial drift that generally marks the termination of important glacial advances.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.” The abbreviations for soil textures are *cos-coarse sand, s-sand, fs-fine sand, vfs-very fine sand, lcos-loamy coarse sand, ls-loamy sand, lfs-loamy fine sand, lvfs-loamy very fine sand, sl-sandy loam, fsl-fine sandy loam, vfsl-very fine sandy loam, l-loam, sil-silt loam, sicl-silty clay loam, sic-silty clay,* and *clay*.

Till plain. An extensive area of nearly level to undulating soils underlain by glacial till.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The position that forms 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.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve. A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

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

(Data recorded in the period 1951-1984 at Montpelier, VT)

Month	Temperature: avg daily max	Temperature: avg daily min	Temperature: avg	Temperature: 2 years in 10 will have max temp. >than	Temperature: 2 years in 10 will have min temp. <than	Temperature: avg no. of growing degree days*	Precipitation: avg (in.)	Precipitation: 2 yrs in 10 will have less than (in.)	Precipitation: 2 yrs in 10 will have more than (in.)	Precipitation: average number of days with 0.10 inch or more	Average Snowfall (in.)
January	24.6	5.9	15.3	53	-23	0	2.30	1.06	3.36	6	20.7
February	27.7	8.5	18.1	52	-23	0	2.48	1.34	3.47	6	20.9
March	36.4	19.1	27.8	61	-11	11	2.39	1.42	3.25	6	16.8
April	50.6	31.3	41.0	79	12	108	2.59	1.75	3.34	7	5.8
May	64.4	41.8	53.1	87	25	416	3.22	1.60	4.63	8	0.4
June	73.3	50.8	62.1	90	32	663	3.32	2.08	4.44	8	0
July	77.9	55.3	66.6	92	41	825	3.08	1.95	4.10	7	0
August	75.3	53.3	64.3	89	37	753	3.35	2.01	4.54	7	0
September	67.2	45.7	56.5	86	27	495	2.88	1.66	3.96	6	0
October	56.2	36.0	46.1	79	18	209	2.84	1.47	4.03	7	0.8
November	42.3	27.3	34.8	67	3	41	3.02	1.90	4.02	8	9.6
December	29.3	12.9	21.1	58	-18	13	2.86	1.66	3.92	7	24.5
Yearly :											
Average	52.1	32.3	42.2	----	----	-----	---	---	---	---	---
Extreme	97	-34	---	93	-26	-----	---	---	---	---	---
Total	---	---	---	----	----	3534	34.33	29.65	38.84	83	99.5

*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 (Threshold: 40.0 deg. F)

Table 2.—Freeze Dates in Spring and Fall

(Data were recorded in the period (1951-1984) at Montpelier, VT)

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--	May 10	May 28	June 3
2 year in 10 later than--	May 4	May 22	May 30
5 year in 10 later than--	April 21	May 10	May 22
First freezing temperature in fall:			
1 yr in 10 earlier than--	October 1	September 19	September 8
2 yr in 10 earlier than--	October 6	September 25	September 13
5 yr in 10 earlier than--	October 16	October 6	September 21

Table 3.—Growing Season

(Data were recorded in the period 1961-1990 at Montpelier, VT)

Probability	Daily Minimum Temperature Higher than 24°F	Higher than 28°F	Higher than 32°F
	Days	Days	Days
9 years in 10	156	124	103
8 years in 10	163	132	110
5 years in 10	177	148	122
2 years in 10	191	164	134
1 year in 10	199	173	141

Table 4.—Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
2A	Ondawa fine sandy loam, 0 to 3 percent slopes	539	0.1
3A	Rumney fine sandy loam, 0 to 2 percent slopes	2,054	0.5
4A	Sunny silt loam, 0 to 2 percent slopes	1,102	0.2
9A	Rifle muck, 0 to 2 percent slopes, ponded	1,097	0.2
14B	Colonel fine sandy loam, 3 to 8 percent slopes	3,009	0.7
14C	Colonel fine sandy loam, 8 to 15 percent slopes	7,029	1.6
14D	Colonel fine sandy loam, 15 to 25 percent slopes	718	0.2
17A	Cabot silt loam, 0 to 3 percent slopes	502	0.1
17B	Cabot silt loam, 3 to 8 percent slopes	7,473	1.7
17C	Cabot silt loam, 8 to 15 percent slopes	4,630	1.0
18B	Cabot silt loam, 0 to 8 percent slopes, very stony	10,648	2.4
18C	Cabot silt loam, 8 to 15 percent slopes, very stony	11,115	2.5
19B	Colonel fine sandy loam, 3 to 8 percent slopes, very stony	3,144	0.7
19C	Colonel fine sandy loam, 8 to 15 percent slopes, very stony	12,468	2.8
19D	Colonel fine sandy loam, 15 to 35 percent slopes, very stony	3,716	0.8
20A	Peacham muck, 0 to 5 percent slopes	1,084	0.2
21A	Sunday fine sand, 0 to 3 percent slopes	726	0.2
26A	Adams loamy fine sand, 0 to 3 percent slopes	413	*
26B	Adams loamy fine sand, 3 to 8 percent slopes	1,493	0.3
26C	Adams loamy fine sand, 8 to 15 percent slopes	1,085	0.2
26D	Adams loamy fine sand, 15 to 25 percent slopes	550	0.1
26E	Adams loamy fine sand, 25 to 60 percent slopes	2,088	0.5
33A	Machias fine sandy loam, 0 to 3 percent slopes	604	0.1
33B	Machias fine sandy loam, 3 to 8 percent slopes	1,695	0.4
33C	Machias fine sandy loam, 8 to 15 percent slopes	531	0.1
37B	Stetson loam, 3 to 8 percent slopes	427	*
37C	Stetson loam, 8 to 15 percent slopes	526	0.1
37D	Stetson loam, 15 to 25 percent slopes	270	*
37E	Stetson loam, 25 to 60 percent slopes	324	*
39A	Colton gravelly loamy sand, 0 to 3 percent slopes	832	0.2
39B	Colton gravelly loamy sand, 3 to 8 percent slopes	1,864	0.4
39C	Colton gravelly loamy sand, 8 to 15 percent slopes	1,847	0.4
39D	Colton gravelly loamy sand, 15 to 25 percent slopes	1,131	0.3
39E	Colton gravelly loamy sand, 25 to 60 percent slopes	1,918	0.4
41D	Buxton silt loam, 15 to 25 percent slopes	2,148	0.5
41E	Buxton silt loam, 25 to 45 percent slopes	2,481	0.6
43B	Salmon very fine sandy loam, 3 to 8 percent slopes	781	0.2
43C	Salmon very fine sandy loam, 8 to 15 percent slopes	607	0.1
43D	Salmon very fine sandy loam, 15 to 25 percent slopes	920	0.2
43E	Salmon very fine sandy loam, 25 to 50 percent slopes	2,742	0.6
44B	Lamoine silt loam, 3 to 8 percent slopes	1,214	0.3
44C	Lamoine silt loam, 8 to 15 percent slopes	1,539	0.3
45A	Scantic silt loam, 0 to 3 percent slopes	695	0.2
55B	Nicholville silt loam, 3 to 8 percent slopes	1,028	0.2
58A	Grange silt loam, 0 to 3 percent slopes	1,382	0.3
59A	Waitsfield silt loam, 0 to 3 percent slopes	965	0.2
60A	Weider very fine sandy loam, 0 to 3 percent slopes	970	0.2
62B	Berkshire fine sandy loam, 3 to 8 percent slopes	657	0.1
62C	Berkshire fine sandy loam, 8 to 15 percent slopes	1,060	0.2
62D	Berkshire fine sandy loam, 15 to 25 percent slopes	886	0.2
63B	Berkshire fine sandy loam, 3 to 8 percent slopes, very stony	438	*
63C	Berkshire fine sandy loam, 8 to 15 percent slopes, very stony	1,467	0.3
63D	Berkshire fine sandy loam, 15 to 35 percent slopes, very stony	9,586	2.2
63E	Berkshire fine sandy loam, 35 to 60 percent slopes, very stony	1,082	0.2
64C	Salmon-Adamant complex, 8 to 15 percent slopes, very rocky	496	0.1
64D	Salmon-Adamant complex, 15 to 25 percent slopes, very rocky	1,014	0.2
64E	Salmon-Adamant complex, 25 to 50 percent slopes, very rocky	1,331	0.3
66B	Vershire-Dummerston complex, 3 to 8 percent slopes, rocky	1,657	0.4
66C	Vershire-Dummerston complex, 8 to 15 percent slopes, rocky	14,894	3.3
66D	Vershire-Dummerston complex, 15 to 25 percent slopes, rocky	12,220	2.7
66E	Vershire-Dummerston complex, 25 to 60 percent slopes, rocky	2,340	0.5
67C	Glover-Vershire complex, 8 to 15 percent slopes, very rocky	7,191	1.6

See footnote at end of table.

Table 4.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Acres	Percent
67D	Glover-Vershire complex, 15 to 35 percent slopes, very rocky	21,328	4.8
67E	Glover-Vershire complex, 35 to 60 percent slopes, very rocky	7,597	1.7
68D	Stratton-Glebe complex, 15 to 35 percent slopes, very rocky	2,630	0.6
68E	Stratton-Glebe complex, 35 to 60 percent slopes, very rocky	5,698	1.3
69D	Sisk-Glebe complex, 15 to 35 percent slopes, very bouldery	749	0.2
69E	Sisk-Glebe complex, 35 to 60 percent slopes, very bouldery	251	*
71C	Tunbridge-Lyman complex, 3 to 15 percent slopes, rocky	2,527	0.6
72B	Tunbridge-Lyman complex, 3 to 8 percent slopes, very rocky	342	*
72C	Tunbridge-Lyman complex, 8 to 15 percent slopes, very rocky	14,282	3.2
72D	Tunbridge-Lyman complex, 15 to 35 percent slopes, very rocky	67,657	15.2
72E	Tunbridge-Lyman complex, 35 to 60 percent slopes, very rocky	16,875	3.8
76C	Berkshire fine sandy loam, 8 to 15 percent slopes, very bouldery	775	0.2
76D	Berkshire fine sandy loam, 15 to 35 percent slopes, very bouldery	3,155	0.7
76E	Berkshire fine sandy loam, 35 to 60 percent slopes, very bouldery	847	0.2
77B	Peru gravelly fine sandy loam, 3 to 8 percent slopes	219	*
77C	Peru gravelly fine sandy loam, 8 to 15 percent slopes	756	0.2
77D	Peru gravelly fine sandy loam, 15 to 25 percent slopes	2,077	0.5
78C	Peru gravelly fine sandy loam, 8 to 15 percent slopes, very stony	1,368	0.3
78D	Peru gravelly fine sandy loam, 15 to 35 percent slopes, very stony	16,079	3.6
78E	Peru gravelly fine sandy loam, 35 to 60 percent slopes, very stony	2,411	0.5
79A	Markey and Wonsqueak mucks, 0 to 2 percent slopes, ponded	1,985	0.4
82A	Peacham muck, 0 to 5 percent slopes, extremely bouldery	333	*
85E	Ricker-Londonderry-Stratton complex, 35 to 60 percent slopes, very rocky	11,061	2.5
86F	Ricker-Londonderry-rock outcrop complex, 35 to 70 percent slopes	973	0.2
88D	Houghtonville fine sandy loam, 15 to 35 percent slopes, very bouldery	1,289	0.3
89E	Houghtonville fine sandy loam, 15 to 60 percent slopes, rubbly	1,017	0.2
90B	Dummerston fine sandy loam, 3 to 8 percent slopes	820	0.2
90C	Dummerston fine sandy loam, 8 to 15 percent slopes	2,599	0.6
90D	Dummerston fine sandy loam, 15 to 25 percent slopes	863	0.2
91C	Dummerston fine sandy loam, 8 to 15 percent slopes, very stony	1,347	0.3
91D	Dummerston fine sandy loam, 15 to 35 percent slopes, very stony	2,691	0.6
92B	Buckland silt loam, 3 to 8 percent slopes	2,239	0.5
92C	Buckland silt loam, 8 to 15 percent slopes	4,725	1.1
92D	Buckland silt loam, 15 to 25 percent slopes	1,727	0.4
93B	Buckland silt loam, 3 to 8 percent slopes, very stony	1,056	0.2
93C	Buckland silt loam, 8 to 15 percent slopes, very stony	3,333	0.7
93D	Buckland silt loam, 15 to 35 percent slopes, very stony	4,329	1.0
96D	Peru gravelly fine sandy loam, 15 to 35 percent slopes, extremely bouldery	2,023	0.5
98B	Cabot silt loam, 3 to 8 percent slopes, extremely bouldery	2,022	0.5
98C	Cabot silt loam, 8 to 15 percent slopes, extremely bouldery	2,042	0.5
99C	Colonel fine sandy loam, 3 to 15 percent slopes, extremely bouldery	3,726	0.8
99D	Colonel fine sandy loam, 15 to 35 percent slopes, extremely bouldery	1,159	0.3
100	Pits, sand and pits, gravel	487	0.1
102	Pits, quarry-dumps, mine complex	863	0.2
103	Udorthents, loamy	263	*
104	Urban land-Udipsamments complex, occasionally flooded	702	0.2
116B	Mundal fine sandy loam, 3 to 8 percent slopes, very stony	295	*
116C	Mundal fine sandy loam, 8 to 15 percent slopes, very stony	876	0.2
116D	Mundal fine sandy loam, 15 to 35 percent slopes, very stony	4,836	1.1
151F	Hogback-Rock outcrop-Rawsonville complex, 35 to 70 percent slopes	2,021	0.5
162D	Houghtonville-Rawsonville complex, 15 to 35 percent slopes, very bouldery	633	0.1
162E	Houghtonville-Rawsonville complex, 35 to 60 percent slopes, very bouldery	174	*
163C	Houghtonville fine sandy loam, 8 to 15 percent slopes, very stony	361	*
163D	Houghtonville fine sandy loam, 15 to 35 percent slopes, very stony	2,757	0.6
163E	Houghtonville fine sandy loam, 35 to 60 percent slopes, very stony	257	*
168C	Hogback-Rawsonville complex, 8 to 15 percent slopes, very rocky	2,050	0.5
168D	Hogback-Rawsonville complex, 15 to 35 percent slopes, very rocky	26,379	5.9
168E	Hogback-Rawsonville complex, 35 to 60 percent slopes, very rocky	12,840	2.9
172F	Taconic-Hubbardton-Rock outcrop complex, 60 to 80 percent slopes	1,335	0.3
W	Water	4,246	1.0
	Total	444,800	100.0

* Less than 0.1 percent.

Table 5.—Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name.)

Map symbol	Soil name
2A	Ondawa fine sandy loam, 0 to 3 percent slopes
33A	Machias fine sandy loam, 0 to 3 percent slopes
33B	Machias fine sandy loam, 3 to 8 percent slopes
37B	Stetson loam, 3 to 8 percent slopes
44B	Lamoine silt loam, 3 to 8 percent slopes
58A	Grange silt loam, 0 to 3 percent slopes (Prime farmland if drained)
59A	Waitsfield silt loam, 0 to 3 percent slopes
60A	Weider very fine sandy loam, 0 to 3 percent slopes
62B	Berkshire fine sandy loam, 3 to 8 percent slopes
66B	Vershire-Dummerston complex, 3 to 8 percent slopes, rocky
77B	Peru gravelly fine sandy loam, 3 to 8 percent slopes
90B	Dummerston fine sandy loam, 3 to 8 percent slopes
92B	Buckland silt loam, 3 to 8 percent slopes

Table 6.—Land Capability and Yields per Acre of Crops and Pasture

(Yields in the "N" columns are for nonirrigated areas; Yields are those that can be expected under a high level of management. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

Map symbol and soil name	Land capability	Alfalfa hay	Corn silage	Grass hay	Grass-legume	Grass-clover	Pasture
	N	N	N	N	N	N	N
		Tons	Tons	Tons	Tons	AUM	AUM
2A:		4.50	26.00	---	4.00	---	7.60
Ondawa----------	1						
3A:		---	---	3.00	2.50	---	5.30
Rumney----------	4w						
4A:		---	---	4.00	4.00	6.40	---
Sunny-----------	4w						
14B:		3.00	16.00	3.00	3.00	---	5.50
Colonel---------	3w						
14C:		3.00	14.00	3.00	3.00	---	5.50
Colonel---------	3e						
14D:		---	---	---	---	---	5.00
Colonel---------	4e						
17A:		---	15.00	4.00	3.50	5.60	---
Cabot-----------	3w						
17B:		---	15.00	4.00	3.50	5.50	---
Cabot-----------	3w						
17C:		---	13.00	4.00	3.50	5.60	---
Cabot-----------	3e						
18B:		---	---	---	---	---	2.70
Cabot-----------	6s						
18C:		---	---	---	---	---	2.70
Cabot-----------	6s						
19B:		---	---	---	---	---	4.50
Colonel---------	6s						
19C:		---	---	---	---	---	4.50
Colonel---------	6s						
19D:		---	---	---	---	---	2.00
Colonel---------	7s						
21A:		2.50	12.00	2.00	---	---	3.60
Sunday----------	3s						
26A:		---	16.00	---	4.00	---	4.50
Adams-----------	3s						
26B:		---	16.00	---	4.00	---	4.50
Adams-----------	3s						
26C:		---	16.00	---	4.00	---	4.50
Adams-----------	4e						

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn silage	Grass hay	Grass-legume	Grass-clover	Pasture
	N	N	N	N	N	N	N
		Tons	Tons	Tons	Tons	AUM	AUM
33A:		4.50	20.00	4.00	3.50	---	8.00
Machias--------	2w						
33B:		4.50	20.00	4.00	3.50	---	8.00
Machias--------	2w						
33C:		4.50	14.00	4.00	3.50	---	8.00
Machias--------	3e						
37B:		4.50	16.00	3.00	3.50	---	6.70
Stetson--------	2s						
37C:		4.00	14.00	3.00	3.00	---	5.70
Stetson--------	3e						
37D:		3.00	---	2.50	2.50	---	4.80
Stetson--------	4e						
39A:		2.50	12.00	---	2.00	---	5.00
Colton---------	3s						
39B:		2.50	12.00	---	2.00	---	5.00
Colton---------	3s						
39C:		2.50	---	---	2.00	---	5.00
Colton---------	4e						
41D:		3.00	18.00	4.00	3.00	---	5.50
Buxton---------	4e						
43B:		5.50	22.00	---	4.50	---	8.50
Salmon---------	2e						
43C:		5.50	21.00	---	4.50	---	8.50
Salmon---------	3e						
43D:		4.00	19.00	---	3.50	---	6.50
Salmon---------	4e						
44B:		3.50	22.00	4.00	3.50	---	6.50
Lamoine--------	3w						
44C:		3.50	20.00	4.00	3.50	---	6.50
Lamoine--------	3e						
45A:		---	---	3.00	---	---	5.00
Scantic--------	4w						
55B:		4.50	20.00	---	4.00	---	7.50
Nicholville----	2e						
58A:		---	---	6.50	3.00	---	6.50
Grange---------	3w						
59A:		4.50	26.00	4.00	4.00	6.40	---
Waitsfield-----	1						
60A:		4.00	24.00	3.50	3.50	5.60	---
Weider---------	2w						

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn silage	Grass hay	Grass-legume	Grass-clover	Pasture
	N	N	N	N	N	N	N
		Tons	Tons	Tons	Tons	AUM	AUM
62B:		4.50	22.00	---	4.00	6.50	---
Berkshire------	2e						
62C:		4.00	20.00	---	3.50	6.50	---
Berkshire------	3e						
62D:		3.50	15.00	---	3.00	6.50	---
Berkshire------	4e						
63B:		---	---	---	---	5.00	---
Berkshire------	6s						
64C:		5.50	---	---	4.50	---	8.50
Salmon---------	3e						
Adamant--------	3e						
64D:		4.00	---	---	3.50	---	6.50
Salmon---------	4e						
Adamant--------	4e						
66B:		4.00	17.00	3.50	3.50	5.60	---
Vershire-------	2e						
Dummerston-----	2e						
66C:		4.00	15.00	3.50	3.50	5.60	---
Vershire-------	3e						
Dummerston-----	3e						
66D:		3.50	12.00	3.00	3.00	---	---
Vershire-------	4e						
Dummerston-----	4e						
67C:		---	---	---	---	---	2.40
Glover---------	6s						
Vershire-------	6s						
71C:		4.00	18.00	3.50	3.50	5.60	---
Tunbridge------	3e						
Lyman----------	4e						
72B:		---	---	---	---	---	3.10
Tunbridge------	6s						
Lyman----------	6s						
72C:		---	---	---	---	---	3.10
Tunbridge------	6s						
Lyman----------	6s						
77B:		4.00	20.00	4.00	4.00	---	8.00
Peru-----------	2e						
77C:		4.00	18.00	4.00	4.00	---	8.00
Peru-----------	3e						
77D:		3.50	16.00	3.50	3.50	---	7.00
Peru-----------	4e						
90B:		4.50	21.00	3.50	3.50	5.60	---
Dummerston-----	2e						

Table 6.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn silage	Grass hay	Grass-legume	Grass-clover	Pasture
	N	N	N	N	N	N	N
		Tons	Tons	Tons	Tons	AUM	AUM
90C:		4.00	19.00	3.50	3.50	5.60	---
Dummerston-----	3e						
90D:		3.50	16.00	3.00	3.00	4.80	---
Dummerston-----	4e						
91C:		---	---	---	---	---	2.80
Dummerston-----	6s						
92B:		4.00	22.00	4.00	3.50	5.60	---
Buckland-------	2w						
92C:		3.50	20.00	3.50	3.00	4.80	---
Buckland-------	3e						
92D:		3.00	---	3.50	2.50	4.00	---
Buckland-------	4e						
93B:		---	---	---	---	---	2.60
Buckland-------	6s						
93C:		---	---	---	---	---	2.60
Buckland-------	6s						
93D:		---	---	---	---	---	2.60
Buckland-------	7s						
116B:		---	---	---	---	---	3.10
Mundal---------	6s						
116C:		---	---	---	---	---	3.10
Mundal---------	6s						
163C:		---	---	---	---	---	3.60
Houghtonville--	6s						
168C:		---	---	---	---	---	2.40
Hogback--------	6s						
Rawsonville----	6s						

Table 7.—Forestland Management and Productivity

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
								cu ft/ac	
2A:	4								
Ondawa---------		Slight	Slight	Slight	Slight	eastern white pine--	57	100	eastern white pine, red pine, white spruce
						northern red oak----	60	43	
						red pine-----------	65	114	
						red spruce----------	45	100	
						sugar maple*--------	55	29	
3A:	5								
Rumney---------		Slight	Severe	Severe	Severe	eastern white pine--	56	100	eastern arborvitae, eastern white pine, white spruce
						red maple-----------	65	43	
						red spruce----------	45	100	
						sugar maple*--------	---	---	
4A:	6								
Sunny----------		Slight	Severe	Moderate	Severe	eastern white pine--	---	---	eastern arborvitae, eastern white pine
						red maple-----------	65	43	
						sugar maple*--------	---	---	
9A:	7								
Rifle----------		Slight	Severe	Severe	Severe	American basswood---	---	---	---
						balsam fir----------	40	72	
						black ash-----------	---	---	
						black spruce--------	---	---	
						eastern arborvitae--	---	---	
						paper birch---------	---	---	
						tamarack------------	---	---	
14B:	5								
Colonel--------		Slight	Moderate	Slight	Severe	balsam fir----------	54	100	European larch, black spruce, eastern white pine, tamarack
						eastern white pine--	64	114	
						paper birch---------	55	57	
						red maple-----------	64	43	
						red spruce----------	45	100	
						sugar maple*--------	---	---	
14C:	5								
Colonel--------		Slight	Moderate	Slight	Severe	balsam fir----------	54	100	European larch, black spruce, eastern white pine, tamarack
						eastern white pine--	64	114	
						paper birch---------	55	57	
						red maple-----------	64	43	
						red spruce----------	45	100	
						sugar maple*--------	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
								cu ft/ac	
14D:	5								
Colonel--------		Moderate	Moderate	Slight	Severe	balsam fir----------	54	100	European larch, black spruce, eastern white pine, tamarack
						eastern white pine--	64	114	
						paper birch---------	55	57	
						red maple-----------	64	43	
						red spruce----------	45	100	
						sugar maple*--------	---	---	
17A:	5								
Cabot----------		Slight	Severe	Severe	Severe	balsam fir----------	56	114	eastern white pine, white spruce
						eastern arborvitae--	---	---	
						eastern hemlock-----	---	---	
						eastern white pine--	---	---	
						red maple-----------	60	43	
						red spruce----------	45	100	
						sugar maple*--------	56	29	
						tamarack------------	---	---	
						white spruce--------	56	129	
17B:	5								
Cabot----------		Slight	Severe	Severe	Severe	balsam fir----------	56	114	eastern white pine, white spruce
						eastern arborvitae--	---	---	
						eastern hemlock-----	---	---	
						eastern white pine--	---	---	
						red maple-----------	60	43	
						red spruce----------	45	100	
						sugar maple*--------	56	29	
						tamarack------------	---	---	
						white spruce--------	56	129	
17C:	5								
Cabot----------		Slight	Severe	Severe	Severe	balsam fir----------	56	114	eastern white pine, white spruce
						eastern arborvitae--	---	---	
						eastern hemlock-----	---	---	
						eastern white pine--	---	---	
						red maple-----------	60	43	
						red spruce----------	45	100	
						sugar maple*--------	56	29	
						tamarack------------	---	---	
						white spruce--------	56	129	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber (cu ft/ac)	Trees to manage
18B:	5								
Cabot----------		Slight	Severe	Moderate	Severe	balsam fir----------	---	---	eastern white pine, white spruce
						eastern arborvitae--	---	---	
						eastern white pine--	---	---	
						elm-----------------	---	---	
						hemlock-------------	---	---	
						red maple-----------	60	43	
						red spruce----------	---	---	
						sugar maple*--------	56	29	
						tamarack------------	---	---	
						white spruce--------	60	143	
18C:	5								
Cabot----------		Slight	Severe	Moderate	Severe	balsam fir----------	---	---	eastern white pine, white spruce
						eastern arborvitae--	---	---	
						eastern white pine--	---	---	
						elm-----------------	---	---	
						hemlock-------------	---	---	
						red maple-----------	60	43	
						red spruce----------	---	---	
						sugar maple*--------	56	29	
						tamarack------------	---	---	
						white spruce--------	60	143	
19B:	5								
Colonel--------		Slight	Moderate	Slight	Severe	balsam fir----------	54	100	European larch, black spruce, eastern white pine, tamarack
						eastern white pine--	64	114	
						paper birch---------	55	57	
						red maple-----------	64	43	
						red spruce----------	45	100	
						sugar maple*--------	---	---	
19C:	5								
Colonel--------		Slight	Moderate	Slight	Severe	balsam fir----------	54	100	European larch, black spruce, eastern white pine, tamarack
						eastern white pine--	64	114	
						paper birch---------	55	57	
						red maple-----------	64	43	
						red spruce----------	45	100	
						sugar maple*--------	---	---	
19D:	5								
Colonel--------		Moderate	Moderate	Slight	Severe	balsam fir----------	54	100	European larch, black spruce, eastern white pine, tamarack
						eastern white pine--	64	114	
						paper birch---------	55	57	
						red maple-----------	64	43	
						red spruce----------	45	100	
						sugar maple*--------	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume of wood fiber (cu ft/ac)	Trees to manage
20A:	7								
Peacham--------		Slight	Severe	Severe	Severe	european alder------	---	---	---
						black spruce--------	---	---	
						eastern arborvitae--	---	---	
						eastern white pine--	---	---	
						red maple-----------	60	43	
						red spruce----------	---	---	
						tamarack------------	---	---	
21A:	5								
Sunday---------		Slight	Slight	Severe	Slight	balsam poplar-------	55	---	European larch, eastern white pine, red pine
						eastern white pine--	55	86	
						northern red oak----	50	29	
						red maple-----------	---	---	
						sugar maple*--------	48	29	
26A:	2								
Adams----------		Slight	Slight	Severe	Slight	American beech------	---	---	European larch, eastern white pine, red pine
						eastern hemlock-----	---	---	
						eastern white pine*-	66	114	
						red maple-----------	---	---	
						sugar maple---------	61	43	
26B:	2								
Adams----------		Slight	Slight	Severe	Slight	American beech------	---	---	European larch, eastern white pine, red pine
						eastern hemlock-----	---	---	
						eastern white pine*-	66	114	
						red maple-----------	---	---	
						sugar maple---------	61	43	
26C:	2								
Adams----------		Slight	Slight	Severe	Slight	American beech------	---	---	European larch, eastern white pine, red pine
						eastern hemlock-----	---	---	
						eastern white pine*-	66	114	
						red maple-----------	---	---	
						sugar maple---------	61	43	
26D:	3								
Adams----------		Moderate	Moderate	Severe	Slight	American beech------	---	---	European larch, eastern white pine, red pine
						eastern hemlock-----	---	---	
						eastern white pine*-	66	114	
						red maple-----------	---	---	
						sugar maple---------	61	43	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
								cu ft/ac	
26E:	3								
Adams----------		Moderate	Severe	Severe	Slight	American beech------	---	---	European larch, eastern white pine, red pine
						eastern hemlock-----	---	---	
						eastern white pine*-	66	114	
						red maple-----------	---	---	
						sugar maple---------	61	43	
33A:	1								
Machias--------		Slight	Slight	Slight	Slight	American beech------	55	29	European larch, eastern white pine, white spruce
						balsam fir----------	45	86	
						eastern white pine*-	68	114	
						paper birch---------	55	57	
						red spruce----------	45	100	
						white spruce--------	52	114	
33B:	1								
Machias--------		Slight	Slight	Slight	Slight	American beech------	55	29	European larch, eastern white pine, white spruce
						balsam fir----------	45	86	
						eastern white pine*-	68	114	
						paper birch---------	55	57	
						red spruce----------	45	100	
						white spruce--------	52	114	
33C:	1								
Machias--------		Slight	Slight	Slight	Slight	American beech------	55	29	European larch, eastern white pine, white spruce
						balsam fir----------	45	86	
						eastern white pine*-	68	114	
						paper birch---------	55	57	
						red spruce----------	45	100	
						white spruce--------	52	114	
37B:	1								
Stetson--------		Slight	Slight	Slight	Slight	eastern white pine*-	68	114	eastern white pine, red pine
						red spruce----------	43	86	
						sugar maple---------	59	43	
						white spruce--------	49	100	
37C:	1								
Stetson--------		Slight	Slight	Slight	Slight	eastern white pine*-	68	114	eastern white pine, red pine
						red spruce----------	43	86	
						sugar maple---------	59	43	
						white spruce--------	49	100	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
								cu ft/ac	
37D:	1								
Stetson		Severe	Moderate	Slight	Slight	eastern white pine*	68	114	eastern white pine, red pine
						red spruce	43	86	
						sugar maple	59	43	
						white spruce	49	100	
37E:	3								
Stetson		Severe	Severe	Slight	Slight	eastern white pine*	68	114	eastern white pine, red pine
						red spruce	43	86	
						sugar maple	59	43	
						white spruce	49	100	
39A:	2								
Colton		Slight	Slight	Severe	Slight	eastern white pine*	62	114	European larch, eastern white pine, red pine
						red pine	52	86	
						red spruce	39	86	
						sugar maple	61	43	
						white spruce	52	114	
39B:	2								
Colton		Slight	Slight	Severe	Slight	eastern white pine*	62	114	European larch, eastern white pine, red pine
						red pine	52	86	
						red spruce	39	86	
						sugar maple	61	43	
						white spruce	52	114	
39C:	2								
Colton		Slight	Slight	Severe	Slight	eastern white pine*	62	114	European larch, eastern white pine, red pine
						red pine	52	86	
						red spruce	39	86	
						sugar maple	61	43	
						white spruce	52	114	
39D:	3								
Colton		Moderate	Moderate	Severe	Slight	eastern white pine*	62	114	European larch, eastern white pine, red pine
						red pine	52	86	
						red spruce	39	86	
						sugar maple	61	43	
						white spruce	52	114	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
								cu ft/ac	
39E:	3								
Colton---------		Moderate	Severe	Severe	Slight	eastern white pine*-	62	114	European larch, eastern white pine, red pine
						red pine------------	52	86	
						red spruce----------	39	86	
						sugar maple---------	61	43	
						white spruce--------	52	114	
41D:	5								
Buxton---------		Moderate	Moderate	Slight	Moderate	balsam fir----------	55	114	eastern white pine, white spruce
						eastern hemlock-----	---	---	
						eastern white pine--	62	114	
						northern red oak----	60	43	
						paper birch---------	57	57	
						sugar maple*--------	---	---	
						white spruce--------	55	129	
41E:	5								
Buxton---------		Severe	Severe	Slight	Moderate	balsam fir----------	55	114	eastern white pine, white spruce
						eastern hemlock-----	---	---	
						eastern white pine--	62	114	
						northern red oak----	60	43	
						paper birch---------	57	57	
						sugar maple*--------	---	---	
						white spruce--------	55	129	
43B:	1								
Salmon---------		Slight	Slight	Slight	Slight	black cherry--------	---	---	European larch, Norway spruce, eastern white pine, red pine, red spruce
						eastern white pine--	---	---	
						northern red oak----	---	---	
						sugar maple*--------	68	43	
						white ash-----------	---	---	
						white spruce--------	---	---	
43C:	1								
Salmon---------		Moderate	Slight	Slight	Slight	black cherry--------	---	---	European larch, Norway spruce, eastern white pine, red pine, red spruce
						eastern white pine--	---	---	
						northern red oak----	---	---	
						sugar maple*--------	68	43	
						white ash-----------	---	---	
						white spruce--------	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
								cu ft/ac	
43D:	1								
Salmon		Severe	Moderate	Slight	Slight	black cherry	---	---	European larch, Norway spruce, eastern white pine, red pine, red spruce
						eastern white pine	---	---	
						northern red oak	---	---	
						sugar maple*	68	43	
						white ash	---	---	
						white spruce	---	---	
43E:	3								
Salmon		Severe	Severe	Slight	Slight	black cherry	---	---	European larch, Norway spruce, eastern white pine, red pine, red spruce
						eastern white pine	---	---	
						northern red oak	---	---	
						sugar maple*	68	43	
						white ash	---	---	
						white spruce	---	---	
44B:	5								
Lamoine		Slight	Moderate	Slight	Severe	balsam fir	55	114	black spruce, eastern arborvitae, eastern white pine
						eastern hemlock	---	---	
						eastern white pine	65	114	
						gray birch	---	---	
						paper birch	58	57	
						red maple	58	43	
						red spruce	45	100	
						sugar maple*	50	29	
						white spruce	55	129	
						yellow birch	50	29	
44C:	5								
Lamoine		Slight	Moderate	Slight	Severe	balsam fir	55	114	black spruce, eastern arborvitae, eastern white pine
						eastern hemlock	---	---	
						eastern white pine	65	114	
						gray birch	---	---	
						paper birch	58	57	
						red maple	58	43	
						red spruce	45	100	
						sugar maple*	50	29	
						white spruce	55	129	
						yellow birch	50	29	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber (cu ft/ac)	Trees to manage
45A:	6								
Scantic--------		Slight	Severe	Moderate	Severe	balsam fir----------	60	114	balsam fir, black spruce, eastern arborvitae, eastern white pine, red spruce, tamarack, white spruce
						eastern white pine--	58	100	
						red maple-----------	55	29	
						sugar maple*--------	---	---	
						white ash-----------	67	29	
						white spruce--------	60	143	
55B:	1								
Nicholville----		Slight	Slight	Slight	Slight	eastern white pine--	75	172	European larch, Norway spruce, eastern white pine, white spruce
						northern red oak----	70	57	
						sugar maple*--------	65	43	
58A:	6								
Grange---------		Slight	Severe	Severe	Severe	eastern white pine--	65	114	balsam fir, eastern white pine, white spruce
						sugar maple*--------	---	---	
						red spruce----------	45	100	
						white spruce--------	55	129	
59A:	3								
Waitsfield-----		Slight	Slight	Slight	Slight	eastern white pine--	72	129	eastern white pine, red pine
						sugar maple*--------	---	---	
60A:	3								
Weider---------		Slight	Slight	Slight	Slight	eastern white pine--	75	143	eastern white pine, red pine
						red pine------------	75	143	
						sugar maple*--------	---	---	
62B:	2								
Berkshire------		Slight	Slight	Slight	Slight	balsam fir----------	60	114	Douglas fir, balsam fir, eastern white pine, red pine, white spruce
						eastern white pine--	72	129	
						paper birch---------	60	57	
						red pine------------	65	114	
						red spruce----------	50	114	
						sugar maple*--------	52	29	
						white ash-----------	62	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume of wood fiber (cu ft/ac)	Trees to manage
62C:	2								
Berkshire		Slight	Slight	Slight	Slight	balsam fir	60	114	Douglas fir, balsam fir, eastern white pine, red pine, white spruce
						eastern white pine	72	129	
						paper birch	60	57	
						red pine	65	114	
						red spruce	50	114	
						sugar maple*	52	29	
						white ash	62	43	
						white spruce	55	129	
						yellow birch	55	29	
62D:	3								
Berkshire		Moderate	Moderate	Slight	Slight	balsam fir	60	114	Douglas fir, balsam fir, eastern white pine, red pine, white spruce
						eastern white pine	72	129	
						paper birch	60	57	
						red pine	65	114	
						red spruce	50	114	
						sugar maple*	52	29	
						white ash	62	43	
						white spruce	55	129	
						yellow birch	55	29	
63B:	3								
Berkshire		Slight	Slight	Slight	Slight	balsam fir	60	114	balsam fir, eastern white pine, red pine, white spruce
						eastern white pine	72	129	
						paper birch	60	57	
						red pine	65	114	
						red spruce	50	114	
						sugar maple*	52	29	
						white ash	62	43	
						white spruce	55	129	
						yellow birch	55	29	
63C:	3								
Berkshire		Slight	Slight	Slight	Slight	balsam fir	60	114	balsam fir, eastern white pine, red pine, white spruce
						eastern white pine	72	129	
						paper birch	60	57	
						red pine	65	114	
						red spruce	50	114	
						sugar maple*	52	29	
						white ash	62	43	
						white spruce	55	129	
						yellow birch	55	29	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
								cu ft/ac	
63D:	4								
Berkshire		Moderate	Moderate	Slight	Slight	balsam fir	60	114	balsam fir, eastern white pine, red pine, white spruce
						eastern white pine	72	129	
						paper birch	60	57	
						red pine	65	114	
						red spruce	50	114	
						sugar maple*	52	29	
						white ash	62	43	
						white spruce	55	129	
						yellow birch	55	29	
63E:	5								
Berkshire		Severe	Severe	Slight	Slight	balsam fir	60	114	balsam fir, eastern white pine, red pine, white spruce
						eastern white pine	72	129	
						paper birch	60	57	
						red pine	65	114	
						red spruce	50	114	
						sugar maple*	52	29	
						white ash	62	43	
						white spruce	55	129	
						yellow birch	55	29	
64C:	2								
Salmon		Moderate	Slight	Slight	Slight	black cherry	---	---	European larch, Norway spruce, eastern white pine, red pine, red spruce
						eastern white pine	---	---	
						northern red oak	---	---	
						sugar maple*	68	43	
						white ash	---	---	
						white spruce	---	---	
Adamant		Moderate	Slight	Slight	Moderate	eastern white pine	48	72	Norway spruce, red pine, white spruce
						sugar maple*	70	43	
						white spruce	60	143	
64D:	2								
Salmon		Severe	Moderate	Slight	Slight	black cherry	---	---	European larch, Norway spruce, eastern white pine, red pine, red spruce
						eastern white pine	---	---	
						northern red oak	---	---	
						sugar maple*	68	43	
						white ash	---	---	
						white spruce	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
								cu ft/ac	
64D:	2								
Adamant--------		Moderate	Moderate	Slight	Moderate	eastern white pine--	48	72	Norway spruce, red pine, white spruce
						sugar maple*--------	70	43	
						white spruce--------	60	143	
64E:	2								
Salmon---------		Severe	Severe	Slight	Slight	black cherry--------	---	---	European larch, Norway spruce, eastern white pine, red pine, red spruce
						eastern white pine--	---	---	
						northern red oak----	---	---	
						sugar maple*--------	68	43	
						white ash-----------	---	---	
						white spruce--------	---	---	
Adamant--------		Severe	Severe	Slight	Moderate	eastern white pine--	48	72	Norway spruce, red pine, white spruce
						sugar maple*--------	70	43	
						white spruce--------	60	143	
66B:	2								
Vershire-------		Slight	Slight	Slight	Moderate	American beech------	65	43	eastern white pine, red spruce, white spruce
						balsam fir----------	65	129	
						eastern white pine--	75	143	
						hemlock-------------	---	---	
						paper birch---------	69	86	
						red spruce----------	55	129	
						sugar maple*--------	65	43	
						yellow birch--------	64	43	
Dummerston-----		Slight	Slight	Slight	Slight	American beech------	---	---	European larch, Norway spruce, Scotch pine, eastern white pine, red pine, red spruce, white spruce
						eastern hemlock-----	---	---	
						eastern white pine--	---	---	
						hickory-------------	---	---	
						northern red oak----	---	---	
						paper birch---------	---	---	
						red maple-----------	60	43	
						sugar maple*--------	61	43	
						white ash-----------	---	---	
						white oak-----------	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume of wood fiber (cu ft/ac)	Trees to manage
66C:	2								
Vershire-------		Slight	Slight	Slight	Moderate	American beech------	65	43	eastern white pine, red spruce, white spruce
						balsam fir----------	65	129	
						eastern white pine--	75	143	
						hemlock-------------	---	---	
						paper birch---------	69	86	
						red spruce----------	55	129	
						sugar maple*--------	65	43	
						yellow birch--------	64	43	
Dummerston-----		Slight	Slight	Slight	Slight	American beech------	---	---	European larch, Norway spruce, Scotch pine, eastern white pine, red pine, red spruce, white spruce
						eastern hemlock-----	---	---	
						eastern white pine--	---	---	
						hickory-------------	---	---	
						northern red oak----	---	---	
						paper birch---------	---	---	
						red maple-----------	60	43	
						sugar maple*--------	61	43	
						white ash-----------	---	---	
						white oak-----------	---	---	
66D:	3								
Vershire-------		Moderate	Moderate	Slight	Moderate	American beech------	65	43	eastern white pine, red spruce, white spruce
						balsam fir----------	65	129	
						eastern white pine--	75	143	
						hemlock-------------	---	---	
						paper birch---------	69	86	
						red spruce----------	55	129	
						sugar maple*--------	65	43	
						yellow birch--------	64	43	
Dummerston-----		Moderate	Moderate	Slight	Slight	American beech------	---	---	European larch, Norway spruce, Scotch pine, eastern white pine, red pine, red spruce, white spruce
						eastern hemlock-----	---	---	
						eastern white pine--	---	---	
						hickory-------------	---	---	
						northern red oak----	---	---	
						paper birch---------	---	---	
						red maple-----------	60	43	
						sugar maple*--------	61	43	
						white ash-----------	---	---	
						white oak-----------	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
								cu ft/ac	
66E:	4								
Vershire-------		Severe	Severe	Slight	Moderate	American beech------	65	43	eastern white pine, red spruce, white spruce
						balsam fir----------	65	129	
						eastern white pine--	75	143	
						hemlock-------------	---	---	
						paper birch---------	69	86	
						red spruce----------	55	129	
						sugar maple*--------	65	43	
						yellow birch--------	64	43	
Dummerston-----		Severe	Severe	Slight	Slight	American beech------	---	---	European larch, Norway spruce, Scotch pine, eastern white pine, red pine, red spruce, white spruce
						eastern hemlock-----	---	---	
						eastern white pine--	---	---	
						hickory-------------	---	---	
						northern red oak----	---	---	
						paper birch---------	---	---	
						red maple-----------	60	43	
						sugar maple*--------	61	43	
						white ash-----------	---	---	
						white oak-----------	---	---	
67C:	4								
Glover---------		Slight	Slight	Severe	Severe	American beech------	58	43	balsam fir, eastern white pine, tamarack, white spruce
						eastern white pine--	65	114	
						paper birch---------	64	72	
						red maple-----------	65	43	
						red spruce----------	44	86	
						sugar maple*--------	61	43	
						white spruce--------	57	129	
						yellow birch--------	59	43	
Vershire-------		Slight	Slight	Slight	Moderate	American beech------	65	43	eastern white pine, red spruce, white spruce
						balsam fir----------	65	129	
						eastern white pine--	75	143	
						hemlock-------------	---	---	
						paper birch---------	69	86	
						red spruce----------	55	129	
						sugar maple*--------	65	43	
						yellow birch--------	64	43	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns				Potential productivity			Trees to manage
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Volume of wood fiber	
								cu ft/ac	
67D:	5								
Glover		Moderate	Moderate	Severe	Severe	American beech	58	43	balsam fir, eastern white pine, tamarack, white spruce
						eastern white pine	65	114	
						paper birch	64	72	
						red maple	65	43	
						red spruce	44	86	
						sugar maple*	61	43	
						white spruce	57	129	
						yellow birch	59	43	
Vershire		Moderate	Moderate	Slight	Moderate	American beech	65	43	eastern white pine, red spruce, white spruce
						balsam fir	65	129	
						eastern white pine	75	143	
						hemlock	---	---	
						paper birch	69	86	
						red spruce	55	129	
						sugar maple*	65	43	
						yellow birch	64	43	
67E:	5								
Glover		Severe	Severe	Severe	Severe	American beech	58	43	balsam fir, eastern white pine, tamarack, white spruce
						eastern white pine	65	114	
						paper birch	64	72	
						red maple	65	43	
						red spruce	44	86	
						sugar maple*	61	43	
						white spruce	57	129	
						yellow birch	59	43	
Vershire		Severe	Severe	Slight	Moderate	American beech	65	43	eastern white pine, red spruce, white spruce
						balsam fir	65	129	
						eastern white pine	75	143	
						hemlock	---	---	
						paper birch	69	86	
						red spruce	55	129	
						sugar maple*	65	43	
						yellow birch	64	43	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Volume of wood fiber	Trees to manage
								cu ft/ac	
68D:	7								
Stratton		Severe	Moderate	Moderate	Severe	American beech	---	---	balsam fir, white spruce
						American mountainash	---	---	
						balsam fir	---	---	
						eastern hemlock	---	---	
						mountain maple	---	---	
						paper birch	---	---	
						red maple	---	---	
						red spruce	35	72	
						sugar maple	---	---	
						yellow birch	---	---	
Glebe		Severe	Moderate	Slight	Moderate	American beech	---	---	balsam fir, white spruce
						American mountainash	---	---	
						balsam fir	---	---	
						eastern hemlock	---	---	
						mountain maple	---	---	
						paper birch	---	---	
						red maple	---	---	
						red spruce	50	114	
						sugar maple	---	---	
						yellow birch	---	---	
68E:	7								
Stratton		Severe	Severe	Moderate	Severe	American beech	---	---	balsam fir, white spruce
						American mountainash	---	---	
						balsam fir	---	---	
						eastern hemlock	---	---	
						mountain maple	---	---	
						paper birch	---	---	
						red maple	---	---	
						red spruce	35	72	
						sugar maple	---	---	
						yellow birch	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
								cu ft/ac	
68E:	7								
Glebe----------		Severe	Severe	Slight	Moderate	American beech------	---	---	balsam fir, white spruce
						American mountainash	---	---	
						balsam fir----------	---	---	
						eastern hemlock-----	---	---	
						mountain maple------	---	---	
						paper birch---------	---	---	
						red maple-----------	---	---	
						red spruce----------	50	114	
						sugar maple---------	---	---	
						yellow birch--------	---	---	
69D:	7								
Sisk-----------		Moderate	Moderate	Slight	Moderate	American mountainash	---	---	red spruce
						balsam fir----------	35	57	
						paper birch---------	---	---	
						red spruce----------	35	72	
Glebe----------		Severe	Moderate	Slight	Moderate	American beech------	---	---	balsam fir, white spruce
						American mountainash	---	---	
						balsam fir----------	---	---	
						eastern hemlock-----	---	---	
						mountain maple------	---	---	
						paper birch---------	---	---	
						red maple-----------	---	---	
						red spruce----------	50	114	
						sugar maple---------	---	---	
						yellow birch--------	---	---	
69E:	7								
Sisk-----------		Severe	Severe	Slight	Moderate	American mountainash	---	---	red spruce
						balsam fir----------	35	57	
						paper birch---------	---	---	
						red spruce----------	35	72	
Glebe----------		Severe	Severe	Slight	Moderate	American beech------	---	---	balsam fir, white spruce
						American mountainash	---	---	
						balsam fir----------	---	---	
						eastern hemlock-----	---	---	
						mountain maple------	---	---	
						paper birch---------	---	---	
						red maple-----------	---	---	
						red spruce----------	50	114	
						sugar maple---------	---	---	
						yellow birch--------	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber (cu ft/ac)	Trees to manage
71C:	4								
Tunbridge------		Slight	Slight	Slight	Moderate	balsam fir----------	---	---	Douglas fir, Fraser's fir, Norway spruce, balsam fir, blue spruce, eastern white pine, larch, red spruce, white spruce
						eastern white pine--	65	114	
						northern red oak----	68	57	
						paper birch---------	78	43	
						red maple-----------	---	---	
						red spruce----------	45	100	
						sugar maple*--------	60	43	
						white ash-----------	65	43	
						white spruce--------	55	129	
						yellow birch--------	60	43	
Lyman----------		Slight	Slight	Moderate	Severe	American beech------	---	---	Austrian pine, balsam fir, eastern white pine, white spruce
						balsam fir----------	48	114	
						eastern hemlock-----	---	---	
						eastern white pine--	56	100	
						northern red oak----	54	43	
						paper birch---------	---	---	
						red spruce----------	42	86	
						sugar maple*--------	---	---	
						white spruce--------	55	129	
72B:	4								
Tunbridge------		Slight	Slight	Slight	Moderate	balsam fir----------	---	---	Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						eastern white pine--	50	86	
						northern red oak----	---	---	
						paper birch---------	---	---	
						red spruce----------	50	114	
						sugar maple*--------	60	43	
						white ash-----------	65	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	
Lyman----------		Slight	Slight	Moderate	Severe	balsam fir----------	60	114	balsam fir, eastern white pine, red pine, white spruce
						red spruce----------	40	86	
						sugar maple*--------	50	29	
						white spruce--------	55	129	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
								cu ft/ac	
72C:	4								
Tunbridge------		Slight	Slight	Slight	Moderate	balsam fir----------	---	---	Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						eastern white pine--	50	86	
						northern red oak----	---	---	
						paper birch---------	---	---	
						red spruce----------	50	114	
						sugar maple*--------	60	43	
						white ash-----------	65	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	
Lyman----------		Slight	Slight	Moderate	Severe	balsam fir----------	60	114	balsam fir, eastern white pine, red pine, white spruce
						red spruce----------	40	86	
						sugar maple*--------	50	29	
						white spruce--------	55	129	
72D:	5								
Tunbridge------		Moderate	Moderate	Slight	Moderate	balsam fir----------	---	---	Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						eastern white pine--	50	86	
						northern red oak----	---	---	
						paper birch---------	---	---	
						red spruce----------	50	114	
						sugar maple*--------	60	43	
						white ash-----------	65	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	
Lyman----------		Moderate	Moderate	Moderate	Severe	balsam fir----------	60	114	balsam fir, eastern white pine, red pine, white spruce
						red spruce----------	40	86	
						sugar maple*--------	50	29	
						white spruce--------	55	129	
72E:	5								
Tunbridge------		Severe	Severe	Slight	Moderate	balsam fir----------	---	---	Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						eastern white pine--	50	86	
						northern red oak----	---	---	
						paper birch---------	---	---	
						red spruce----------	50	114	
						sugar maple*--------	60	43	
						white ash-----------	65	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
								cu ft/ac	
72E:	5								
Lyman---------		Severe	Severe	Moderate	Severe	balsam fir----------	60	114	balsam fir, eastern white pine, red pine, white spruce
						red spruce----------	40	86	
						sugar maple*--------	50	29	
						white spruce--------	55	129	
76C:	3								
Berkshire------		Slight	Slight	Slight	Slight	balsam fir----------	60	114	balsam fir, eastern white pine, red pine, white spruce
						eastern white pine--	72	129	
						paper birch---------	60	57	
						red pine------------	65	114	
						red spruce----------	50	114	
						sugar maple*--------	52	29	
						white ash-----------	62	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	
76D:	4								
Berkshire------		Moderate	Moderate	Slight	Slight	balsam fir----------	60	114	balsam fir, eastern white pine, red pine, white spruce
						eastern white pine--	72	129	
						paper birch---------	60	57	
						red pine------------	65	114	
						red spruce----------	50	114	
						sugar maple*--------	52	29	
						white ash-----------	62	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	
76E:	5								
Berkshire------		Severe	Severe	Slight	Slight	balsam fir----------	60	114	balsam fir, eastern white pine, red pine, white spruce
						eastern white pine--	72	129	
						paper birch---------	60	57	
						red pine------------	65	114	
						red spruce----------	50	114	
						sugar maple*--------	52	29	
						white ash-----------	62	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber (cu ft/ac)	Trees to manage
77B:	2								
Peru-----------		Slight	Slight	Slight	Moderate	balsam fir----------	55	114	eastern white pine, white spruce
						eastern white pine--	67	114	
						northern red oak----	67	43	
						red pine------------	61	100	
						red spruce----------	39	86	
						sugar maple*--------	60	43	
						white ash-----------	64	43	
						white spruce--------	53	114	
						yellow birch--------	60	43	
77C:	2								
Peru-----------		Slight	Slight	Slight	Moderate	balsam fir----------	55	114	eastern white pine, white spruce
						eastern white pine--	67	114	
						northern red oak----	67	43	
						red pine------------	61	100	
						red spruce----------	39	86	
						sugar maple*--------	60	43	
						white ash-----------	64	43	
						white spruce--------	53	114	
						yellow birch--------	60	43	
77D:	3								
Peru-----------		Moderate	Moderate	Slight	Moderate	balsam fir----------	55	114	eastern white pine, white spruce
						eastern white pine--	67	114	
						northern red oak----	67	43	
						red pine------------	61	100	
						red spruce----------	39	86	
						sugar maple*--------	60	43	
						white ash-----------	64	43	
						white spruce--------	53	114	
						yellow birch--------	60	43	
78C:	3								
Peru-----------		Slight	Slight	Slight	Moderate	balsam fir----------	55	114	eastern white pine, white spruce
						eastern white pine--	67	114	
						northern red oak----	70	57	
						red pine------------	61	100	
						red spruce----------	39	86	
						sugar maple*--------	60	43	
						white ash-----------	64	43	
						white spruce--------	53	114	
						yellow birch--------	60	43	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
								cu ft/ac	
78D:	4								
Peru-----------		Moderate	Moderate	Slight	Moderate	balsam fir----------	55	114	eastern white pine, white spruce
						eastern white pine--	67	114	
						northern red oak----	70	57	
						red pine------------	61	100	
						red spruce----------	39	86	
						sugar maple*--------	60	43	
						white ash-----------	64	43	
						white spruce--------	53	114	
						yellow birch--------	60	43	
78E:	5								
Peru-----------		Severe	Severe	Slight	Moderate	balsam fir----------	55	114	eastern white pine, white spruce
						eastern white pine--	67	114	
						northern red oak----	70	57	
						red pine------------	61	100	
						red spruce----------	39	86	
						sugar maple*--------	60	43	
						white ash-----------	64	43	
						white spruce--------	53	114	
						yellow birch--------	60	43	
79A:	7								
Markey---------		Slight	Severe	Severe	Severe	balsam fir---------			---
						balsam poplar-------	---	---	
						black spruce--------	20	29	
						eastern arborvitae--	---	---	
						quaking aspen-------	---	---	
						red maple-----------	---	---	
						tamarack------------	---	---	
Wonsqueak------		Slight	Severe	Severe	Severe	balsam fir----------	---	---	---
						balsam poplar-------	---	---	
						black spruce--------	20	29	
						eastern arborvitae--	---	---	
						quaking aspen-------	---	---	
						red maple-----------	---	---	
						tamarack------------	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber (cu ft/ac)	Trees to manage
82A:	7								
Peacham		Slight	Severe	Severe	Severe	european alder	---	---	---
						black spruce	---	---	
						eastern arborvitae	---	---	
						eastern white pine	---	---	
						red maple	60	43	
						red spruce	---	---	
						tamarack	---	---	
85E:	7								
Ricker		Severe	Severe	Severe	Severe	American mountainash	---	---	---
						balsam fir	20	57	
						paper birch	---	---	
						red spruce	20	29	
						yellow birch	---	---	
Londonderry		Severe	Severe	Severe	Severe	balsam fir	---	---	---
						red spruce	30	57	
						white spruce	---	---	
Stratton		Severe	Severe	Moderate	Severe	American beech	---	---	balsam fir, white spruce
						American mountainash	---	---	
						balsam fir	---	---	
						eastern hemlock	---	---	
						mountain maple	---	---	
						paper birch	---	---	
						red maple	---	---	
						red spruce	35	72	
						sugar maple	---	---	
						yellow birch	---	---	
86F:	7								
Ricker		Severe	Severe	Severe	Severe	American mountainash	---	---	---
						balsam fir	20	57	
						paper birch	---	---	
						red spruce	20	29	
						yellow birch	---	---	
Londonderry		Severe	Severe	Severe	Severe	balsam fir	---	---	---
						red spruce	30	57	
						white spruce	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber (cu ft/ac)	Trees to manage
88D:	4								
Houghtonville		Severe	Moderate	Slight	Slight	American beech	---	---	balsam fir, white spruce
						balsam fir	---	---	
						paper birch	---	---	
						red spruce	---	---	
						sugar maple*	60	43	
						white ash	---	---	
						white spruce	---	---	
						yellow birch	---	---	
89E:	5								
Houghtonville		Severe	Severe	Slight	Slight	American beech	---	---	balsam fir, white spruce
						balsam fir	---	---	
						paper birch	---	---	
						red spruce	---	---	
						sugar maple*	60	43	
						white spruce	---	---	
90B:	2								
Dummerston		Slight	Slight	Slight	Slight	American beech	---	---	European larch, Norway spruce, Scotch pine, eastern white pine, red pine, red spruce, white spruce
						eastern hemlock	---	---	
						eastern white pine	---	---	
						hickory	---	---	
						northern red oak	---	---	
						paper birch	---	---	
						red maple	60	43	
						sugar maple*	61	43	
						white ash	---	---	
						white oak	---	---	
90C:	2								
Dummerston		Slight	Slight	Slight	Slight	American beech	---	---	European larch, Norway spruce, Scotch pine, eastern white pine, red pine, red spruce, white spruce
						eastern hemlock	---	---	
						eastern white pine	---	---	
						hickory	---	---	
						northern red oak	---	---	
						paper birch	---	---	
						red maple	60	43	
						sugar maple*	61	43	
						white ash	---	---	
						white oak	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
								cu ft/ac	
90D:	3								
Dummerston-----		Moderate	Moderate	Slight	Slight	American beech------	---	---	European larch, Norway spruce, Scotch pine, eastern white pine, red pine, red spruce, white spruce
						eastern hemlock-----	---	---	
						eastern white pine--	---	---	
						hickory------------	---	---	
						northern red oak----	---	---	
						paper birch---------	---	---	
						red maple----------	60	43	
						sugar maple*--------	61	43	
						white ash----------	---	---	
						white oak----------	---	---	
91C:	3								
Dummerston-----		Slight	Slight	Slight	Slight	American beech------	---	---	European larch, Norway spruce, Scotch pine, eastern white pine, red pine, red spruce, white spruce
						eastern hemlock-----	---	---	
						eastern white pine--	---	---	
						hickory------------	---	---	
						northern red oak----	---	---	
						paper birch---------	---	---	
						red maple----------	60	43	
						sugar maple*--------	60	43	
						white ash----------	---	---	
						white oak----------	---	---	
91D:	4								
Dummerston-----		Moderate	Moderate	Slight	Slight	American beech------	---	---	European larch, Norway spruce, Scotch pine, eastern white pine, red pine, red spruce, white spruce
						eastern hemlock-----	---	---	
						eastern white pine--	---	---	
						hickory------------	---	---	
						northern red oak----	---	---	
						paper birch---------	---	---	
						red maple----------	60	43	
						sugar maple*--------	60	43	
						white ash----------	---	---	
						white oak----------	---	---	
92B:	3								
Buckland-------		Slight	Slight	Slight	Moderate	American beech------	66	43	Norway spruce, eastern white pine, red spruce, white spruce
						balsam fir---------	62	114	
						eastern arborvitae--	60	86	
						eastern hemlock-----	60	---	
						eastern white pine--	71	129	
						paper birch---------	59	57	
						sugar maple*--------	57	29	
						white ash----------	61	43	
						white spruce--------	64	143	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
								cu ft/ac	
92C:	3								
Buckland-------		Slight	Slight	Slight	Moderate	American beech------	66	43	Norway spruce, eastern white pine, red spruce, white spruce
						balsam fir----------	62	114	
						eastern arborvitae--	60	86	
						eastern hemlock-----	60	---	
						eastern white pine--	71	129	
						paper birch---------	59	57	
						sugar maple*--------	57	29	
						white ash-----------	61	43	
						white spruce--------	64	143	
92D:	3								
Buckland-------		Moderate	Moderate	Slight	Moderate	American beech------	66	43	Norway spruce, eastern white pine, red spruce, white spruce
						balsam fir----------	62	114	
						eastern arborvitae--	60	86	
						eastern hemlock-----	60	---	
						eastern white pine--	71	129	
						paper birch---------	59	57	
						sugar maple*--------	57	29	
						white ash-----------	61	43	
						white spruce--------	64	143	
93B:	3								
Buckland-------		Slight	Slight	Slight	Moderate	American beech------	66	43	Norway spruce, eastern white pine, red pine, red spruce, tamarack, white spruce
						balsam fir----------	62	114	
						eastern arborvitae--	60	86	
						eastern hemlock-----	60	---	
						eastern white pine--	71	129	
						paper birch---------	59	57	
						sugar maple*--------	57	29	
						white ash-----------	61	43	
						white spruce--------	64	143	
93C:	3								
Buckland-------		Slight	Slight	Slight	Moderate	American beech------	66	43	Norway spruce, eastern white pine, red pine, red spruce, tamarack, white spruce
						balsam fir----------	62	114	
						eastern arborvitae--	60	86	
						eastern hemlock-----	60	---	
						eastern white pine--	71	129	
						paper birch---------	59	57	
						sugar maple*--------	57	29	
						white ash-----------	61	43	
						white spruce--------	64	143	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber (cu ft/ac)	Trees to manage
93D:	4								
Buckland		Moderate	Moderate	Slight	Moderate	American beech	66	43	Norway spruce, eastern white pine, red pine, red spruce, tamarack, white spruce
						balsam fir	62	114	
						eastern arborvitae	60	86	
						eastern hemlock	60	---	
						eastern white pine	71	129	
						paper birch	59	57	
						sugar maple*	57	29	
						white ash	61	43	
						white spruce	64	143	
96D:	5								
Peru		Moderate	Severe	Moderate	Moderate	balsam fir	64	129	European larch, black spruce, eastern white pine
						eastern white pine	70	129	
						paper birch	62	72	
						red spruce	54	114	
						sugar maple*	62	43	
						white spruce	64	143	
98B:	6								
Cabot		Slight	Severe	Moderate	Severe	balsam fir	---	---	eastern white pine, white spruce
						eastern arborvitae	---	---	
						eastern white pine	---	---	
						elm	---	---	
						hemlock	---	---	
						red maple	60	43	
						red spruce	---	---	
						sugar maple*	56	29	
						tamarack	---	---	
						white spruce	60	143	
98C:	6								
Cabot		Slight	Severe	Moderate	Severe	balsam fir	---	---	eastern white pine, white spruce
						eastern arborvitae	---	---	
						eastern white pine	---	---	
						elm	---	---	
						hemlock	---	---	
						red maple	60	43	
						red spruce	---	---	
						sugar maple*	56	29	
						tamarack	---	---	
						white spruce	60	143	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
								cu ft/ac	
99C:	6								
Colonel		Slight	Severe	Slight	Severe	balsam fir	54	100	European larch, black spruce, eastern white pine, tamarack
						eastern white pine	64	114	
						paper birch	55	57	
						red maple	64	43	
						red spruce	45	100	
						sugar maple*	---	---	
99D:	6								
Colonel		Moderate	Severe	Slight	Severe	balsam fir	54	100	European larch, black spruce, eastern white pine, tamarack
						eastern white pine	64	114	
						paper birch	55	57	
						red maple	64	43	
						red spruce	45	100	
						sugar maple*	---	---	
116B:	2								
Mundal		Slight	Moderate	Slight	Moderate	American beech	---	---	Norway spruce, Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						balsam fir	55	114	
						eastern white pine	67	114	
						paper birch	---	---	
						red maple	---	---	
						red spruce	50	114	
						sugar maple*	65	43	
						white ash	75	43	
						white spruce	55	129	
						yellow birch	---	---	
116C:	2								
Mundal		Moderate	Moderate	Slight	Moderate	American beech	---	---	Norway spruce, Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						balsam fir	55	114	
						eastern white pine	67	114	
						paper birch	---	---	
						red maple	---	---	
						red spruce	50	114	
						sugar maple*	65	43	
						white ash	75	43	
						white spruce	55	129	
						yellow birch	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume of wood fiber (cu ft/ac)	Trees to manage
116D:	3								
Mundal---------		Severe	Moderate	Slight	Moderate	American beech------	---	---	Norway spruce, Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						balsam fir----------	55	114	
						eastern white pine--	67	114	
						paper birch---------	---	---	
						red maple-----------	---	---	
						red spruce----------	50	114	
						sugar maple*--------	65	43	
						white ash-----------	75	43	
						white spruce--------	55	129	
						yellow birch--------	---	---	
151F:	6								
Hogback--------		Severe	Severe	Moderate	Severe	American beech------	---	---	Norway spruce, balsam fir, eastern white pine, red spruce
						balsam fir----------	48	86	
						eastern white pine--	55	86	
						northern red oak----	63	43	
						paper birch---------	---	---	
						red spruce----------	42	86	
						sugar maple*--------	50	29	
						white spruce--------	55	129	
						yellow birch--------	---	---	
Rawsonville----		Severe	Severe	Slight	Moderate	American beech------	64	43	Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						balsam fir----------	---	---	
						eastern hemlock-----	---	---	
						paper birch---------	---	---	
						red maple-----------	---	---	
						red spruce----------	45	100	
						sugar maple*--------	60	43	
						white ash-----------	67	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	
162D:	4								
Houghtonville--		Severe	Moderate	Slight	Slight	American beech------	---	---	balsam fir, white spruce
						balsam fir----------	---	---	
						paper birch---------	---	---	
						red spruce----------	---	---	
						sugar maple*--------	60	43	
						white ash-----------	---	---	
						white spruce--------	---	---	
						yellow birch--------	---	---	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Volume of wood fiber (cu ft/ac)	Trees to manage
162D:	4								
Rawsonville----		Severe	Moderate	Slight	Moderate	American beech------	64	43	Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						balsam fir----------	---	---	
						eastern hemlock-----	---	---	
						paper birch---------	---	---	
						red maple-----------	---	---	
						red spruce----------	45	100	
						sugar maple*--------	60	43	
						white ash-----------	67	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	
162E:	5								
Houghtonville--		Severe	Severe	Slight	Slight	American beech------	---	---	balsam fir, white spruce
						balsam fir----------	---	---	
						paper birch---------	---	---	
						red spruce----------	---	---	
						sugar maple*--------	60	43	
						white ash-----------	---	---	
						white spruce--------	---	---	
						yellow birch--------	---	---	
Rawsonville----		Severe	Severe	Slight	Moderate	American beech------	64	43	Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						balsam fir----------	---	---	
						eastern hemlock-----	---	---	
						paper birch---------	---	---	
						red maple-----------	---	---	
						red spruce----------	45	100	
						sugar maple*--------	60	43	
						white ash-----------	67	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	
163C:	3								
Houghtonville--		Moderate	Moderate	Slight	Slight	American beech------	65	43	Norway spruce, Scotch pine, balsam fir, red spruce, tamarack, white spruce
						balsam fir----------	55	114	
						paper birch---------	66	72	
						red spruce----------	50	114	
						sugar maple*--------	60	43	
						white ash-----------	65	43	
						white spruce--------	55	129	
						yellow birch--------	54	29	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber (cu ft/ac)	Trees to manage
163D:	4								
Houghtonville--		Severe	Moderate	Slight	Slight	American beech------	65	43	Norway spruce, Scotch pine, balsam fir, red spruce, tamarack, white spruce
						balsam fir----------	55	114	
						paper birch---------	66	72	
						red spruce----------	50	114	
						sugar maple*--------	60	43	
						white ash-----------	65	43	
						white spruce--------	55	129	
						yellow birch--------	54	29	
163E:	5								
Houghtonville--		Severe	Severe	Slight	Slight	American beech------	65	43	Norway spruce, Scotch pine, balsam fir, red spruce, tamarack, white spruce
						balsam fir----------	55	114	
						paper birch---------	66	72	
						red spruce----------	50	114	
						sugar maple*--------	60	43	
						white ash-----------	65	43	
						white spruce--------	55	129	
						yellow birch--------	54	29	
168C:	5								
Hogback--------		Moderate	Severe	Moderate	Severe	American beech------	---	---	Norway spruce, balsam fir, eastern white pine, red spruce
						balsam fir----------	48	86	
						eastern white pine--	55	86	
						northern red oak----	63	43	
						paper birch---------	---	---	
						red spruce----------	42	86	
						sugar maple*--------	50	29	
						white spruce--------	55	129	
						yellow birch--------	---	---	
Rawsonville----		Moderate	Moderate	Slight	Moderate	American beech------	64	43	Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						balsam fir----------	---	---	
						eastern hemlock-----	---	---	
						paper birch---------	---	---	
						red maple-----------	---	---	
						red spruce----------	45	100	
						sugar maple*--------	60	43	
						white ash-----------	67	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber (cu ft/ac)	Trees to manage
168D:	5								
Hogback--------		Severe	Severe	Moderate	Severe	American beech------	---	---	Norway spruce, balsam fir, eastern white pine, red spruce
						balsam fir----------	48	86	
						eastern white pine--	55	86	
						northern red oak----	63	43	
						paper birch---------	---	---	
						red spruce----------	42	86	
						sugar maple*--------	50	29	
						white spruce--------	55	129	
						yellow birch--------	---	---	
Rawsonville----		Severe	Moderate	Slight	Moderate	American beech------	64	43	Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						balsam fir----------	---	---	
						eastern hemlock-----	---	---	
						paper birch---------	---	---	
						red maple-----------	---	---	
						red spruce----------	45	100	
						sugar maple*--------	60	43	
						white ash-----------	67	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	
168E:	6								
Hogback--------		Severe	Severe	Moderate	Severe	American beech------	---	---	Norway spruce, balsam fir, eastern white pine, red spruce
						balsam fir----------	48	86	
						eastern white pine--	55	86	
						northern red oak----	63	43	
						paper birch---------	---	---	
						red spruce----------	42	86	
						sugar maple*--------	50	29	
						white spruce--------	55	129	
						yellow birch--------	---	---	
Rawsonville----		Severe	Severe	Slight	Moderate	American beech------	64	43	Scotch pine, balsam fir, eastern white pine, red spruce, tamarack, white spruce
						balsam fir----------	---	---	
						eastern hemlock-----	---	---	
						paper birch---------	---	---	
						red maple-----------	---	---	
						red spruce----------	45	100	
						sugar maple*--------	60	43	
						white ash-----------	67	43	
						white spruce--------	55	129	
						yellow birch--------	55	29	

Table 7.—Forestland Management and Productivity—continued

Map symbol and soil name	VT forest value group	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to manage
								cu ft/ac	
172F:	6								
Taconic--------		Severe	Severe	Moderate	Severe	American beech------	---	---	Norway spruce, balsam fir, eastern white pine, red pine, white spruce
						balsam fir----------	50	100	
						eastern hemlock-----	---	---	
						northern red oak----	50	29	
						paper birch---------	53	57	
						red spruce----------	40	86	
						sugar maple*--------	50	29	
						white oak-----------	50	29	
						white spruce--------	50	114	
Hubbardton-----		Severe	Severe	Severe	Severe	American hornbeam---	---	---	---
						black oak-----------	---	---	
						eastern hemlock-----	---	---	
						eastern white pine--	50	86	
						hickory-------------	---	---	
						northern red oak----	50	29	
						red maple-----------	---	---	
						red spruce----------	35	72	
						sugar maple*--------	50	29	
						white oak-----------	---	---	

Table 8.—Recreational Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
2A:					
Ondawa	Severe: flooding	Moderate: flooding	Severe: flooding	Moderate: flooding	Severe: flooding
3A:					
Rumney	Severe: flooding wetness	Severe: wetness	Severe: flooding wetness	Severe: wetness	Severe: flooding wetness
4A:					
Sunny	Severe: flooding wetness	Severe: wetness	Severe: flooding wetness	Severe: wetness	Severe: flooding wetness
9A:					
Rifle	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding
14B:					
Colonel	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
14C:					
Colonel	Severe: wetness	Severe: wetness	Severe: slope wetness	Severe: wetness	Severe: wetness
14D:					
Colonel	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: wetness	Severe: slope wetness
17A:					
Cabot	Severe: percs slowly wetness	Severe: percs slowly wetness	Severe: percs slowly wetness	Severe: wetness	Severe: wetness
17B:					
Cabot	Severe: percs slowly wetness	Severe: percs slowly wetness	Severe: percs slowly wetness	Severe: wetness	Severe: wetness
17C:					
Cabot	Severe: percs slowly wetness	Severe: percs slowly wetness	Severe: percs slowly slope wetness	Severe: wetness	Severe: wetness
18B:					
Cabot	Severe: wetness	Severe: wetness	Severe: large stones wetness	Severe: wetness	Severe: wetness
18C:					
Cabot	Severe: wetness	Severe: wetness	Severe: large stones slope wetness	Severe: wetness	Severe: wetness

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
19B:					
Colonel	Severe: wetness	Severe: wetness	Severe: large stones small stones	Severe: wetness	Severe: wetness
19C:					
Colonel	Severe: wetness	Severe: wetness	Severe: large stones slope small stones	Severe: wetness	Severe: wetness
19D:					
Colonel	Severe: slope wetness	Severe: slope wetness	Severe: large stones slope small stones	Severe: slope wetness	Severe: slope wetness
20A:					
Peacham	Severe: excess humus percs slowly ponding	Severe: excess humus percs slowly ponding	Severe: excess humus percs slowly ponding	Severe: excess humus ponding	Severe: excess humus ponding
21A:					
Sunday	Severe: flooding too sandy	Severe: too sandy	Severe: flooding too sandy	Severe: too sandy	Severe: flooding droughty
26A:					
Adams	Slight	Slight	Slight	Slight	Severe: droughty
26B:					
Adams	Slight	Slight	Moderate: slope	Slight	Severe: droughty
26C:					
Adams	Moderate: slope	Moderate: slope	Severe: slope	Slight	Severe: droughty
26D:					
Adams	Severe: slope	Severe: slope	Severe: slope	Moderate: slope	Severe: slope droughty
26E:					
Adams	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
33A:					
Machias	Moderate: wetness	Moderate: wetness	Moderate: small stones wetness	Moderate: wetness	Severe: droughty
33B:					
Machias	Moderate: wetness	Moderate: wetness	Moderate: slope small stones wetness	Moderate: wetness	Severe: droughty

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
33C:					
Machias	Moderate: slope wetness	Moderate: slope wetness	Severe: slope	Moderate: wetness	Severe: droughty
37B:					
Stetson	Slight	Slight	Moderate: slope small stones	Slight	Moderate: droughty
37C:					
Stetson	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: slope droughty
37D:					
Stetson	Severe: slope	Severe: slope	Severe: slope	Moderate: slope	Severe: slope
37E:					
Stetson	Severe: slope	Severe: slope	Severe: slope small stones	Severe: slope	Severe: slope
39A:					
Colton	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Severe: small stones droughty
39B:					
Colton	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Severe: small stones droughty
39C:					
Colton	Moderate: slope small stones	Moderate: slope small stones	Severe: slope small stones	Slight	Severe: small stones droughty
39D:					
Colton	Severe: slope	Severe: slope	Severe: slope small stones	Moderate: slope	Severe: slope small stones droughty
39E:					
Colton	Severe: slope	Severe: slope	Severe: slope small stones	Severe: slope	Severe: slope small stones droughty
41D:					
Buxton	Severe: percs slowly slope	Severe: percs slowly slope	Severe: percs slowly slope	Moderate: slope wetness	Severe: slope
41E:					
Buxton	Severe: percs slowly slope	Severe: percs slowly slope	Severe: percs slowly slope	Severe: slope	Severe: slope
43B:					
Salmon	Slight	Slight	Moderate: slope	Moderate: erodes easily	Slight

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
43C:					
Salmon	Moderate: slope	Moderate: slope	Severe: slope	Severe: erodes easily	Moderate: slope
43D:					
Salmon	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily	Severe: slope
43E:					
Salmon	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily slope	Severe: slope
44B:					
Lamoine	Severe: percs slowly wetness	Severe: percs slowly wetness	Severe: percs slowly wetness	Severe: wetness	Severe: wetness
44C:					
Lamoine	Severe: percs slowly wetness	Severe: percs slowly wetness	Severe: percs slowly slope wetness	Severe: wetness	Severe: wetness
45A:					
Scantic	Severe: percs slowly wetness	Severe: percs slowly wetness	Severe: percs slowly wetness	Severe: wetness	Severe: wetness
55B:					
Nicholville	Slight	Slight	Moderate: slope	Slight	Slight
58A:					
Grange	Severe: wetness	Severe: wetness	Severe: wetness	Severe: erodes easily wetness	Severe: wetness
59A:					
Waitsfield	Severe: flooding	Moderate: flooding	Severe: flooding	Moderate: flooding	Severe: flooding
60A:					
Weider	Severe: flooding	Moderate: flooding wetness	Severe: flooding	Moderate: flooding wetness	Severe: flooding
62B:					
Berkshire	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Moderate: large stones small stones
62C:					
Berkshire	Moderate: slope small stones	Moderate: slope small stones	Severe: slope small stones	Slight	Moderate: large stones slope small stones
62D:					
Berkshire	Severe: slope	Severe: slope	Severe: slope small stones	Moderate: slope	Severe: slope

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
63B:					
Berkshire	Moderate: large stones small stones	Moderate: large stones small stones	Severe: large stones small stones	Slight	Moderate: large stones small stones
63C:					
Berkshire	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Slight	Moderate: large stones small stones
63D:					
Berkshire	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
63E:					
Berkshire	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
64C:					
Salmon	Moderate: slope	Moderate: slope	Severe: slope	Severe: erodes easily	Moderate: slope
Adamant	Moderate: slope	Moderate: slope	Severe: slope	Severe: erodes easily	Moderate: slope depth to rock
64D:					
Salmon	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily	Severe: slope
Adamant	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily	Severe: slope
64E:					
Salmon	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily slope	Severe: slope
Adamant	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily slope	Severe: slope
66B:					
Vershire	Slight	Slight	Moderate: slope	Severe: erodes easily	Moderate: depth to rock
Dummerston	Slight	Slight	Moderate: slope small stones	Slight	Moderate: droughty
66C:					
Vershire	Moderate: slope	Moderate: slope	Severe: slope	Severe: erodes easily	Moderate: slope
Dummerston	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: slope droughty

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
66D:					
Vershire	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily	Severe: slope
Dummerston	Severe: slope	Severe: slope	Severe: slope	Moderate: slope	Severe: slope
66E:					
Vershire	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily slope	Severe: slope
Dummerston	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
67C:					
Glover	Severe: depth to rock	Severe: depth to rock	Severe: large stones slope depth to rock	Slight	Severe: depth to rock
Vershire	Moderate: large stones slope	Moderate: large stones slope	Severe: large stones slope small stones	Slight	Moderate: large stones slope small stones
67D:					
Glover	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock	Severe: slope	Severe: slope depth to rock
Vershire	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
67E:					
Glover	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock	Severe: slope	Severe: slope depth to rock
Vershire	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
68D:					
Stratton	Severe: large stones slope	Severe: large stones slope	Severe: large stones slope depth to rock	Severe: erodes easily slope fragile	Severe: slope thin layer
Glebe	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: slope
68E:					
Stratton	Severe: large stones slope	Severe: large stones slope	Severe: large stones slope depth to rock	Severe: erodes easily slope fragile	Severe: slope thin layer

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
68E:					
Glebe	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: slope
69D:					
Sisk	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
Glebe	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: slope
69E:					
Sisk	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
Glebe	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: slope
71C:					
Tunbridge	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: slope droughty
Lyman	Severe: depth to rock	Severe: depth to rock	Severe: slope small stones depth to rock	Slight	Severe: depth to rock
72B:					
Tunbridge	Moderate: small stones	Moderate: small stones	Severe: large stones small stones	Slight	Moderate: large stones small stones droughty
Lyman	Severe: depth to rock	Severe: depth to rock	Severe: large stones depth to rock	Slight	Severe: depth to rock
72C:					
Tunbridge	Moderate: slope small stones	Moderate: slope small stones	Severe: large stones slope small stones	Slight	Moderate: large stones small stones droughty
Lyman	Severe: depth to rock	Severe: depth to rock	Severe: large stones slope depth to rock	Slight	Severe: depth to rock
72D:					
Tunbridge	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Moderate: large stones small stones droughty

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
72D:					
Lyman	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock	Severe: slope	Severe: slope depth to rock
72E:					
Tunbridge	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Moderate: large stones small stones droughty
Lyman	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock	Severe: slope	Severe: slope depth to rock
76C:					
Berkshire	Moderate: slope small stones	Moderate: slope small stones	Severe: large stones slope small stones	Slight	Moderate: small stones
76D:					
Berkshire	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
76E:					
Berkshire	Severe: slope	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
77B:					
Peru	Moderate: percs slowly wetness	Moderate: percs slowly wetness	Moderate: slope small stones wetness	Moderate: wetness	Moderate: wetness
77C:					
Peru	Moderate: percs slowly slope wetness	Moderate: percs slowly slope wetness	Severe: slope	Moderate: wetness	Moderate: slope wetness
77D:					
Peru	Severe: slope	Severe: slope	Severe: slope	Moderate: slope wetness	Severe: slope
78C:					
Peru	Moderate: percs slowly slope wetness	Moderate: percs slowly slope wetness	Severe: slope	Moderate: wetness	Severe: large stones slope wetness
78D:					
Peru	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
78E:					
Peru	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
79A:					
Markey	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding
Wonsqueak	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding	Severe: excess humus ponding
82A:					
Peacham	Severe: large stones percs slowly ponding	Severe: excess humus large stones ponding	Severe: excess humus large stones ponding	Severe: excess humus large stones ponding	Severe: excess humus ponding
85E:					
Ricker	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus large stones slope	Severe: excess humus slope	Severe: excess humus slope depth to rock
Londonderry	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope	Severe: erodes easily slope	Severe: slope depth to rock
Stratton	Severe: large stones slope	Severe: large stones slope	Severe: large stones slope depth to rock	Severe: erodes easily slope fragile	Severe: slope thin layer
86F:					
Ricker	Severe: excess humus slope depth to rock	Severe: excess humus slope depth to rock	Severe: excess humus large stones slope	Severe: excess humus slope	Severe: excess humus slope depth to rock
Londonderry	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope	Severe: erodes easily slope	Severe: slope depth to rock
Rock Outcrop	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope	Severe: depth to rock
88D:					
Houghtonville	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
89E:					
Houghtonville	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
90B:					
Dummerston	Slight	Slight	Moderate: slope small stones	Slight	Moderate: droughty

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
90C:					
Dummerston	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: slope droughty
90D:					
Dummerston	Severe: slope	Severe: slope	Severe: slope	Moderate: slope	Severe: slope
91C:					
Dummerston	Moderate: slope	Moderate: slope	Severe: large stones slope	Moderate: large stones	Severe: large stones
91D:					
Dummerston	Severe: slope	Severe: slope	Severe: large stones slope	Moderate: large stones	Severe: large stones slope
92B:					
Buckland	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: large stones
92C:					
Buckland	Severe: wetness	Moderate: slope wetness	Severe: slope wetness	Moderate: wetness	Moderate: large stones
92D:					
Buckland	Severe: slope wetness	Severe: slope	Severe: slope wetness	Moderate: slope wetness	Severe: slope
93B:					
Buckland	Severe: wetness	Moderate: large stones wetness	Severe: large stones small stones	Moderate: wetness	Moderate: small stones
93C:					
Buckland	Severe: wetness	Moderate: large stones slope wetness	Severe: large stones slope small stones	Moderate: wetness	Moderate: slope small stones
93D:					
Buckland	Severe: slope wetness	Severe: slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
96D:					
Peru	Severe: large stones slope	Severe: large stones slope	Severe: large stones slope small stones	Severe: slope	Severe: slope
98B:					
Cabot	Severe: large stones wetness	Severe: large stones wetness	Severe: large stones small stones	Severe: wetness	Severe: large stones wetness

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
98C:					
Cabot	Severe: large stones wetness	Severe: large stones wetness	Severe: large stones slope small stones	Severe: wetness	Severe: large stones wetness
99C:					
Colonel	Severe: large stones wetness	Severe: large stones wetness	Severe: large stones slope small stones	Severe: wetness	Severe: wetness
99D:					
Colonel	Severe: large stones slope wetness	Severe: large stones slope wetness	Severe: large stones slope small stones	Severe: slope wetness	Severe: slope wetness
100:					
Pits, Gravel	Severe: small stones too sandy	Severe: small stones too sandy	Severe: small stones too sandy	Severe: small stones too sandy	Severe: small stones too sandy droughty
Pits, Sand	Severe: too sandy	Severe: too sandy	Severe: too sandy	Severe: too sandy	Severe: too sandy droughty
102:					
Dumps	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Pits	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Slight	Severe: depth to rock
103:					
Udorthents	---	---	---	---	---
104:					
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Udipsamments	---	---	---	---	---
116B:					
Mundal	Severe: large stones fragile	Severe: large stones fragile	Severe: large stones fragile	Severe: erodes easily fragile	Severe: large stones
116C:					
Mundal	Severe: large stones fragile	Severe: large stones fragile	Severe: large stones slope fragile	Severe: erodes easily fragile	Severe: large stones
116D:					
Mundal	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
151F:					
Hogback	Severe: large stones slope	Severe: large stones slope	Severe: large stones slope depth to rock	Severe: erodes easily slope fragile	Severe: large stones slope thin layer
Rock Outcrop	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope	Severe: depth to rock
Rawsonville	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
162D:					
Houghtonville	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
Rawsonville	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
162E:					
Houghtonville	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
Rawsonville	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
163C:					
Houghtonville	Severe: large stones fragile	Severe: large stones fragile	Severe: large stones slope fragile	Severe: erodes easily fragile	Severe: large stones
163D:					
Houghtonville	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
163E:					
Houghtonville	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
168C:					
Hogback	Severe: large stones fragile depth to rock	Severe: large stones fragile depth to rock	Severe: large stones slope depth to rock	Severe: erodes easily fragile	Severe: large stones thin layer

Table 8.—Recreational Development—Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
168C:					
Rawsonville	Severe: large stones fragile	Severe: large stones fragile	Severe: large stones slope fragile	Severe: erodes easily fragile	Severe: large stones
168D:					
Hogback	Severe: large stones slope	Severe: large stones slope	Severe: large stones slope depth to rock	Severe: erodes easily slope fragile	Severe: large stones slope thin layer
Rawsonville	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
168E:					
Hogback	Severe: large stones slope	Severe: large stones slope	Severe: large stones slope depth to rock	Severe: erodes easily slope fragile	Severe: large stones slope thin layer
Rawsonville	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: large stones slope fragile	Severe: erodes easily slope fragile	Severe: large stones slope
172F:					
Taconic	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope small stones	Severe: slope	Severe: large stones slope thin layer
Hubbardton	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope small stones	Severe: large stones slope	Severe: large stones slope depth to rock
Rock Outcrop	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope	Severe: depth to rock

Table 9.—Wildlife Habitat

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for-: Open-land wild-life	Wood-land wild-life	Wetland wild-life
2A: Ondawa	Poor	Fair	Fair	Good	Good	Poor	Very poor	Fair	Good	Very poor
3A: Rumney	Poor	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair
4A: Sunny	Poor	Fair	Poor	Fair	Fair	Good	Fair	Fair	Fair	Fair
9A: Rifle	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
14B: Colonel	Fair	Good	Good	Fair	Fair	Poor	Very poor	Good	Fair	Very poor
14C: Colonel	Fair	Good	Good	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor
14D: Colonel	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
17A: Cabot	Poor	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair
17B: Cabot	Poor	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	Fair	Very poor
17C: Cabot	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
18B: Cabot	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
18C: Cabot	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
19B: Colonel	Very poor	Poor	Good	Fair	Fair	Poor	Very poor	Poor	Fair	Very poor
19C: Colonel	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
19D: Colonel	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
20A:										
Peacham	Very poor	Poor	Poor	Poor	Poor	Good	Poor	Poor	Poor	Fair
21A:										
Sunday	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
26A:										
Adams	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
26B:										
Adams	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
26C:										
Adams	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
26D:										
Adams	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
26E:										
Adams	Very poor	Poor	Poor	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
33A:										
Machias	Fair	Good	Good	Fair	Fair	Poor	Poor	Good	Fair	Poor
33B:										
Machias	Fair	Good	Good	Fair	Fair	Poor	Very poor	Good	Fair	Very poor
33C:										
Machias	Fair	Good	Good	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor
37B:										
Stetson	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
37C:										
Stetson	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
37D:										
Stetson	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
37E:										
Stetson	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
39A:										
Colton	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for-: Openland wildlife	Woodland wildlife	Wetland wildlife
39B: Colton	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
39C: Colton	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
39D: Colton	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
39E: Colton	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
41D: Buxton	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
41E: Buxton	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
43B: Salmon	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
43C: Salmon	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
43D: Salmon	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
43E: Salmon	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
44B: Lamoine	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
44C: Lamoine	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
45A: Scantic	Poor	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair
55B: Nicholville	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
58A: Grange	Poor	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair
59A: Waitsfield	Poor	Fair	Fair	Good	Good	Poor	Very poor	Fair	Good	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for-		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
60A:										
Weider	Poor	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor
62B:										
Berkshire	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
62C:										
Berkshire	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
62D:										
Berkshire	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
63B:										
Berkshire	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
63C:										
Berkshire	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
63D:										
Berkshire	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
63E:										
Berkshire	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
64C:										
Salmon	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Adamant	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
64D:										
Salmon	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Adamant	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
64E:										
Salmon	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Adamant	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
66B:										
Vershire	Poor	Fair	Fair	Good	Good	Poor	Very poor	Fair	Good	Very poor
Dummerston	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Open-land wild-life	Wood-land wild-life	Wetland wild-life
66C:										
Vershire	Poor	Fair	Fair	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Dummerston	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
66D:										
Vershire	Poor	Fair	Fair	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Dummerston	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
66E:										
Vershire	Very poor	Very poor	Fair	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
Dummerston	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
67C:										
Glover	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Vershire	Very poor	Poor	Fair	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
67D:										
Glover	Very poor	Very poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Vershire	Very poor	Very poor	Fair	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
67E:										
Glover	Very poor	Very poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Vershire	Very poor	Very poor	Fair	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
68D:										
Stratton	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Glebe	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
68E:										
Stratton	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Glebe	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
69D:										
Sisk	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
69D:										
Glebe	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
69E:										
Sisk	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
Glebe	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
71C:										
Tunbridge	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Lyman	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
72B:										
Tunbridge	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
Lyman	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
72C:										
Tunbridge	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Lyman	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
72D:										
Tunbridge	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Lyman	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
72E:										
Tunbridge	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
Lyman	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
76C:										
Berkshire	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
76D:										
Berkshire	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
76E:										
Berkshire	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
77B:										
Peru	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for-: Openland wildlife	Woodland wildlife	Wetland wildlife
77C:										
Peru	Fair	Good	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
77D:										
Peru	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
78C:										
Peru	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
78D:										
Peru	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
78E:										
Peru	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
79A:										
Markey	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Wonsqueak	Very poor	Poor	Poor	Very poor	Very poor	Good	Good	Poor	Very poor	Good
82A:										
Peacham	Very poor	Poor	Poor	Poor	Poor	Good	Poor	Poor	Poor	Fair
85E:										
Ricker	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
Londonderry	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
Stratton	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
86F:										
Ricker	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
Londonderry	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
Rock Outcrop	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
88D:										
Houghtonville	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
89E:										
Houghtonville	Very poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Very poor	Fair	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for: Openland wildlife	Woodland wildlife	Wetland wildlife
90B: Dummerston	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
90C: Dummerston	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
90D: Dummerston	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
91C: Dummerston	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
91D: Dummerston	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
92B: Buckland	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
92C: Buckland	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
92D: Buckland	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
93B: Buckland	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Fair	Very poor
93C: Buckland	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
93D: Buckland	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
96D: Peru	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
98B: Cabot	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
98C: Cabot	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
99C: Colonel	Very poor	Very poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for-: Openland wildlife	Woodland wildlife	Wetland wildlife
99D:										
Colonel	Very poor	Very poor	Good	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
100:										
Pits, Gravel	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
Pits, Sand	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
102:										
Dumps	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
Pits	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
116B:										
Mundal	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
116C:										
Mundal	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
116D:										
Mundal	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
151F:										
Hogback	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Rock Outcrop	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
Rawsonville	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
162D:										
Houghtonville	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Rawsonville	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
162E:										
Houghtonville	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Rawsonville	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
163C:										
Houghtonville	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor

Table 9.—Wildlife Habitat—Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for-		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
163D:										
Houghtonville----	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
163E:										
Houghtonville----	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
168C:										
Hogback----------	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Rawsonville------	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
168D:										
Hogback----------	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Rawsonville------	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
168E:										
Hogback----------	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Rawsonville------	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
172F:										
Taconic----------	Very poor	Very poor	Poor	Very poor	Very poor	Very poor	Very poor	Poor	Very poor	Very poor
Hubbardton-------	Very poor	Very poor	Poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
Rock Outcrop-----	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor

Table 10.—Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
2A:						
Ondawa	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding
3A:						
Rumney	Severe: wetness cutbanks cave	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action wetness	Severe: flooding wetness
4A:						
Sunny	Severe: wetness cutbanks cave	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action wetness	Severe: flooding wetness
9A:						
Rifle	Severe: excess humus ponding	Severe: low strength ponding	Severe: low strength ponding	Severe: low strength ponding	Severe: frost action ponding	Severe: excess humus ponding
14B:						
Colonel	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness
14C:						
Colonel	Severe: wetness	Severe: wetness	Severe: wetness	Severe: slope wetness	Severe: frost action wetness	Severe: wetness
14D:						
Colonel	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: frost action slope wetness	Severe: slope wetness
17A:						
Cabot	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
17B:						
Cabot	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness
17C:						
Cabot	Severe: wetness	Severe: wetness	Severe: wetness	Severe: slope wetness	Severe: frost action wetness	Severe: wetness
18B:						
Cabot	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness
18C:						
Cabot	Severe: wetness	Severe: wetness	Severe: wetness	Severe: slope wetness	Severe: frost action wetness	Severe: wetness
19B:						
Colonel	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness
19C:						
Colonel	Severe: wetness	Severe: wetness	Severe: wetness	Severe: slope wetness	Severe: frost action wetness	Severe: wetness
19D:						
Colonel	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: frost action slope wetness	Severe: slope wetness
20A:						
Peacham	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: frost action ponding	Severe: excess humus ponding
21A:						
Sunday	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding droughty

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
26A:						
Adams	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
26B:						
Adams	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: droughty
26C:						
Adams	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: droughty
26D:						
Adams	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
26E:						
Adams	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
33A:						
Machias	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: frost action wetness	Severe: droughty
33B:						
Machias	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action wetness	Severe: droughty
33C:						
Machias	Severe: wetness cutbanks cave	Moderate: slope wetness	Severe: wetness	Severe: slope	Moderate: frost action slope wetness	Severe: droughty
37B:						
Stetson	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: droughty
37C:						
Stetson	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: slope droughty

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
37D:						
Stetson	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
37E:						
Stetson	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
39A:						
Colton	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: small stones droughty
39B:						
Colton	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: small stones droughty
39C:						
Colton	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: small stones droughty
39D:						
Colton	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
39E:						
Colton	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
41D:						
Buxton	Severe: slope wetness	Severe: slope	Severe: slope wetness	Severe: slope	Severe: frost action low strength slope	Severe: slope

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
41E:						
Buxton	Severe: slope wetness	Severe: slope	Severe: slope wetness	Severe: slope	Severe: frost action low strength slope	Severe: slope
43B:						
Salmon	Slight	Slight	Slight	Moderate: slope	Severe: frost action	Slight
43C:						
Salmon	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Severe: frost action	Moderate: slope
43D:						
Salmon	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: frost action slope	Severe: slope
43E:						
Salmon	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: frost action slope	Severe: slope
44B:						
Lamoine	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action low strength wetness	Severe: wetness
44C:						
Lamoine	Severe: wetness	Severe: wetness	Severe: wetness	Severe: slope wetness	Severe: frost action low strength wetness	Severe: wetness
45A:						
Scantic	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action low strength wetness	Severe: wetness
55B:						
Nicholville	Severe: wetness	Severe: frost action	Severe: wetness	Severe: frost action	Severe: frost action	Slight

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
58A:						
Grange	Severe: wetness cutbanks cave	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: wetness
59A:						
Waitsfield	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding
60A:						
Weider	Severe: wetness cutbanks cave	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding	Severe: flooding
62B:						
Berkshire	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: large stones small stones
62C:						
Berkshire	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: large stones slope small stones
62D:						
Berkshire	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
63B:						
Berkshire	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: large stones small stones
63C:						
Berkshire	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: large stones small stones
63D:						
Berkshire	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
63E:						
Berkshire	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
64C:						
Salmon	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Severe: frost action	Moderate: slope
Adamant	Severe: depth to rock	Moderate: slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action, slope, depth to rock	Moderate: slope, depth to rock
64D:						
Salmon	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: frost action, slope	Severe: slope
Adamant	Severe: slope, depth to rock	Severe: slope	Severe: slope, depth to rock	Severe: slope	Severe: slope	Severe: slope
64E:						
Salmon	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: frost action, slope	Severe: slope
Adamant	Severe: slope, depth to rock	Severe: slope	Severe: slope, depth to rock	Severe: slope	Severe: slope	Severe: slope
66B:						
Vershire	Severe: depth to rock	Moderate: depth to rock	Severe: depth to rock	Moderate: slope, depth to rock	Moderate: frost action, depth to rock	Moderate: depth to rock
Dummerston	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: droughty
66C:						
Vershire	Severe: depth to rock	Moderate: slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action, slope, depth to rock	Moderate: slope
Dummerston	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action, slope	Moderate: slope, droughty

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
66D:						
Vershire	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope
Dummerston	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
66E:						
Vershire	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope
Dummerston	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
67C:						
Glover	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock
Vershire	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Moderate: large stones slope small stones
67D:						
Glover	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Vershire	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope
67E:						
Glover	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Vershire	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
68D:						
Stratton	Severe: depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: frost action slope depth to rock	Severe: slope thin layer
Glebe	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: frost action slope	Severe: slope
68E:						
Stratton	Severe: depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: frost action slope depth to rock	Severe: slope thin layer
Glebe	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: frost action slope	Severe: slope
69D:						
Sisk	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Glebe	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: frost action slope	Severe: slope
69E:						
Sisk	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Glebe	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: frost action slope	Severe: slope
71C:						
Tunbridge	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Moderate: slope droughty
Lyman	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
72B:						
Tunbridge	Severe: depth to rock	Moderate: depth to rock	Severe: depth to rock	Moderate: slope depth to rock	Moderate: frost action depth to rock	Moderate: large stones small stones droughty
Lyman	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock
72C:						
Tunbridge	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Moderate: large stones small stones droughty
Lyman	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock
72D:						
Tunbridge	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Moderate: large stones small stones droughty
Lyman	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
72E:						
Tunbridge	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Moderate: large stones small stones droughty
Lyman	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
76C:						
Berkshire	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: small stones
76D:						
Berkshire	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
76E:						
Berkshire	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
77B:						
Peru	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Severe: frost action	Moderate: wetness
77C:						
Peru	Severe: wetness	Moderate: slope wetness	Severe: wetness	Severe: slope	Severe: frost action	Moderate: slope wetness
77D:						
Peru	Severe: slope wetness	Severe: slope	Severe: slope wetness	Severe: slope	Severe: frost action slope	Severe: slope
78C:						
Peru	Severe: wetness	Moderate: slope wetness	Severe: wetness	Severe: slope	Severe: frost action	Severe: large stones slope wetness
78D:						
Peru	Severe: slope wetness	Severe: slope	Severe: slope wetness	Severe: slope	Severe: frost action slope	Severe: slope
78E:						
Peru	Severe: slope wetness	Severe: slope	Severe: slope wetness	Severe: slope	Severe: frost action slope	Severe: slope
79A:						
Markey	Severe: excess humus ponding cutbanks cave	Severe: low strength subsides ponding	Severe: subsides ponding	Severe: low strength subsides ponding	Severe: frost action subsides ponding	Severe: excess humus ponding
Wonsqueak	Severe: excess humus ponding	Severe: low strength ponding	Severe: ponding	Severe: low strength ponding	Severe: frost action ponding	Severe: excess humus ponding

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
82A:						
Peacham	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: frost action ponding	Severe: excess humus ponding
85E:						
Ricker	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: excess humus slope depth to rock
Londonderry	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Stratton	Severe: depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: frost action slope depth to rock	Severe: slope thin layer
86F:						
Ricker	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: excess humus slope depth to rock
Londonderry	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Rock Outcrop	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: depth to rock
88D:						
Houghtonville	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: frost action slope	Severe: large stones slope
89E:						
Houghtonville	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: frost action slope	Severe: large stones slope
90B:						
Dummerston	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: droughty

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
90C:						
Dummerston	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope droughty
90D:						
Dummerston	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
91C:						
Dummerston	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Severe: large stones
91D:						
Dummerston	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: large stones slope
92B:						
Buckland	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: large stones
92C:						
Buckland	Severe: wetness	Severe: wetness	Severe: wetness	Severe: slope wetness	Severe: frost action	Moderate: large stones
92D:						
Buckland	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: frost action slope	Severe: slope
93B:						
Buckland	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action	Moderate: small stones
93C:						
Buckland	Severe: wetness	Severe: wetness	Severe: wetness	Severe: slope wetness	Severe: frost action	Moderate: slope small stones
93D:						
Buckland	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: frost action slope	Severe: slope

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
96D:						
Peru	Severe: slope wetness	Severe: slope	Severe: slope wetness	Severe: slope	Severe: frost action slope	Severe: slope
98B:						
Cabot	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: frost action wetness	Severe: large stones wetness
98C:						
Cabot	Severe: wetness	Severe: wetness	Severe: wetness	Severe: slope wetness	Severe: frost action wetness	Severe: large stones wetness
99C:						
Colonel	Severe: wetness	Severe: wetness	Severe: wetness	Severe: slope wetness	Severe: frost action wetness	Severe: wetness
99D:						
Colonel	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: frost action slope wetness	Severe: slope wetness
100:						
Pits, Gravel	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: small stones too sandy droughty
Pits, Sand	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: too sandy droughty
102:						
Dumps	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Pits	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
116B:						
Mundal	Severe: wetness cutbanks cave	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Severe: frost action	Severe: large stones
116C:						
Mundal	Severe: wetness cutbanks cave	Moderate: slope wetness	Severe: wetness	Severe: slope	Severe: frost action	Severe: large stones
116D:						
Mundal	Severe: slope wetness cutbanks cave	Severe: slope	Severe: slope wetness	Severe: slope	Severe: frost action slope	Severe: large stones slope
151F:						
Hogback	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: frost action slope depth to rock	Severe: large stones slope thin layer
Rock Outcrop	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: depth to rock
Rawsonville	Severe: slope cutbanks cave depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: frost action slope	Severe: large stones slope
162D:						
Houghtonville	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: frost action slope	Severe: large stones slope
Rawsonville	Severe: slope cutbanks cave depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: frost action slope	Severe: large stones slope

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
162E:						
Houghtonville	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: frost action slope	Severe: large stones slope
Rawsonville	Severe: slope cutbanks cave depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: frost action slope	Severe: large stones slope
163C:						
Houghtonville	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Severe: frost action	Severe: large stones
163D:						
Houghtonville	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: frost action slope	Severe: large stones slope
163E:						
Houghtonville	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: frost action slope	Severe: large stones slope
168C:						
Hogback	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: frost action depth to rock	Severe: large stones thin layer
Rawsonville	Severe: cutbanks cave depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Severe: frost action	Severe: large stones
168D:						
Hogback	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: frost action slope depth to rock	Severe: large stones slope thin layer
Rawsonville	Severe: slope cutbanks cave depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: frost action slope	Severe: large stones slope

Table 10.—Building Site Development—Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
168E:						
Hogback	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: frost action slope depth to rock	Severe: large stones slope thin layer
Rawsonville	Severe: slope cutbanks cave depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: frost action slope	Severe: large stones slope
172F:						
Taconic	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope thin layer
Hubbardton	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock
Rock Outcrop	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: depth to rock

Table 11.—Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
2A:					
Ondawa	Severe: flooding poor filter	Severe: flooding seepage	Severe: flooding seepage too sandy	Severe: flooding seepage	Poor: seepage too sandy
3A:					
Rumney	Severe: flooding wetness poor filter	Severe: flooding seepage wetness	Severe: flooding seepage wetness	Severe: flooding seepage wetness	Poor: seepage small stones too sandy
4A:					
Sunny	Severe: flooding wetness poor filter	Severe: flooding seepage wetness	Severe: flooding seepage wetness	Severe: flooding seepage wetness	Poor: seepage small stones too sandy
9A:					
Rifle	Severe: ponding	Severe: excess humus seepage ponding	Severe: excess humus seepage ponding	Severe: seepage ponding	Poor: excess humus ponding
14B:					
Colonel	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness
14C:					
Colonel	Severe: percs slowly wetness	Severe: slope wetness	Severe: wetness	Severe: wetness	Poor: wetness
14D:					
Colonel	Severe: percs slowly slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Poor: slope wetness
17A:					
Cabot	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: area reclaim thin layer wetness
17B:					
Cabot	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: area reclaim thin layer wetness
17C:					
Cabot	Severe: percs slowly wetness	Severe: slope wetness	Severe: wetness	Severe: wetness	Poor: area reclaim thin layer wetness

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
18B:					
Cabot	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness
18C:					
Cabot	Severe: percs slowly wetness	Severe: slope wetness	Severe: wetness	Severe: wetness	Poor: wetness
19B:					
Colonel	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness
19C:					
Colonel	Severe: percs slowly wetness	Severe: slope wetness	Severe: wetness	Severe: wetness	Poor: wetness
19D:					
Colonel	Severe: percs slowly slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Poor: slope wetness
20A:					
Peacham	Severe: percs slowly ponding	Severe: excess humus ponding	Severe: ponding	Severe: ponding	Poor: ponding
21A:					
Sunday	Severe: flooding poor filter	Severe: flooding seepage	Severe: flooding seepage too sandy	Severe: flooding seepage	Poor: seepage too sandy
26A:					
Adams	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
26B:					
Adams	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
26C:					
Adams	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy
26D:					
Adams	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage slope too sandy
26E:					
Adams	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage slope too sandy

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
33A:					
Machias	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage small stones too sandy
33B:					
Machias	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage small stones too sandy
33C:					
Machias	Severe: wetness poor filter	Severe: seepage slope wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage small stones too sandy
37B:					
Stetson	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
37C:					
Stetson	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
37D:					
Stetson	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage small stones too sandy
37E:					
Stetson	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage small stones too sandy
39A:					
Colton	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
39B:					
Colton	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy
39C:					
Colton	Severe: poor filter	Severe: seepage slope	Severe: seepage too sandy	Severe: seepage	Poor: seepage small stones too sandy

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
39D:					
Colton	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage small stones too sandy
39E:					
Colton	Severe: slope poor filter	Severe: seepage slope	Severe: seepage slope too sandy	Severe: seepage slope	Poor: seepage small stones too sandy
41D:					
Buxton	Severe: percs slowly slope wetness	Severe: slope	Severe: slope too clayey wetness	Severe: slope	Poor: hard to pack slope too clayey
41E:					
Buxton	Severe: percs slowly slope wetness	Severe: slope	Severe: slope too clayey wetness	Severe: slope	Poor: hard to pack slope too clayey
43B:					
Salmon	Moderate: percs slowly	Moderate: seepage slope	Slight	Slight	Good
43C:					
Salmon	Moderate: percs slowly slope	Severe: slope	Moderate: slope	Moderate: slope	Fair: slope
43D:					
Salmon	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: slope
43E:					
Salmon	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: slope
44B:					
Lamoine	Severe: percs slowly wetness	Moderate: slope	Severe: too clayey wetness	Severe: wetness	Poor: hard to pack too clayey wetness
44C:					
Lamoine	Severe: percs slowly wetness	Severe: slope	Severe: too clayey wetness	Severe: wetness	Poor: hard to pack too clayey wetness
45A:					
Scantic	Severe: percs slowly wetness	Slight	Severe: too clayey wetness	Severe: wetness	Poor: hard to pack too clayey wetness
55B:					
Nicholville	Severe: wetness	Severe: wetness	Severe: wetness	Moderate: wetness	Good

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
58A:					
Grange	Severe: wetness poor filter	Severe: seepage wetness	Severe: seepage too sandy wetness	Severe: seepage wetness	Poor: seepage too sandy wetness
59A:					
Waitsfield	Severe: flooding poor filter	Severe: flooding seepage	Severe: flooding seepage too sandy	Severe: flooding seepage	Poor: small stones too sandy
60A:					
Weider	Severe: flooding wetness poor filter	Severe: flooding seepage wetness	Severe: flooding seepage wetness	Severe: flooding seepage wetness	Poor: seepage small stones too sandy
62B:					
Berkshire	Moderate: percs slowly	Severe: seepage	Severe: seepage	Severe: seepage	Poor: small stones
62C:					
Berkshire	Moderate: percs slowly slope	Severe: seepage slope	Severe: seepage	Severe: seepage	Poor: small stones
62D:					
Berkshire	Severe: slope	Severe: seepage slope	Severe: seepage slope	Severe: seepage slope	Poor: slope small stones
63B:					
Berkshire	Moderate: percs slowly	Severe: seepage	Severe: seepage	Severe: seepage	Fair: small stones
63C:					
Berkshire	Moderate: percs slowly slope	Severe: seepage slope	Severe: seepage	Severe: seepage	Fair: slope small stones
63D:					
Berkshire	Severe: slope	Severe: seepage slope	Severe: seepage slope	Severe: seepage slope	Poor: slope
63E:					
Berkshire	Severe: slope	Severe: seepage slope	Severe: seepage slope	Severe: seepage slope	Poor: slope
64C:					
Salmon	Moderate: percs slowly slope	Severe: slope	Moderate: slope	Moderate: slope	Fair: slope
Adamant	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: depth to rock

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
64D:					
Salmon	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: slope
Adamant	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
64E:					
Salmon	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: slope
Adamant	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
66B:					
Vershire	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock
Dummerston	Moderate: percs slowly	Moderate: seepage slope	Slight	Slight	Poor: small stones
66C:					
Vershire	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock
Dummerston	Moderate: percs slowly slope	Severe: slope	Moderate: slope	Moderate: slope	Poor: small stones
66D:					
Vershire	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
Dummerston	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: slope small stones
66E:					
Vershire	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
Dummerston	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: slope small stones
67C:					
Glover	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock
Vershire	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
67D:					
Glover	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
Vershire	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
67E:					
Glover	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
Vershire	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
68D:					
Stratton	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim seepage small stones
Glebe	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope
68E:					
Stratton	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim seepage small stones
Glebe	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope
69D:					
Sisk	Severe: percs slowly slope	Severe: slope	Severe: slope	Severe: slope	Poor: slope small stones
Glebe	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
69E:					
Sisk	Severe: percs slowly slope	Severe: slope	Severe: slope	Severe: slope	Poor: slope small stones
Glebe	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
71C:					
Tunbridge	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: small stones depth to rock
Lyman	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: seepage depth to rock	Poor: small stones depth to rock
72B:					
Tunbridge	Severe: depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: area reclaim
Lyman	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: seepage depth to rock	Poor: depth to rock
72C:					
Tunbridge	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: area reclaim
Lyman	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: seepage depth to rock	Poor: depth to rock
72D:					
Tunbridge	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope
Lyman	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
72E:					
Tunbridge	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope
Lyman	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: seepage slope depth to rock	Poor: slope depth to rock
76C:					
Berkshire	Moderate: percs slowly slope	Severe: seepage slope	Severe: seepage	Severe: seepage	Fair: slope small stones
76D:					
Berkshire	Severe: slope	Severe: seepage slope	Severe: seepage slope	Severe: seepage slope	Poor: slope

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
76E:					
Berkshire	Severe: slope	Severe: seepage slope	Severe: seepage slope	Severe: seepage slope	Poor: slope
77B:					
Peru	Severe: percs slowly wetness	Moderate: seepage slope	Severe: wetness	Moderate: wetness	Fair: small stones wetness
77C:					
Peru	Severe: percs slowly wetness	Severe: slope	Severe: wetness	Moderate: slope wetness	Fair: slope small stones wetness
77D:					
Peru	Severe: percs slowly slope wetness	Severe: slope	Severe: slope wetness	Severe: slope	Poor: slope
78C:					
Peru	Severe: percs slowly wetness	Severe: slope	Severe: wetness	Moderate: slope wetness	Fair: slope small stones wetness
78D:					
Peru	Severe: percs slowly slope wetness	Severe: slope	Severe: slope wetness	Severe: slope	Poor: slope
78E:					
Peru	Severe: percs slowly slope wetness	Severe: slope	Severe: slope wetness	Severe: slope	Poor: slope
79A:					
Markey	Severe: percs slowly subsides ponding	Severe: excess humus seepage ponding	Severe: seepage too sandy ponding	Severe: seepage ponding	Poor: seepage too sandy ponding
Wonsqueak	Severe: percs slowly ponding	Severe: excess humus seepage ponding	Severe: ponding	Severe: seepage ponding	Poor: ponding
82A:					
Peacham	Severe: percs slowly ponding	Severe: excess humus ponding	Severe: ponding	Severe: ponding	Poor: ponding
85E:					
Ricker	Severe: slope depth to rock	Severe: excess humus slope depth to rock	Severe: seepage slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Londonderry	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
Stratton	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim seepage small stones
86F:					
Ricker	Severe: slope depth to rock	Severe: excess humus slope depth to rock	Severe: seepage slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
Londonderry	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
Rock Outcrop	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: slope depth to rock
88D:					
Houghtonville	Severe: slope	Severe: seepage slope	Severe: seepage slope	Severe: seepage slope	Poor: slope
89E:					
Houghtonville	Severe: slope	Severe: large stones seepage slope	Severe: seepage slope	Severe: seepage slope	Poor: slope
90B:					
Dummerston	Moderate: percs slowly	Moderate: seepage slope	Slight	Slight	Poor: small stones
90C:					
Dummerston	Moderate: percs slowly slope	Severe: slope	Moderate: slope	Moderate: slope	Poor: small stones
90D:					
Dummerston	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: slope small stones
91C:					
Dummerston	Moderate: percs slowly slope	Severe: slope	Moderate: slope	Moderate: slope	Poor: small stones
91D:					
Dummerston	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: slope small stones
92B:					
Buckland	Severe: percs slowly wetness	Severe: seepage	Severe: wetness	Severe: seepage wetness	Poor: wetness

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
92C:					
Buckland	Severe: percs slowly wetness	Severe: seepage slope	Severe: wetness	Severe: seepage wetness	Poor: wetness
92D:					
Buckland	Severe: percs slowly slope wetness	Severe: seepage slope	Severe: slope wetness	Severe: seepage slope wetness	Poor: slope wetness
93B:					
Buckland	Severe: percs slowly wetness	Moderate: seepage slope	Severe: wetness	Severe: wetness	Poor: wetness
93C:					
Buckland	Severe: percs slowly wetness	Severe: slope	Severe: wetness	Severe: wetness	Poor: wetness
93D:					
Buckland	Severe: percs slowly slope wetness	Severe: slope	Severe: slope wetness	Severe: slope wetness	Poor: slope wetness
96D:					
Peru	Severe: percs slowly slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: slope	Poor: slope small stones
98B:					
Cabot	Severe: percs slowly wetness	Moderate: large stones seepage slope	Severe: wetness	Severe: wetness	Poor: large stones wetness
98C:					
Cabot	Severe: percs slowly wetness	Severe: slope	Severe: wetness	Severe: wetness	Poor: large stones wetness
99C:					
Colonel	Severe: percs slowly wetness	Severe: slope wetness	Severe: wetness	Severe: wetness	Poor: wetness
99D:					
Colonel	Severe: percs slowly slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: slope wetness	Poor: slope wetness
100:					
Pits, Sand	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Severe: seepage	Poor: seepage too sandy

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
100:					
Pits, Gravel	Severe: poor filter	Severe: seepage	Severe: seepage too sandy	Slight	Poor: seepage small stones too sandy
102:					
Pits	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock
Dumps	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
103:					
Udorthents	—	—	—	—	—
104:					
Urban Land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Udipsamments	—	—	—	—	—
116B:					
Mundal	Severe: percs slowly wetness	Severe: wetness	Severe: wetness	Moderate: wetness	Poor: small stones
116C:					
Mundal	Severe: percs slowly wetness	Severe: slope wetness	Severe: wetness	Moderate: slope wetness	Poor: small stones
116D:					
Mundal	Severe: percs slowly slope wetness	Severe: slope wetness	Severe: slope wetness	Severe: slope	Poor: slope small stones
151F:					
Hogback	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope
Rock Outcrop	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: slope depth to rock
Rawsonville	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope small stones
162D:					
Houghtonville	Severe: slope	Severe: seepage slope	Severe: seepage slope	Severe: seepage slope	Poor: slope
Rawsonville	Severe: percs slowly poor filter depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope small stones

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
162E:					
Houghtonville----------	Severe: slope	Severe: seepage slope	Severe: seepage slope	Severe: seepage slope	Poor: slope
Rawsonville------------	Severe: percs slowly poor filter depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope small stones
163C:					
Houghtonville----------	Moderate: percs slowly slope	Severe: seepage slope	Severe: seepage	Severe: seepage	Fair: slope small stones
163D:					
Houghtonville----------	Severe: slope	Severe: seepage slope	Severe: seepage slope	Severe: seepage slope	Poor: slope
163E:					
Houghtonville----------	Severe: slope	Severe: seepage slope	Severe: seepage slope	Severe: seepage slope	Poor: slope
168C:					
Hogback----------------	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: area reclaim
Rawsonville------------	Severe: depth to rock	Severe: seepage slope depth to rock	Severe: seepage depth to rock	Severe: seepage depth to rock	Poor: area reclaim small stones
168D:					
Hogback----------------	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope
Rawsonville------------	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope small stones
168E:					
Hogback----------------	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope
Rawsonville------------	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope small stones
172F:					
Taconic----------------	Severe: slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Severe: seepage slope depth to rock	Poor: area reclaim slope small stones

Table 11.—Sanitary Facilities—Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Hubbardton	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: seepage slope depth to rock	Severe: slope depth to rock	Poor: slope depth to rock
Rock Outcrop	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock	Poor: slope depth to rock

Table 12.—Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
2A:				
Ondawa	Good	Probable	Improbable: too sandy	Fair: small stones thin layer
3A:				
Rumney	Poor: wetness	Probable	Probable	Poor: area reclaim small stones wetness
4A:				
Sunny	Poor: wetness	Probable	Probable	Poor: area reclaim wetness
9A:				
Rifle	Poor: low strength wetness	Improbable: excess humus	Improbable: excess humus	Poor: excess humus wetness
14B:				
Colonel	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
14C:				
Colonel	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
14D:				
Colonel	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
17A:				
Cabot	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
17B:				
Cabot	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
17C:				
Cabot	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
18B:				
Cabot	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim large stones wetness
18C:				
Cabot	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim large stones wetness
19B:				
Colonel	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
19C:				
Colonel	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
19D:				
Colonel	Poor: slope wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
20A:				
Peacham	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim excess humus small stones
21A:				
Sunday	Good	Probable	Improbable: too sandy	Poor: too sandy
26A:				
Adams	Good	Probable	Improbable: too sandy	Poor: too sandy
26B:				
Adams	Good	Probable	Improbable: too sandy	Poor: too sandy
26C:				
Adams	Good	Probable	Improbable: too sandy	Poor: too sandy
26D:				
Adams	Fair: slope	Probable	Improbable: too sandy	Poor: slope too sandy

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
26E:				
Adams-------------------	Poor: slope	Probable	Improbable: too sandy	Poor: slope too sandy
33A:				
Machias-----------------	Fair: wetness	Probable	Probable	Poor: area reclaim small stones too sandy
33B:				
Machias-----------------	Fair: wetness	Probable	Probable	Poor: area reclaim small stones too sandy
33C:				
Machias-----------------	Fair: wetness	Probable	Probable	Poor: area reclaim small stones too sandy
37B:				
Stetson-----------------	Good	Probable	Probable	Poor: area reclaim small stones
37C:				
Stetson-----------------	Good	Probable	Probable	Poor: area reclaim small stones
37D:				
Stetson-----------------	Fair: slope	Probable	Probable	Poor: area reclaim slope small stones
37E:				
Stetson-----------------	Poor: slope	Probable	Probable	Poor: area reclaim slope small stones
39A:				
Colton------------------	Good	Probable	Probable	Poor: small stones too sandy
39B:				
Colton------------------	Good	Probable	Probable	Poor: small stones too sandy

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
39C:				
Colton	Good	Probable	Probable	Poor: small stones too sandy
39D:				
Colton	Fair: slope	Probable	Probable	Poor: slope small stones too sandy
39E:				
Colton	Poor: slope	Probable	Probable	Poor: slope small stones too sandy
41D:				
Buxton	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: slope too clayey
41E:				
Buxton	Poor: low strength slope	Improbable: excess fines	Improbable: excess fines	Poor: slope too clayey
43B:				
Salmon	Fair: low strength	Improbable: excess fines	Improbable: excess fines	Good
43C:				
Salmon	Fair: low strength	Improbable: excess fines	Improbable: excess fines	Fair: slope
43D:				
Salmon	Fair: low strength slope	Improbable: excess fines	Improbable: excess fines	Poor: slope
43E:				
Salmon	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope
44B:				
Lamoine	Poor: low strength wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness
44C:				
Lamoine	Poor: low strength wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness
45A:				
Scantic	Poor: low strength wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
55B:				
Nicholville	Poor: frost action	Improbable: excess fines	Improbable: excess fines	Good
58A:				
Grange	Poor: wetness	Probable	Improbable: too sandy	Poor: wetness
59A:				
Waitsfield	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too sandy
60A:				
Weider	Fair: wetness	Probable	Probable	Poor: area reclaim small stones
62B:				
Berkshire	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
62C:				
Berkshire	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
62D:				
Berkshire	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
63B:				
Berkshire	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
63C:				
Berkshire	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
63D:				
Berkshire	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
63E:				
Berkshire	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
64C:				
Salmon	Fair: low strength	Improbable: excess fines	Improbable: excess fines	Fair: slope
Adamant	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Fair: slope thin layer depth to rock

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
64D:				
Salmon	Fair: low strength slope	Improbable: excess fines	Improbable: excess fines	Poor: slope
Adamant	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope
64E:				
Salmon	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope
Adamant	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope
66B:				
Vershire	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Dummerston	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
66C:				
Vershire	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Dummerston	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
66D:				
Vershire	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Dummerston	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
66E:				
Vershire	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Dummerston	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
67C:				
Glover	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Vershire	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
67D:				
Glover	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Vershire	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
67E:				
Glover	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Vershire	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
68D:				
Stratton	Poor: area reclaim large stones slope	Improbable: large stones small stones	Improbable: large stones	Poor: area reclaim large stones slope
Glebe	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
68E:				
Stratton	Poor: area reclaim large stones slope	Improbable: large stones small stones	Improbable: large stones	Poor: area reclaim large stones slope
Glebe	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
69D:				
Sisk	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
Glebe	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
69E:				
Sisk	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
Glebe	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
71C:				
Tunbridge	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Lyman	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones depth to rock
72B:				
Tunbridge	Poor: area reclaim	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Lyman	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
72C:				
Tunbridge	Poor: area reclaim	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Lyman	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
72D:				
Tunbridge	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Lyman	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
72E:				
Tunbridge	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Lyman	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
76C:				
Berkshire	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
76D:				
Berkshire	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
76E:				
Berkshire	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
77B:				
Peru	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
77C:				
Peru	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
77D:				
Peru	Fair: slope, wetness	Improbable: excess fines	Improbable: excess fines	Poor: slope, small stones
78C:				
Peru	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
78D:				
Peru	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope, small stones
78E:				
Peru	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope, small stones
79A:				
Markey	Poor: wetness	Probable	Improbable: too sandy	Poor: excess humus, wetness
Wonsqueak	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess humus, wetness
82A:				
Peacham	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim, excess humus, small stones
85E:				
Ricker	Poor: slope, depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: excess humus, slope, depth to rock
85E:				
Londonderry	Poor: slope, depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope, small stones, depth to rock
Stratton	Poor: area reclaim, large stones, slope	Improbable: large stones, small stones	Improbable: large stones	Poor: area reclaim, large stones, slope

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
86F:				
Ricker	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: excess humus slope depth to rock
Londonderry	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Rock Outcrop	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope depth to rock
88D:				
Houghtonville	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
89E:				
Houghtonville	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: large stones slope small stones
90B:				
Dummerston	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
90C:				
Dummerston	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
90D:				
Dummerston	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
91C:				
Dummerston	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
91D:				
Dummerston	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
92B:				
Buckland	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
92C:				
Buckland	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
92D:				
Buckland	Fair: slope wetness	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
93B:				
Buckland	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
93C:				
Buckland	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
93D:				
Buckland	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
96D:				
Peru	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
98B:				
Cabot	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
98C:				
Cabot	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
99C:				
Colonel	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
99D:				
Colonel	Poor: slope wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones wetness
100:				
Pits, Gravel	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Pits, Sand	Good	Probable	Improbable: too sandy	Poor: small stones too sandy
102:				
Dumps	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Pits	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock
116B:				
Mundal	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
116C:				
Mundal	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
116D:				
Mundal	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
151F:				
Hogback	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
Rock Outcrop	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope depth to rock
Rawsonville	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
162D:				
Houghtonville	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Rawsonville	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
162E:				
Houghtonville	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Rawsonville	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
163C:				
Houghtonville	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
163D:				
Houghtonville	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
163E:				
Houghtonville	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
168C:				
Hogback	Poor: area reclaim	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Rawsonville	Poor: area reclaim	Improbable: excess fines	Improbable: excess fines	Poor: small stones

Table 12.—Construction Materials—Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
168D:				
Hogback	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
Rawsonville	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
168E:				
Hogback	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
Rawsonville	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
172F:				
Taconic	Poor: area reclaim slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
172F:				
Hubbardton	Poor: large stones slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: large stones slope depth to rock
Rock Outcrop	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope depth to rock

Table 13.—Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
2A:							
Ondawa	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: flooding soil blowing	Limitation: erodes easily too sandy soil blowing	Limitation: erodes easily
3A:							
Rumney	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: flooding frost action cutbanks cave	Limitation: flooding wetness soil blowing	Limitation: erodes easily too sandy wetness	Limitation: erodes easily wetness
4A:							
Sunny	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: flooding frost action cutbanks cave	Limitation: flooding wetness	Limitation: erodes easily too sandy wetness	Limitation: erodes easily wetness
9A:							
Rifle	Severe: seepage	Severe: excess humus ponding	Moderate: slow refill	Limitation: frost action ponding	Limitation: soil blowing ponding	Limitation: soil blowing ponding	Limitation: wetness
14B:							
Colonel	Moderate: slope	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly wetness	Limitation: rooting depth wetness
14C:							
Colonel	Severe: slope	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly slope wetness	Limitation: rooting depth slope wetness
14D:							
Colonel	Severe: slope	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly slope wetness	Limitation: rooting depth slope wetness

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Limitations for-- Embankments, dikes, and levees	Limitations for-- Aquifer-fed excavated ponds	Features affecting-- Drainage	Features affecting-- Irrigation	Features affecting-- Terraces and diversions	Features affecting-- Grassed waterways
17A:							
Cabot	Slight	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly	Limitation: percs slowly rooting depth wetness	Limitation: rooting depth wetness	Limitation: rooting depth wetness
17B:							
Cabot	Moderate: slope	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly rooting depth wetness	Limitation: rooting depth wetness	Limitation: rooting depth wetness
17C:							
Cabot	Severe: slope	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly rooting depth wetness	Limitation: rooting depth slope wetness	Limitation: rooting depth slope wetness
18B:							
Cabot	Moderate: slope	Severe: piping wetness	Severe: no water	Limitation: frost action large stones percs slowly	Limitation: large stones percs slowly wetness	Limitation: large stones rooting depth wetness	Limitation: large stones rooting depth wetness
18C:							
Cabot	Severe: slope	Severe: piping wetness	Severe: no water	Limitation: frost action large stones percs slowly	Limitation: large stones percs slowly wetness	Limitation: large stones slope wetness	Limitation: large stones slope wetness
19B:							
Colonel	Moderate: slope	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly wetness	Limitation: rooting depth wetness
19C:							
Colonel	Severe: slope	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly slope wetness	Limitation: rooting depth slope wetness

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
19D:							
Colonel	Severe: slope	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly slope wetness	Limitation: rooting depth slope wetness
20A:							
Peacham	Slight	Severe: piping ponding	Severe: slow refill	Limitation: frost action percs slowly ponding	Limitation: percs slowly ponding droughty	Limitation: percs slowly rooting depth ponding	Limitation: percs slowly rooting depth wetness
21A:							
Sunday	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake flooding droughty	Limitation: too sandy	Limitation: droughty
26A:							
Adams	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
26B:							
Adams	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
26C:							
Adams	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
26D:							
Adams	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
26E:							
Adams	Severe: seepage slope	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
33A:							
Machias	Severe: seepage	Severe: seepage wetness	Severe: cutbanks cave	Limitation: cutbanks cave	Limitation: wetness droughty	Limitation: large stones wetness	Limitation: large stones droughty
33B:							
Machias	Severe: seepage	Severe: seepage wetness	Severe: cutbanks cave	Limitation: slope cutbanks cave	Limitation: slope wetness droughty	Limitation: large stones wetness	Limitation: large stones droughty
33C:							
Machias	Severe: seepage slope	Severe: seepage wetness	Severe: cutbanks cave	Limitation: slope cutbanks cave	Limitation: slope wetness droughty	Limitation: large stones slope wetness	Limitation: large stones slope droughty
37B:							
Stetson	Severe: seepage	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: large stones too sandy	Limitation: large stones droughty
37C:							
Stetson	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
37D:							
Stetson	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
37E:							
Stetson	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
39A:							
Colton	Severe: seepage	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: large stones too sandy	Limitation: large stones droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
39B:							
Colton	Severe: seepage	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones too sandy	Limitation: large stones droughty
39C:							
Colton	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
39D:							
Colton	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
39E:							
Colton	Severe: seepage slope	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: large stones slope too sandy	Limitation: large stones slope droughty
41D:							
Buxton	Severe: slope	Severe: hard to pack	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily slope wetness	Limitation: erodes easily rooting depth slope
41E:							
Buxton	Severe: slope	Severe: hard to pack	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily slope wetness	Limitation: erodes easily rooting depth slope
43B:							
Salmon	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily	Limitation: erodes easily
43C:							
Salmon	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Limitations for-- Embankments, dikes, and levees	Limitations for-- Aquifer-fed excavated ponds	Features affecting-- Drainage	Features affecting-- Irrigation	Features affecting-- Terraces and diversions	Features affecting-- Grassed waterways
43D:							
Salmon	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
43E:							
Salmon	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
44B:							
Lamoine	Moderate: slope	Severe: hard to pack wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily wetness	Limitation: erodes easily wetness
44C:							
Lamoine	Severe: slope	Severe: hard to pack wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily slope wetness	Limitation: erodes easily slope wetness
45A:							
Scantic	Slight	Severe: hard to pack wetness	Severe: no water	Limitation: frost action percs slowly	Limitation: percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily rooting depth wetness
55B:							
Nicholville	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: cutbanks cave	Limitation: erodes easily	Limitation: erodes easily	Limitation: erodes easily
58A:							
Grange	Severe: seepage	Severe: seepage wetness	Severe: cutbanks cave	Limitation: frost action cutbanks cave	Limitation: erodes easily wetness	Limitation: erodes easily too sandy wetness	Limitation: erodes easily wetness
59A:							
Waitsfield	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: flooding droughty	Limitation: erodes easily too sandy	Limitation: erodes easily droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
60A:							
Weider	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: flooding cutbanks cave	Limitation: flooding wetness	Limitation: erodes easily too sandy wetness	Limitation: erodes easily
62B:							
Berkshire	Severe: seepage	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope soil blowing	Limitation: large stones soil blowing	Limitation: large stones
62C:							
Berkshire	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope soil blowing	Limitation: large stones slope soil blowing	Limitation: large stones slope
62D:							
Berkshire	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope soil blowing	Limitation: large stones slope soil blowing	Limitation: large stones slope
63B:							
Berkshire	Severe: seepage	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones	Limitation: large stones droughty
63C:							
Berkshire	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope	Limitation: large stones slope droughty
63D:							
Berkshire	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope	Limitation: large stones slope droughty
63E:							
Berkshire	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope	Limitation: large stones slope droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
64C:							
Salmon	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Adamant	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
64D:							
Salmon	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Adamant	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
64E:							
Salmon	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Adamant	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
66B:							
Vershire	Moderate: seepage slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: large stones depth to rock	Limitation: erodes easily large stones
Dummerston	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Favorable	Limitation: droughty
66C:							
Vershire	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Dummerston	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: slope	Limitation: slope droughty
66D:							
Vershire	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope
Dummerston	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: slope	Limitation: slope droughty
66E:							
Vershire	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope
Dummerston	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: slope	Limitation: slope droughty
67C:							
Glover	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
Vershire	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
67D:							
Glover	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
Vershire	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
67E:							
Glover	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
Vershire	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
68D:							
Stratton	Severe: slope depth to rock	Severe: large stones seepage piping	Severe: no water	Limitation: deep to water	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope
Glebe	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: erodes easily slope
68E:							
Stratton	Severe: slope depth to rock	Severe: large stones seepage piping	Severe: no water	Limitation: deep to water	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope
Glebe	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: erodes easily slope
69D:							
Sisk	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: percs slowly rooting depth slope	Limitation: percs slowly slope	Limitation: rooting depth slope
Glebe	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: slope depth to rock	Limitation: erodes easily slope

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
69E:							
Sisk	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: percs slowly rooting depth slope	Limitation: percs slowly slope	Limitation: rooting depth slope
Glebe	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: slope depth to rock	Limitation: erodes easily slope
71C:							
Tunbridge	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: slope soil blowing depth to rock	Limitation: slope depth to rock droughty
Lyman	Severe: slope depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock droughty
72B:							
Tunbridge	Severe: seepage	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones depth to rock	Limitation: large stones droughty
Lyman	Severe: depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: depth to rock	Limitation: depth to rock droughty
72C:							
Tunbridge	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope droughty
Lyman	Severe: slope depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock droughty

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
72D:							
Tunbridge	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope droughty
Lyman	Severe: slope depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock droughty
72E:							
Tunbridge	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope droughty
Lyman	Severe: slope depth to rock	Severe: piping thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock droughty	Limitation: slope depth to rock	Limitation: slope depth to rock droughty
76C:							
Berkshire	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope	---
76D:							
Berkshire	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope	---
76E:							
Berkshire	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope	---
77B:							
Peru	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: wetness soil blowing	Limitation: percs slowly rooting depth

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
77C:							
Peru	Severe: slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: slope wetness soil blowing	Limitation: percs slowly rooting depth slope
77D:							
Peru	Severe: slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: slope wetness soil blowing	Limitation: percs slowly rooting depth slope
78C:							
Peru	Severe: slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly slope wetness	Limitation: percs slowly rooting depth slope
78D:							
Peru	Severe: slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly slope wetness	Limitation: percs slowly rooting depth slope
78E:							
Peru	Severe: slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly slope wetness	Limitation: percs slowly rooting depth slope
79A:							
Markey	Severe: seepage	Severe: seepage piping ponding	Severe: slow refill cutbanks cave	Limitation: frost action subsides ponding	Limitation: soil blowing ponding	Limitation: too sandy soil blowing ponding	Limitation: wetness
Wonsqueak	Severe: seepage	Severe: piping ponding	Severe: slow refill	Limitation: frost action ponding	Limitation: ponding	Limitation: erodes easily ponding	Limitation: erodes easily wetness
82A:							
Peacham	Slight	Severe: piping ponding	Severe: slow refill	Limitation: frost action percs slowly ponding	Limitation: large stones ponding	Limitation: large stones rooting depth ponding	Limitation: large stones wetness

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
85E:							
Ricker	Severe: slope depth to rock	Severe: thin layer	Severe: no water	Limitation: deep to water	Limitation: rooting depth slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Londonderry	Severe: slope depth to rock	Severe: thin layer	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Stratton	Severe: slope depth to rock	Severe: large stones seepage piping	Severe: no water	Limitation: deep to water	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope
86F:							
Ricker	Severe: slope depth to rock	Severe: thin layer	Severe: no water	Limitation: deep to water	Limitation: rooting depth slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Londonderry	Severe: slope depth to rock	Severe: thin layer	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Rock Outcrop	Severe: slope depth to rock	Slight	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
88D:							
Houghtonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily rooting depth slope	Limitation: erodes easily slope	Limitation: erodes easily rooting depth slope
89E:							
Houghtonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily rooting depth slope	Limitation: erodes easily large stones slope	Limitation: erodes easily rooting depth slope

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
90B: Dummerston	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Favorable	Limitation: droughty
90C: Dummerston	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: slope	Limitation: slope droughty
90D: Dummerston	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: slope	Limitation: slope droughty
91C: Dummerston	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope	Limitation: large stones slope droughty
91D: Dummerston	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones slope	Limitation: large stones slope droughty
92B: Buckland	Severe: seepage	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily large stones	Limitation: large stones wetness
92C: Buckland	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily large stones slope	Limitation: large stones slope wetness
92D: Buckland	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily large stones slope	Limitation: large stones slope wetness

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
93B: Buckland	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily large stones	Limitation: large stones wetness
93C: Buckland	Severe: slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily large stones slope	Limitation: large stones slope wetness
93D: Buckland	Severe: slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily large stones slope	Limitation: large stones slope wetness
96D: Peru	Severe: slope	Severe: piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly slope wetness	Limitation: percs slowly rooting depth slope
98B: Cabot	Moderate: slope	Severe: piping wetness	Severe: no water	Limitation: frost action large stones percs slowly	Limitation: large stones slope wetness	Limitation: large stones wetness	Limitation: large stones wetness
98C: Cabot	Severe: slope	Severe: piping wetness	Severe: no water	Limitation: frost action large stones percs slowly	Limitation: large stones slope wetness	Limitation: large stones slope wetness	Limitation: large stones slope wetness
99C: Colonel	Severe: slope	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly slope wetness	Limitation: rooting depth slope wetness

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
99D:							
Colonel	Severe: slope	Severe: piping wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: percs slowly slope wetness	Limitation: rooting depth slope wetness
100:							
Pits, Gravel	Severe: seepage	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: large stones too sandy	Limitation: large stones droughty
Pits, Sand	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
102:							
Dumps	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Pits	Severe: slope depth to rock	Slight	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
116B:							
Mundal	Moderate: seepage slope	Severe: seepage piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly rooting depth wetness	Limitation: erodes easily large stones	Limitation: erodes easily large stones
116C:							
Mundal	Severe: slope	Severe: seepage piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly rooting depth wetness	Limitation: erodes easily large stones slope	Limitation: erodes easily large stones slope
116D:							
Mundal	Severe: slope	Severe: seepage piping	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly rooting depth wetness	Limitation: erodes easily large stones slope	Limitation: erodes easily large stones slope
151F:							
Hogback	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
Rock Outcrop	Severe: slope depth to rock	Slight	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
Rawsonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
162D:							
Houghtonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily rooting depth slope	Limitation: erodes easily slope	Limitation: erodes easily rooting depth slope
Rawsonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
162E:							
Houghtonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily rooting depth slope	Limitation: erodes easily slope	Limitation: erodes easily rooting depth slope
Rawsonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
163C:							
Houghtonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily rooting depth slope	Limitation: erodes easily slope	Limitation: erodes easily rooting depth slope
163D:							
Houghtonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily rooting depth slope	Limitation: erodes easily slope	Limitation: erodes easily rooting depth slope
163E:							
Houghtonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily rooting depth slope	Limitation: erodes easily slope	Limitation: erodes easily rooting depth slope

Table 13.—Water Management—Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
168C:							
Hogback	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope
Rawsonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
168D:							
Hogback	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope
Rawsonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
168E:							
Hogback	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: large stones slope depth to rock	Limitation: erodes easily large stones slope
Rawsonville	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
172F:							
Taconic	Severe: slope depth to rock	Severe: seepage	Severe: no water	Limitation: deep to water	Limitation: depth to rock droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope droughty
Hubbardton	Severe: slope depth to rock	Severe: large stones	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope droughty
Rock Outcrop	Severe: slope depth to rock	Slight	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock

Table 14.—Engineering Index Properties

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
2A:												
Ondawa----------	0-8	fsl (none)	ML, SM	A-2, A-4	0	0	100	95-100	60-100	30-60	0-14	NP
	8-24	l, fsl, sl (none)	ML, SM	A-2, A-4	0	0	100	95-100	55-95	20-70	0-14	NP
	24-65	lfs, ls, fs, s, cos (gr-grv)	SM, SP, SP-SM	A-1, A-2, A-3	0	0	70-100	45-100	25-75	0-25	0-14	NP
3A:												
Rumney----------	0-7	fsl, sl (none)	ML, SM	A-2, A-4	0	0	85-100	75-100	45-85	25-55	0-25	NP-4
	7-27	l, fsl, sl (none)	ML, SM	A-2, A-4	0	0	85-100	75-100	45-95	25-75	0-15	NP-4
	27-65	lfs, ls, fs, s, cos (gr-grv)	SM, SP, SP-SM	A-1, A-2, A-3	0	0	70-100	45-100	25-75	0-25	0-14	NP
4A:												
Sunny-----------	0-8	sil, vfsl (none)	CL-ML, ML	A-4	0	0	95-100	90-100	85-100	60-90	15-30	NP-10
	8-34	sil, vfsl (none)	CL-ML, ML	A-4	0	0	95-100	90-100	85-100	60-90	15-30	NP-10
	34-65	lfs, ls, fs, s (gr-grv)	SM, SP-SM	A-3, A-2, A-1	0	0-5	45-100	40-100	20-75	4-30	0-15	NP
9A:												
Rifle-----------	0-6	mpt, muck (none)	PT	A-8	0	0	---	---	---	---	---	---
	6-65	mpt, muck (none)	PT	A-8	0	0	---	---	---	---	---	---
14B:												
Colonel---------	0-9	fsl, sl (cn-gr)	ML, SC-SM, SM, CL-ML	A-2, A-4	0-1	0-5	75-95	60-90	35-85	20-70	0-25	NP-10
	9-16	fsl, sl (cn-gr)	CL-ML, ML, SC-SM, SM	A-4, A-1, A-2	0-5	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
	16-60	fsl, sl (cn-gr)	CL-ML, ML, SC-SM, SM	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
14C:												
Colonel---------	0-9	fsl, sl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-1	0-5	75-95	60-90	35-85	20-70	0-25	NP-10
	9-16	fsl, sl (cn-gr)	CL-ML, ML, SC-SM, SM	A-4, A-2, A-1	0-5	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
	16-60	fsl, sl (cn-gr)	CL-ML, ML, SC-SM, SM	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
14D:												
Colonel---------	0-9	fsl, sl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-1	0-5	75-95	60-90	35-85	20-70	0-25	NP-10
	9-16	fsl, sl (cn-gr)	CL-ML, ML, SC-SM, SM	A-1, A-2, A-4	0-5	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
	16-60	fsl, sl (cn-gr)	CL-ML, ML, SC-SM, SM	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
17A:												
Cabot-----------	0-4	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-1	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	4-11	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-4, A-2	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	11-60	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
17B:												
Cabot-----------	0-4	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-1	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	4-11	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	11-60	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
17C:												
Cabot-----------	0-4	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-1	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	4-11	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	11-60	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
18B:												
Cabot-----------	0-1	spm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-9	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	9-17	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	17-61	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
18C:												
Cabot-----------	0-1	spm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-9	sil, l, vfsl, fsl (cn-gr)	SM, CL-ML, ML, SC-SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	9-17	sil, l, vfsl, fsl (cn-gr)	CL-ML, SM, ML, SC-SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	17-61	sil, l, vfsl, fsl (cn-gr)	SM, CL-ML, ML, SC-SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
19B:												
Colonel---------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	fsl, sl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	1-5	1-5	75-95	60-90	35-85	20-70	0-25	NP-10
	4-17	fsl, sl (cn-gr)	SM, SC-SM, CL-ML, ML	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
	17-66	fsl, sl (cn-gr)	ML, SM, CL-ML, SC-SM	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
19C:												
Colonel---------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	fsl, sl (cn-gr)	ML, CL-ML, SC-SM, SM	A-2, A-4	1-5	1-5	75-95	60-90	35-85	20-70	0-25	NP-10
	4-17	fsl, sl (cn-gr)	ML, CL-ML, SC-SM, SM	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
	17-66	fsl, sl (cn-gr)	SM, SC-SM, ML, CL-ML	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
19D:												
Colonel---------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	fsl, sl (cn-gr)	SM, CL-ML, ML, SC-SM	A-2, A-4	1-5	1-5	75-95	60-90	35-85	20-70	0-25	NP-10
	4-17	fsl, sl (cn-gr)	SC-SM, SM, CL-ML, ML	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
	17-66	fsl, sl (cn-gr)	SC-SM, SM, ML, CL-ML	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
20A:												
Peacham---------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-12	mpt, muck (none)	PT	A-8	---	---	---	---	---	---	---	---
	12-28	sil, l, fsl (cn-gr)	SM, ML	A-2, A-4, A-6	0-5	0-15	75-90	55-90	50-90	20-80	15-30	NP-15
	28-67	sil, l, fsl (cn-gr)	SM, ML	A-2, A-4, A-6	0-5	0-15	75-90	55-90	50-90	20-80	15-30	NP-15
21A:												
Sunday----------	0-10	lfs, fs, s (none)	SM, SP-SM	A-2, A-3	0	0	100	95-100	50-85	5-35	0-14	NP
	10-65	lfs, fs, s (none)	SM, SP-SM	A-1, A-2, A-3	0	0	90-100	85-100	30-85	5-35	0-14	NP
26A:												
Adams-----------	0-8	lfs, ls (none)	SP-SM, SM	A-1, A-2, A-3, A-4	0	0	95-100	95-100	45-85	5-40	0-14	NP
	8-31	lfs, ls, fs, s (gr)	SM, SP-SM	A-1, A-2, A-3, A-4	0	0	95-100	95-100	35-95	5-40	0-14	NP
	31-65	fs, s, cos (gr)	SP-SM, SW-SM, SP	A-1, A-2, A-3	0	0-1	80-100	70-100	20-90	0-10	0-14	NP
26B:												
Adams-----------	0-8	lfs, ls (none)	SM, SP-SM	A-1, A-2, A-3, A-4	0	0	95-100	95-100	45-85	5-40	0-14	NP
	8-31	lfs, ls, fs, s (gr)	SM, SP-SM	A-1, A-2, A-3, A-4	0	0	95-100	95-100	35-95	5-40	0-14	NP
	31-65	fs, s, cos (gr)	SW-SM, SP-SM, SP	A-1, A-2, A-3	0	0-1	80-100	70-100	20-90	0-10	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
26C:												
Adams-----------	0-8	lfs, ls (none)	SP-SM, SM	A-1, A-2, A-3, A-4	0	0	95-100	95-100	45-85	5-40	0-14	NP
	8-31	lfs, ls, fs, s (gr)	SM, SP-SM	A-1, A-2, A-3, A-4	0	0	95-100	95-100	35-95	5-40	0-14	NP
	31-65	fs, s, cos (gr)	SP, SP-SM, SW-SM	A-1, A-2, A-3	0	0-1	80-100	70-100	20-90	0-10	0-14	NP
26D:												
Adams-----------	0-8	lfs, ls (none)	SP-SM, SM	A-1, A-2, A-3, A-4	0	0	95-100	95-100	45-85	5-40	0-14	NP
	8-31	lfs, ls, fs, s (gr)	SP-SM, SM	A-1, A-2, A-3, A-4	0	0	95-100	95-100	35-95	5-40	0-14	NP
	31-65	fs, s, cos (gr)	SW-SM, SP-SM, SP	A-1, A-2, A-3	0	0-1	80-100	70-100	20-90	0-10	0-14	NP
26E:												
Adams-----------	0-8	lfs, ls (none)	SP-SM, SM	A-1, A-2, A-3, A-4	0	0	95-100	95-100	45-85	5-40	0-14	NP
	8-31	lfs, ls, fs, s (gr)	SM, SP-SM	A-1, A-2, A-3, A-4	0	0	95-100	95-100	35-95	5-40	0-14	NP
	31-65	fs, s, cos (gr)	SP, SP-SM, SW-SM	A-1, A-2, A-3	0	0-1	80-100	70-100	20-90	0-10	0-14	NP
33A:												
Machias---------	0-8	sil, vfsl, fsl (gr)	ML, SM	A-2, A-4	0	0-15	80-100	75-90	50-90	30-80	0-40	NP-6
	8-22	sil, vfsl, fsl, lfs, fs (gr)	SM, ML	A-1, A-2, A-4	0-1	0-15	75-95	50-90	30-75	15-70	0-40	NP-6
	22-65	ls, fs, s, cos (gr-grv)	SM, SP, GM, GP	A-1, A-2, A-3	0-1	5-20	30-85	25-70	10-60	1-25	0-14	NP
33B:												
Machias---------	0-8	sil, vfsl, fsl (gr)	SM, ML	A-2, A-4	0	0-15	80-100	75-90	50-90	30-80	0-40	NP-6
	8-22	sil, vfsl, fsl, lfs, fs (gr)	ML, SM	A-1, A-2, A-4	0-1	0-15	75-95	50-90	30-75	15-70	0-40	NP-6
	22-65	ls, fs, s, cos (gr-grv)	GM, GP, SM, SP	A-1, A-2, A-3	0-1	5-20	30-85	25-70	10-60	1-25	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
33C:												
Machias---------	0-8	sil, vfsl, fsl (gr)	ML, SM	A-2, A-4	0	0-15	80-100	75-90	50-90	30-80	0-40	NP-6
	8-22	sil, vfsl, fsl, lfs, fs (gr)	SM, ML	A-1, A-2, A-4	0-1	0-15	75-95	50-90	30-75	15-70	0-40	NP-6
	22-65	ls, fs, s, cos (gr-grv)	GM, SM, GP, SP	A-1, A-2, A-3	0-1	5-20	30-85	25-70	10-60	1-25	0-14	NP
37B:												
Stetson---------	0-8	l, fsl, sl (gr-grv)	SM, ML	A-2, A-4, A-5	0	0-5	80-100	80-85	45-80	25-65	0-42	NP-8
	8-20	fsl, sl (gr-grv)	SW-SM, SM, GP-GM, GM	A-1, A-2, A-4	0	0-20	50-85	45-80	25-80	10-70	0-40	NP-7
	20-25	lfs, ls, fs, s, cos (grv-grx)	SP-SM, SM, GM, GW-GM	A-1, A-2, A-3	0	0-20	50-85	45-80	15-65	5-45	0-36	NP-6
	25-65	lfs, ls, fs, s, cos (grv-grx)	GW-GM, GW	A-1	0	0-35	25-50	20-50	10-40	0-15	0-30	NP
37C:												
Stetson---------	0-8	l, fsl, sl (gr-grv)	SM, ML	A-2, A-4, A-5	0	0-5	80-100	80-85	45-80	25-65	0-42	NP-8
	8-20	fsl, sl (gr-grv)	SW-SM, SM, GM, GP-GM	A-1, A-2, A-4	0	0-20	50-85	45-80	25-80	10-70	0-40	NP-7
	20-25	lfs, ls, fs, s, cos (grv-grx)	SP-SM, SM, GW-GM, GM	A-1, A-2, A-3	0	0-20	50-85	45-80	15-65	5-45	0-36	NP-6
	25-65	lfs, ls, fs, s, cos (grv-grx)	GW-GM, GW	A-1	0	0-35	25-50	20-50	10-40	0-15	0-30	NP
37D:												
Stetson---------	0-8	l, fsl, sl (gr-grv)	SM, ML	A-2, A-4, A-5	0	0-5	80-100	80-85	45-80	25-65	0-42	NP-8
	8-20	fsl, sl (gr-grv)	GM, SW-SM, SM, GP-GM	A-1, A-2, A-4	0	0-20	50-85	45-80	25-80	10-70	0-40	NP-7
	20-25	lfs, ls, fs, s, cos (grv-grx)	SP-SM, SM, GW-GM, GM	A-1, A-2, A-3	0	0-20	50-85	45-80	15-65	5-45	0-36	NP-6
	25-65	lfs, ls, fs, s, cos (grv-grx)	GW, GW-GM	A-1	0	0-35	25-50	20-50	10-40	0-15	0-30	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
37E:												
Stetson---------	0-8	l, fsl, sl (gr-grv)	SM, GM	A-2, A-4, A-5	0	0-5	80-100	80-85	45-80	25-65	0-42	NP-8
	8-20	fsl, sl (gr-grv)	SM, GM, GP-GM, SW-SM	A-1, A-2, A-4	0	0-20	50-85	45-80	25-80	10-70	0-40	NP-7
	20-25	lfs, ls, fs, s, cos (grv-grx)	SP-SM, GM, GW-GM, SM	A-1, A-2, A-3	0	0-20	50-85	45-80	15-65	5-45	0-36	NP-6
	25-65	lfs, ls, fs, s, cos (grv-grx)	GW-GM, GW	A-1	0	0-35	25-50	20-50	10-40	0-15	0-30	NP
39A:												
Colton----------	0-7	fsl, sl, lfs, ls (gr-grv)	GM, SP, SM, GW	A-1, A-2, A-3	0	15-25	30-80	25-75	25-60	2-25	0-10	NP-2
	7-30	ls, s (gr-grv)	GM, SP, SM	A-1	0-1	5-20	30-80	25-75	20-50	2-20	0-14	NP
	30-65	s (gr-grv-grx)	GW, SW	A-1	0-1	10-45	20-55	15-50	10-30	0-5	0-14	NP
39B:												
Colton----------	0-7	fsl, sl, lfs, ls (gr-grv)	GM, GW, SM, SP	A-1, A-2, A-3	0	15-25	30-80	25-75	25-60	2-25	0-10	NP-2
	7-30	ls, s (gr-grv)	GM, SM, SP	A-1	0-1	5-20	30-80	25-75	20-50	2-20	0-14	NP
	30-65	s (gr-grv-grx)	GW, SW	A-1	0-1	10-45	20-55	15-50	10-30	0-5	0-14	NP
39C:												
Colton----------	0-7	fsl, sl, lfs, ls (gr-grv)	SP, GM, GW, SM	A-1, A-2, A-3	0	15-25	30-80	25-75	25-60	2-25	0-10	NP-2
	7-30	ls, s (gr-grv)	SP, SM, GM	A-1	0-1	5-20	30-80	25-75	20-50	2-20	0-14	NP
	30-65	s (gr-grv-grx)	GW, SW	A-1	0-1	10-45	20-55	15-50	10-30	0-5	0-14	NP
39D:												
Colton----------	0-7	fsl, sl, lfs, ls (gr-grv)	GM, GW, SM, SP	A-1, A-2, A-3	0	15-25	30-80	25-75	25-60	2-25	0-10	NP-2
	7-30	ls, s (gr-grv)	SP, GM, SM	A-1	0-1	5-20	30-80	25-75	20-50	2-20	0-14	NP
	30-65	s (gr-grv-grx)	GW, SW	A-1	0-1	10-45	20-55	15-50	10-30	0-5	0-14	NP
39E:												
Colton----------	0-7	fsl, sl, lfs, ls (gr-grv)	SP, SM, GM, GW	A-1, A-2, A-3	0	15-25	30-80	25-75	25-60	2-25	0-10	NP-2
	7-30	ls, s (gr-grv)	SM, SP, GM	A-1	0-1	5-20	30-80	25-75	20-50	2-20	0-14	NP
	30-65	s (gr-grv-grx)	SW, GW	A-1	0-1	10-45	20-55	15-50	10-30	0-5	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
41D:												
Buxton----------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-3	sicl, sil (none)	ML, MH	A-4, A-5, A-7	0	0	98-100	95-100	95-100	85-100	36-55	5-15
	3-13	sic, sicl, sil (none)	MH, ML, CL	A-4, A-6, A-7	0	0	98-100	95-100	95-100	85-100	28-55	8-25
	13-26	sic, sicl (none)	CL, MH, ML	A-4, A-6, A-7	0	0	98-100	95-100	95-100	85-100	28-55	8-25
	26-66	c, sic, sicl (none)	CL, MH	A-6, A-7	0	0	98-100	95-100	95-100	90-100	30-60	10-25
41E:												
Buxton----------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-3	sicl, sil (none)	MH, ML	A-4, A-5, A-7	0	0	98-100	95-100	95-100	85-100	36-55	5-15
	3-13	sic, sicl, sil (none)	MH, ML, CL	A-4, A-6, A-7	0	0	98-100	95-100	95-100	85-100	28-55	8-25
	13-26	sic, sicl (none)	MH, ML, CL	A-4, A-6, A-7	0	0	98-100	95-100	95-100	85-100	28-55	8-25
	26-66	c, sic, sicl (none)	CL, MH	A-6, A-7	0	0	98-100	95-100	95-100	90-100	30-60	10-25
43B:												
Salmon----------	0-6	sil, vfsl (none)	CL-ML, ML	A-4, A-6	0	0	100	85-100	80-100	50-95	20-40	2-12
	6-30	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	85-100	80-100	50-95	15-25	NP-5
	30-60	sil, vfsl (none)	SM, SC-SM, ML, CL-ML	A-2, A-4	0	0	100	85-100	60-100	25-95	15-25	NP-5
43C:												
Salmon----------	0-6	sil, vfsl (none)	ML, CL-ML	A-4, A-6	0	0	100	85-100	80-100	50-95	20-40	2-12
	6-30	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	85-100	80-100	50-95	15-25	NP-5
	30-60	sil, vfsl (none)	SM, CL-ML, ML, SC-SM	A-2, A-4	0	0	100	85-100	60-100	25-95	15-25	NP-5

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
43D:												
Salmon----------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-7	sil, vfsl (none)	ML, CL-ML	A-4, A-6	0	0	100	85-100	80-100	50-95	20-40	2-12
	7-19	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	85-100	80-100	50-95	15-25	NP-5
	19-68	sil, vfsl (none)	ML, CL-ML	A-4	0	0	100	85-100	80-100	70-95	15-25	NP-5
43E:												
Salmon----------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-7	sil, vfsl (none)	ML, CL-ML	A-4, A-6	0	0	100	85-100	80-100	50-95	20-40	2-12
	7-19	sil, vfsl (none)	ML, CL-ML	A-4	0	0	100	85-100	80-100	50-95	15-25	NP-5
	19-68	sil, vfsl (none)	ML, CL-ML	A-4	0	0	100	85-100	80-100	70-95	15-25	NP-5
44B:												
Lamoine---------	0-10	sicl, sil (none)	ML, MH	A-4, A-5, A-7	0	0	98-100	95-100	95-100	85-100	36-55	5-15
	10-17	sic, sicl, sil (none)	CL, MH, ML	A-4, A-6, A-7	0	0	98-100	95-100	95-100	85-100	28-55	8-25
	17-65	c, sic, sicl (none)	CL, MH	A-6, A-7	0	0	98-100	95-100	95-100	90-100	30-60	10-25
44C:												
Lamoine---------	0-10	sicl, sil (none)	MH, ML	A-4, A-5, A-7	0	0	98-100	95-100	95-100	85-100	36-55	5-15
	10-17	sic, sicl, sil (none)	ML, MH, CL	A-4, A-6, A-7	0	0	98-100	95-100	95-100	85-100	28-55	8-25
	17-65	c, sic, sicl (none)	MH, CL	A-6, A-7	0	0	98-100	95-100	95-100	90-100	30-60	10-25
45A:												
Scantic---------	0-8	sicl, sil (none)	ML, MH	A-4, A-5, A-7	0	0	100	95-100	90-100	70-100	36-55	5-20
	8-30	sic, sicl, sil (none)	MH, CL	A-4, A-6, A-7	0	0	100	95-100	95-100	85-100	25-55	8-25
	30-65	c, sic, sicl (none)	MH, CL	A-6, A-7	0	0	100	95-100	95-100	90-100	30-60	10-25

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
55B:												
Nicholville-----	0-8	sil, vfsl (none)	ML, CL-ML	A-4, A-6	0	0	90-100	85-100	70-100	60-90	20-40	2-12
	8-14	sil, vfsl (none)	ML, CL-ML	A-4	0	0	90-100	85-100	75-100	60-90	15-25	NP-5
	14-65	sil, vfsl (none)	CL-ML, SC-SM, SM, ML	A-2, A-4	0	0	90-100	85-100	65-100	30-90	15-25	NP-5
58A:												
Grange----------	0-8	sil, vfsl, fsl (none)	ML	A-4	0	0	100	95-100	85-100	50-80	0-30	NP-7
	8-22	sil, vfsl, fsl (none)	SM, ML	A-4	0	0	100	95-100	70-100	40-80	0-30	NP-7
	22-65	fs, s, cos (gr-grv)	SM, SP, SP-SM	A-1, A-2-4, A-3	0	0-10	65-100	30-100	15-80	2-15	0-14	NP
59A:												
Waitsfield------	0-9	sil, vfsl, fsl (none)	ML	A-4	0	0-5	95-100	90-100	65-100	35-90	20-40	NP-10
	9-20	sil, vfsl, fsl (none)	ML	A-4	0	0-5	95-100	90-100	65-100	35-90	20-40	NP-10
	20-65	lfs, ls, fs, s, cos (gr-grv-grx)	SM	A-1, A-2, A-3	0	0-10	45-100	40-100	20-75	5-30	15-20	NP
60A:												
Weider----------	0-6	sil, vfsl, fsl (none)	ML, CL-ML	A-4	0	0-5	95-100	90-100	65-100	35-90	15-30	NP-10
	6-25	sil, vfsl, fsl (none)	ML, CL-ML	A-4	0	0-5	95-100	90-100	65-100	35-90	15-30	NP-10
	25-65	ls, s, cos (gr-grv)	SM, SP-SM	A-1, A-2, A-3	0	0-10	45-100	40-100	20-75	5-30	0-15	NP
62B:												
Berkshire-------	0-8	sil, l, fsl (cn-gr)	SM, ML	A-2, A-4	0-1	0-10	80-95	70-90	45-90	20-70	0-30	NP-10
	8-26	l, fsl, sl (cn-gr)	SM, ML	A-2, A-4	0-10	0-20	75-95	65-85	40-85	20-65	0-30	NP-10
	26-60	fsl, sl (cn-gr)	SM, ML	A-2, A-4	0-10	0-20	75-90	65-85	40-80	20-60	0-20	NP-6

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
62C:												
Berkshire-------	0-8	sil, l, fsl (cn-gr)	ML, SM	A-2, A-4	0-1	0-10	80-95	70-90	45-90	20-70	0-30	NP-10
	8-26	l, fsl, sl (cn-gr)	ML, SM	A-2, A-4	0-10	0-20	75-95	65-85	40-85	20-65	0-30	NP-10
	26-60	fsl, sl (cn-gr)	SM, ML	A-2, A-4	0-10	0-20	75-90	65-85	40-80	20-60	0-20	NP-6
62D:												
Berkshire-------	0-8	sil, l, fsl (cn-gr)	SM, ML	A-2, A-4	0-1	0-10	80-95	70-90	45-90	20-70	0-30	NP-10
	8-26	l, fsl, sl (cn-gr)	SM, ML	A-2, A-4	0-10	0-20	75-95	65-85	40-85	20-65	0-30	NP-10
	26-60	fsl, sl (cn-gr)	SM, ML	A-2, A-4	0-10	0-20	75-90	65-85	40-80	20-60	0-20	NP-6
63B:												
Berkshire-------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-6	sil, l, fsl (cn-gr)	SM, ML	A-2, A-4, A-5	1-5	1-10	80-95	70-90	45-85	25-65	0-50	NP-10
	6-38	l, fsl, sl (cn-gr)	SM, ML	A-2, A-4, A-5	0-10	0-20	75-95	65-85	40-75	20-60	0-50	NP-10
	38-67	fsl, sl (cn-gr)	SM, ML	A-2, A-4	0-10	0-20	75-90	65-85	40-80	20-55	0-20	NP-6
63C:												
Berkshire-------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-6	sil, l, fsl (cn-gr)	SM, ML	A-2, A-4, A-5	1-5	1-10	80-95	70-90	45-85	25-65	0-50	NP-10
	6-38	l, fsl, sl (cn-gr)	SM, ML	A-2, A-4, A-5	0-10	0-20	75-95	65-85	40-75	20-60	0-50	NP-10
	38-67	fsl, sl (cn-gr)	SM, ML	A-2, A-4	0-10	0-20	75-90	65-85	40-80	20-55	0-20	NP-6
63D:												
Berkshire-------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-6	sil, l, fsl (cn-gr)	SM, ML	A-2, A-4, A-5	1-5	1-10	80-95	70-90	45-85	25-65	0-50	NP-10
	6-38	l, fsl, sl (cn-gr)	ML, SM	A-2, A-4, A-5	0-10	0-20	75-95	65-85	40-75	20-60	0-50	NP-10
	38-67	fsl, sl (cn-gr)	ML, SM	A-2, A-4	0-10	0-20	75-90	65-85	40-80	20-55	0-20	NP-6

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
63E:												
Berkshire-------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-6	sil, l, fsl (cn-gr)	ML, SM	A-2, A-4, A-5	1-5	1-10	80-95	70-90	45-85	25-65	0-50	NP-10
	6-38	l, fsl, sl (cn-gr)	SM, ML	A-2, A-4, A-5	0-10	0-20	75-95	65-85	40-75	20-60	0-50	NP-10
	38-67	fsl, sl (cn-gr)	SM, ML	A-2, A-4	0-10	0-20	75-90	65-85	40-80	20-55	0-20	NP-6
64C:												
Salmon----------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-7	sil, vfsl (none)	CL-ML, ML	A-4, A-6	0	0	100	85-100	80-100	50-95	20-40	2-12
	7-19	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	85-100	80-100	50-95	15-25	NP-5
	19-68	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	85-100	80-100	70-95	15-25	NP-5
Adamant---------	0-4	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	4-9	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	95-100	80-100	60-90	21-29	NP-7
	9-22	sil, vfsl (none)	ML, CL-ML	A-4	0	0	100	95-100	80-100	60-90	21-29	NP-7
	22-28	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	95-100	80-100	55-90	21-29	NP-7
	28-32	uwb (none)			---	---	---	---	---	---	---	---
64D:												
Salmon----------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-7	sil, vfsl (none)	ML, CL-ML	A-4, A-6	0	0	100	85-100	80-100	50-95	20-40	2-12
	7-19	sil, vfsl (none)	ML, CL-ML	A-4	0	0	100	85-100	80-100	50-95	15-25	NP-5
	19-68	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	85-100	80-100	70-95	15-25	NP-5

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
Adamant---------	0-4	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	4-9	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	95-100	80-100	60-90	21-29	NP-7
	9-22	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	95-100	80-100	60-90	21-29	NP-7
	22-28	sil, vfsl (none)	ML, CL-ML	A-4	0	0	100	95-100	80-100	55-90	21-29	NP-7
	28-32	uwb (none)			---	---	---	---	---	---	---	---
64E:												
Salmon----------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-7	sil, vfsl (none)	ML, CL-ML	A-6, A-4	0	0	100	85-100	80-100	50-95	20-40	2-12
	7-19	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	85-100	80-100	50-95	15-25	NP-5
	19-68	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	85-100	80-100	70-95	15-25	NP-5
Adamant---------	0-4	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	4-9	sil, vfsl (none)	ML, CL-ML	A-4	0	0	100	95-100	80-100	60-90	21-29	NP-7
	9-22	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	95-100	80-100	60-90	21-29	NP-7
	22-28	sil, vfsl (none)	CL-ML, ML	A-4	0	0	100	95-100	80-100	55-90	21-29	NP-7
	28-32	uwb (none)			---	---	---	---	---	---	---	---
66B:												
Vershire--------	0-9	sil, vfsl, fsl (cn)	ML, SM	A-4	0-1	0-5	85-100	80-95	60-95	40-85	15-40	NP-10
	9-17	sil, vfsl, fsl (cn)	SM, ML	A-2-4, A-4	0-5	0-20	75-100	70-95	50-95	30-85	15-40	NP-10
	17-36	sil, vfsl, fsl (cn)	SM, ML	A-2-4, A-4	0-5	0-20	75-100	70-95	50-95	30-85	15-40	NP-10
	36-40	uwb (none)			---	---	---	---	---	---	---	---
Dummerston------	0-4	sil, l, vfsl, fsl (cn-gr)	CL, ML, SC, SM	A-4, A-6	0-1	0-5	85-100	80-95	60-95	35-85	15-35	NP-15
	4-26	sil, l, vfsl, fsl (cn-gr)	CL, ML, SM, SC	A-2, A-4, A-6	0-5	0-15	75-100	70-95	50-95	30-85	15-30	NP-15
	26-65	sil, vfsl, fsl (cn-gr)	SC, SM, ML, CL	A-2, A-4, A-6	0-5	0-15	50-90	45-85	30-85	20-75	15-30	NP-15

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
66C:												
Vershire--------	0-9	sil, vfsl, fsl (cn)	ML, SM	A-4	0-1	0-5	85-100	80-95	60-95	40-85	15-40	NP-10
	9-17	sil, vfsl, fsl (cn)	ML, SM	A-2-4, A-4	0-5	0-20	75-100	70-95	50-95	30-85	15-40	NP-10
	17-36	sil, vfsl, fsl (cn)	SM, ML	A-2-4, A-4	0-5	0-20	75-100	70-95	50-95	30-85	15-40	NP-10
	36-40	uwb (none)			---	---	---	---	---	---	---	---
Dummerston------	0-4	sil, l, vfsl, fsl (cn-gr)	SM, ML, SC, CL	A-4, A-6	0-1	0-5	85-100	80-95	60-95	35-85	15-35	NP-15
	4-26	sil, l, vfsl, fsl (cn-gr)	CL, ML, SC, SM	A-2, A-4, A-6	0-5	0-15	75-100	70-95	50-95	30-85	15-30	NP-15
	26-65	sil, vfsl, fsl (cn-gr)	SM, SC, ML, CL	A-6, A-2, A-4	0-5	0-15	50-90	45-85	30-85	20-75	15-30	NP-15
66D:												
Vershire--------	0-9	sil, vfsl, fsl (cn)	ML, SM	A-4	0-1	0-5	85-100	80-95	60-95	40-85	15-40	NP-10
	9-17	sil, vfsl, fsl (cn)	SM, ML	A-2-4, A-4	0-5	0-20	75-100	70-95	50-95	30-85	15-40	NP-10
	17-36	sil, vfsl, fsl (cn)	SM, ML	A-2-4, A-4	0-5	0-20	75-100	70-95	50-95	30-85	15-40	NP-10
	36-40	uwb (none)			---	---	---	---	---	---	---	---
Dummerston------	0-4	sil, l, vfsl, fsl (cn-gr)	ML, CL, SC, SM	A-4, A-6	0-1	0-5	85-100	80-95	60-95	35-85	15-35	NP-15
	4-26	sil, l, vfsl, fsl (cn-gr)	ML, SC, SM, CL	A-2, A-4, A-6	0-5	0-15	75-100	70-95	50-95	30-85	15-30	NP-15
	26-65	sil, vfsl, fsl (cn-gr)	CL, ML, SC, SM	A-2, A-4, A-6	0-5	0-15	50-90	45-85	30-85	20-75	15-30	NP-15
66E:												
Vershire--------	0-9	sil, vfsl, fsl (cn)	ML, SM	A-4	0-1	0-5	85-100	80-95	60-95	40-85	15-40	NP-10
	9-17	sil, vfsl, fsl (cn)	ML, SM	A-2-4, A-4	0-5	0-20	75-100	70-95	50-95	30-85	15-40	NP-10
	17-36	sil, vfsl, fsl (cn)	ML, SM	A-2-4, A-4	0-5	0-20	75-100	70-95	50-95	30-85	15-40	NP-10
	36-40	uwb (none)			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
Dummerston------	0-4	sil, l, vfsl, fsl (cn-gr)	SC, ML, CL, SM	A-4, A-6	0-1	0-5	85-100	80-95	60-95	35-85	15-35	NP-15
	4-26	sil, l, vfsl, fsl (cn-gr)	CL, ML, SC, SM	A-2, A-4, A-6	0-5	0-15	75-100	70-95	50-95	30-85	15-30	NP-15
	26-65	sil, vfsl, fsl (cn-gr)	CL, ML, SC, SM	A-2, A-4, A-6	0-5	0-15	50-90	45-85	30-85	20-75	15-30	NP-15
67C:												
Glover----------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, vfsl, fsl (cn)	ML	A-4	1-5	5-25	85-95	80-95	70-95	60-85	15-40	NP-10
	4-17	sil, vfsl, fsl (cn)	ML	A-4	0-5	5-25	85-90	75-90	60-85	50-75	15-40	NP-10
	17-21	uwb (none)			---	---	---	---	---	---	---	---
Vershire--------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, vfsl, fsl (cn)	ML, SM	A-4	1-5	1-10	85-100	80-95	50-95	40-85	15-40	NP-10
	4-26	sil, vfsl, fsl (cn)	ML, SM	A-2-4, A-4	0-5	0-20	75-100	70-95	50-95	30-85	15-40	NP-10
	26-30	uwb (none)			---	---	---	---	---	---	---	---
67D:												
Glover----------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, vfsl, fsl (cn)	ML	A-4	1-5	5-25	85-95	80-95	70-95	60-85	15-40	NP-10
	4-17	sil, vfsl, fsl (cn)	ML	A-4	0-5	5-25	85-90	75-90	60-85	50-75	15-40	NP-10
	17-21	uwb (none)			---	---	---	---	---	---	---	---
Vershire--------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, vfsl, fsl (cn)	ML, SM	A-4	1-5	1-10	85-100	80-95	50-95	40-85	15-40	NP-10
	4-26	sil, vfsl, fsl (cn)	ML, SM	A-2-4, A-4	0-5	0-20	75-100	70-95	50-95	30-85	15-40	NP-10
	26-30	uwb (none)			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
67E:												
Glover----------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, vfsl, fsl (cn)	ML	A-4	1-5	5-25	85-95	80-95	70-95	60-85	15-40	NP-10
	4-17	sil, vfsl, fsl (cn)	ML	A-4	0-5	5-25	85-90	75-90	60-85	50-75	15-40	NP-10
	17-21	uwb (none)			---	---	---	---	---	---	---	---
Vershire--------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, vfsl, fsl (cn)	SM, ML	A-4	1-5	1-10	85-100	80-95	50-95	40-85	15-40	NP-10
	4-26	sil, vfsl, fsl (cn)	SM, ML	A-2-4, A-4	0-5	0-20	75-100	70-95	50-95	30-85	15-40	NP-10
	26-30	uwb (none)			---	---	---	---	---	---	---	---
68D:												
Stratton--------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-2	sil, fsl (cb-cbv-cn-cnv-gr-grv)	SM, ML	A-2-4, A-2-5, A-4, A-5	1-5	5-15	80-100	75-100	50-100	30-90	20-50	NP-10
	2-18	sil, fsl (cb-cbv-cn-cnv-gr-grv)	GW-GM, GM, ML	A-1, A-2, A-4, A-5	0-20	0-60	30-100	25-100	20-100	10-90	20-50	NP-10
	18-22	uwb (none)			---	---	---	---	---	---	---	---
Glebe-----------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-2	sil, vfsl, fsl (gr-grv)	ML, SM	A-4	1-5	0-5	75-100	70-90	50-85	30-60	10-40	NP-10
	2-34	sil, vfsl, fsl (gr-grv)	GM, ML, SM	A-2-4, A-4	0-5	0-5	65-90	60-85	40-85	25-75	10-40	NP-10
	34-38	uwb (none)			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
68E:												
Stratton--------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-2	sil, fsl (cb-cbv-cn-cnv-gr-grv)	SM, ML	A-2-4, A-2-5, A-4, A-5	1-5	5-15	80-100	75-100	50-100	30-90	20-50	NP-10
	2-18	sil, fsl (cb-cbv-cn-cnv-gr-grv)	GM, GW-GM, ML	A-1, A-2, A-4, A-5	0-20	0-60	30-100	25-100	20-100	10-90	20-50	NP-10
	18-22	uwb (none)			---	---	---	---	---	---	---	---
Glebe-----------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-2	sil, vfsl, fsl (gr-grv)	SM, ML	A-4	1-5	0-5	75-100	70-90	50-85	30-60	10-40	NP-10
	2-34	sil, vfsl, fsl (gr-grv)	SM, GM, ML	A-2-4, A-4	0-5	0-5	65-90	60-85	40-85	25-75	10-40	NP-10
	34-38	uwb (none)			---	---	---	---	---	---	---	---
69D:												
Sisk------------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-5	vfsl, fsl (gr)	SM, GM, ML	A-2, A-4	1-5	1-15	65-95	60-95	40-90	25-85	0-35	NP-10
	5-26	fsl (gr)	SM, ML, GM	A-2, A-4	1-10	1-15	65-95	60-95	35-90	25-85	0-35	NP-10
	26-67	fsl (gr)	SM, SC-SM, ML, CL-ML	A-2, A-4	1-10	1-15	65-95	60-95	35-90	25-70	0-25	NP-8
Glebe-----------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-2	sil, vfsl, fsl (gr-grv)	SM	A-2-4, A-4, A-5	1-5	0-5	75-100	70-90	50-90	30-70	20-50	NP-10
	2-34	sil, vfsl, fsl (gr-grv)	GM, ML, SM	A-2-4, A-4, A-5	0-5	0-5	65-90	60-85	40-85	25-75	20-50	NP-10
	34-38	uwb (none)			---	---	---	---	---	---	---	---
69E:												
Sisk------------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-5	vfsl, fsl (gr)	SM, GM, ML	A-2, A-4	1-5	1-15	65-95	60-95	40-90	25-85	0-35	NP-10
	5-26	fsl (gr)	ML, GM, SM	A-2, A-4	1-10	1-15	65-95	60-95	35-90	25-85	0-35	NP-10
	26-67	fsl (gr)	ML, SC-SM, SM, CL-ML	A-2, A-4	1-10	1-15	65-95	60-95	35-90	25-70	0-25	NP-8

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
Glebe-----------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-2	sil, vfsl, fsl (gr-grv)	SM	A-2-4, A-4, A-5	1-5	0-5	75-100	70-90	50-90	30-70	20-50	NP-10
	2-34	sil, vfsl, fsl (gr-grv)	GM, ML, SM	A-2-4, A-4, A-5	0-5	0-5	65-90	60-85	40-85	25-75	20-50	NP-10
	34-38	uwb (none)			---	---	---	---	---	---	---	---
71C:												
Tunbridge-------	0-6	sil, vfsl, fsl (cn-gr)	SM, ML	A-2, A-4	0-1	0-5	85-100	80-95	55-95	30-85	15-20	NP-2
	6-16	l, vfsl, fsl (cn-gr)	ML, SM	A-2, A-4, A-5	0-2	0-15	70-100	60-95	35-95	20-85	15-50	NP-6
	16-22	vfsl, fsl (cn-gr)	ML, SM	A-2, A-4	0-2	0-15	70-100	60-95	35-95	20-85	15-20	NP-2
	22-26	uwb (none)			---	---	---	---	---	---	---	---
Lyman-----------	0-7	vfsl, fsl (cn-gr)	SM, ML	A-1, A-2, A-4	0-1	0-15	80-95	70-90	40-85	20-80	0-35	NP-6
	7-15	l, vfsl, fsl (cn-gr)	SM, GM, ML	A-1, A-2, A-4	0-3	0-20	65-95	60-90	35-85	20-80	0-30	NP-4
	15-19	uwb (none)			---	---	---	---	---	---	---	---
72B:												
Tunbridge-------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-4	sil, vfsl, fsl (cn-gr)	SM, GM, ML	A-2, A-4	1-5	1-5	85-100	80-95	55-95	30-85	0-20	NP-2
	4-17	l, vfsl, fsl (cn-gr)	ML, SM	A-2, A-4, A-5	0-2	0-15	70-100	60-95	35-95	20-85	0-50	NP-6
	17-25	vfsl, fsl (cn-gr)	ML, SM	A-2, A-4	0-2	0-15	70-100	60-95	35-95	20-85	0-20	NP-2
	25-29	uwb (none)			---	---	---	---	---	---	---	---
Lyman-----------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-2	vfsl, fsl (cn-gr)	SM, GM, ML	A-1, A-2, A-4	1-5	0-15	80-95	70-90	40-85	20-80	0-30	NP-6
	2-15	l, vfsl, fsl (cn-gr)	SM, GM, ML	A-1, A-2, A-4	0-3	0-20	65-95	60-90	35-85	20-80	0-30	NP-4
	15-19	uwb (none)			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
72C:												
Tunbridge-------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-4	sil, vfsl, fsl (cn-gr)	SM, ML, GM	A-2, A-4	1-5	1-5	85-100	80-95	55-95	30-85	0-20	NP-2
	4-17	l, vfsl, fsl (cn-gr)	SM, ML	A-2, A-4, A-5	0-2	0-15	70-100	60-95	35-95	20-85	0-50	NP-6
	17-25	vfsl, fsl (cn-gr)	ML, SM	A-2, A-4	0-2	0-15	70-100	60-95	35-95	20-85	0-20	NP-2
	25-29	uwb (none)			---	---	---	---	---	---	---	---
Lyman-----------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-2	vfsl, fsl (cn-gr)	GM, SM, ML	A-1, A-2, A-4	1-5	0-15	80-95	70-90	40-85	20-80	0-30	NP-6
	2-15	l, vfsl, fsl (cn-gr)	ML, GM, SM	A-1, A-2, A-4	0-3	0-20	65-95	60-90	35-85	20-80	0-30	NP-4
	15-19	uwb (none)			---	---	---	---	---	---	---	---
72D:												
Tunbridge-------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-4	sil, vfsl, fsl (cn-gr)	GM, SM, ML	A-2, A-4	1-5	1-5	85-100	80-95	55-95	30-85	0-20	NP-2
	4-17	l, vfsl, fsl (cn-gr)	ML, SM	A-2, A-4, A-5	0-2	0-15	70-100	60-95	35-95	20-85	0-50	NP-6
	17-25	vfsl, fsl (cn-gr)	ML, SM	A-2, A-4	0-2	0-15	70-100	60-95	35-95	20-85	0-20	NP-2
	25-29	uwb (none)			---	---	---	---	---	---	---	---
Lyman-----------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-2	vfsl, fsl (cn-gr)	GM, ML, SM	A-1, A-2, A-4	1-5	0-15	80-95	70-90	40-85	20-80	0-30	NP-6
	2-15	l, vfsl, fsl (cn-gr)	ML, GM, SM	A-1, A-2, A-4	0-3	0-20	65-95	60-90	35-85	20-80	0-30	NP-4
	15-19	uwb (none)			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
72E:												
Tunbridge-------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-4	sil, vfsl, fsl (cn-gr)	GM, SM, ML	A-2, A-4	1-5	1-5	85-100	80-95	55-90	30-85	0-20	NP-2
	4-17	l, vfsl, fsl (cn-gr)	SM, ML	A-2, A-4, A-5	0-2	0-15	70-100	60-95	35-95	20-85	0-50	NP-6
	17-25	vfsl, fsl (cn-gr)	ML, SM	A-2, A-4	0-2	0-15	70-100	60-95	35-95	20-85	0-20	NP-2
	25-29	uwb (none)			---	---	---	---	---	---	---	---
Lyman-----------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-2	vfsl, fsl (cn-gr)	GM, ML, SM	A-1, A-2, A-4	1-5	0-15	80-95	70-90	40-85	20-80	0-30	NP-6
	2-15	l, vfsl, fsl (cn-gr)	ML, SM, GM	A-1, A-2, A-4	0-3	0-20	65-95	60-90	35-85	20-80	0-30	NP-4
	15-19	uwb (none)			---	---	---	---	---	---	---	---
76C:												
Berkshire-------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-6	sil, l, fsl (cn-gr)	ML, SM	A-2, A-4, A-5	1-5	1-10	80-95	70-90	45-85	25-65	0-50	NP-10
	6-38	l, fsl, sl (cn-gr)	ML, SM	A-5, A-2, A-4	0-10	0-20	75-95	65-90	40-75	20-60	0-50	NP-10
	38-67	fsl, sl (cn-gr)	ML, SM	A-2, A-4	0-10	0-20	75-90	65-85	40-80	20-55	0-20	NP-6
76D:												
Berkshire-------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-6	sil, l, fsl (cn-gr)	SM, ML	A-2, A-4, A-5	1-5	1-10	80-95	70-90	45-85	25-65	0-50	NP-10
	6-38	l, fsl, sl (cn-gr)	ML, SM	A-2, A-4, A-5	0-10	0-20	75-95	65-90	40-75	20-60	0-50	NP-10
	38-67	fsl, sl (cn-gr)	ML, SM	A-2, A-4	0-10	0-20	75-90	65-85	40-80	20-55	0-20	NP-6
76E:												
Berkshire-------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-6	sil, l, fsl (cn-gr)	ML, SM	A-2, A-4, A-5	1-5	1-10	80-95	70-90	45-85	25-65	0-50	NP-10
	6-38	l, fsl, sl (cn-gr)	ML, SM	A-5, A-2, A-4	0-10	0-20	75-95	65-90	40-75	20-60	0-50	NP-10
	38-67	fsl, sl (cn-gr)	ML, SM	A-2, A-4	0-10	0-20	75-90	65-85	40-80	20-55	0-20	NP-6

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
77B:												
Peru------------	0-7	l, fsl (cn-gr)	SM, ML, CL-ML	A-2, A-4	0-1	0-10	60-80	55-75	40-75	25-70	0-30	NP-10
	7-20	l, fsl, sl (cn-gr)	ML, CL-ML, SC-SM, SM	A-1-b, A-2, A-4	0-1	0-15	75-95	60-90	40-85	20-65	0-30	NP-10
	20-60	fsl, sl (cn-gr)	CL-ML, SC-SM, SM, ML	A-1-b, A-2, A-4	0-1	0-15	70-95	55-95	35-80	20-60	0-30	NP-10
77C:												
Peru------------	0-7	l, fsl (cn-gr)	CL-ML, ML, SM	A-2, A-4	0-1	0-10	60-80	55-75	40-75	25-70	0-30	NP-10
	7-20	l, fsl, sl (cn-gr)	SM, CL-ML, SC-SM, ML	A-1-b, A-2, A-4	0-1	0-15	75-95	60-90	40-85	20-65	0-30	NP-10
	20-60	fsl, sl (cn-gr)	SM, SC-SM, ML, CL-ML	A-1-b, A-2, A-4	0-1	0-15	70-95	55-95	35-80	20-60	0-30	NP-10
77D:												
Peru------------	0-7	l, fsl (cn-gr)	SM, ML, CL-ML	A-2, A-4	0-1	0-10	60-80	55-75	40-75	25-70	0-30	NP-10
	7-20	l, fsl, sl (cn-gr)	SC-SM, ML, CL-ML, SM	A-1-b, A-2, A-4	0-1	0-15	75-95	60-90	40-85	20-65	0-30	NP-10
	20-60	fsl, sl (cn-gr)	ML, CL-ML, SC-SM, SM	A-1-b, A-2, A-4	0-1	0-15	70-95	55-95	35-80	20-60	0-30	NP-10
78C:												
Peru------------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-4	l, fsl (cn-gr)	SC, SM, CL-ML, ML	A-2, A-4	1-5	5-15	90-100	75-90	50-90	30-80	0-30	NP-10
	4-32	l, fsl, sl (cn-gr)	SM, SC-SM, ML, CL-ML	A-1-b, A-2, A-4	0-1	0-15	75-95	60-90	40-85	20-65	0-30	NP-10
	32-67	fsl, sl (cn-gr)	SM, CL-ML, ML, SC-SM	A-1-b, A-2, A-4	0-1	0-15	70-95	55-95	35-80	20-60	0-30	NP-10
78D:												
Peru------------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-4	l, fsl (cn-gr)	SC, ML, CL-ML, SM	A-2, A-4	1-5	5-15	90-100	75-90	50-90	30-80	0-30	NP-10
	4-32	l, fsl, sl (cn-gr)	SC-SM, SM, CL-ML, ML	A-1-b, A-2, A-4	0-1	0-15	75-95	60-90	40-85	20-65	0-30	NP-10
	32-67	fsl, sl (cn-gr)	SM, SC-SM, ML, CL-ML	A-1-b, A-2, A-4	0-1	0-15	70-95	55-95	35-80	20-60	0-30	NP-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
78E:												
Peru------------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-4	l, fsl (cn-gr)	SC, ML, CL-ML, SM	A-2, A-4	1-5	5-15	90-100	75-90	50-90	30-80	0-30	NP-10
	4-32	l, fsl, sl (cn-gr)	CL-ML, SC-SM, SM, ML	A-1-b, A-2, A-4	0-1	0-15	75-95	60-90	40-85	20-65	0-30	NP-10
	32-67	fsl, sl (cn-gr)	SM, SC-SM, ML, CL-ML	A-1-b, A-2, A-4	0-1	0-15	70-95	55-95	35-80	20-60	0-30	NP-10
79A:												
Markey----------	0-42	muck (none)	PT	A-8	---	---	---	---	---	---	---	---
	42-65	fs, s (none)	SM, SP, SP-SM	A-1, A-2, A-3	0	0	95-100	60-100	30-75	0-30	---	NP
Wonsqueak-------	0-9	mpt, muck (none)	PT	A-8	0	0	---	---	---	---	---	---
	9-42	muck (none)	PT	A-8	0	0	---	---	---	---	---	---
	42-65	sicl, sil, vfsl, fsl (gr)	CL, CL-ML, SM, ML	A-2, A-4, A-6	0	0-5	85-100	75-100	50-100	30-95	0-40	NP-20
82A:												
Peacham---------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-12	mpt, muck (none)	PT	A-8	---	---	---	---	---	---	---	---
	12-28	sil, l, fsl (cn-gr)	ML, SM	A-2, A-4, A-6	0-5	0-15	75-90	55-90	50-90	20-80	15-30	NP-15
	28-67	sil, l, fsl (cn-gr)	SM, ML	A-2, A-4, A-6	0-5	0-15	75-90	55-90	50-90	20-80	15-30	NP-15
85E:												
Ricker----------	0-8	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	8-12	uwb (none)			---	---	---	---	---	---	---	---
Londonderry-----	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-8	vfsl, fsl (gr)	SM, CL-ML, CL, ML	A-2-4, A-4	1-5	0-10	85-100	80-95	50-95	25-85	15-30	NP-10
	8-12	uwb (none)			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
Stratton--------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-2	sil, fsl (cb-cbv-cn-cnv-gr-grv)	ML, SM	A-2-4, A-2-5, A-4, A-5	1-5	5-15	80-100	75-100	50-100	30-90	20-50	NP-10
	2-18	sil, fsl (cb-cbv-cn-cnv-gr-grv)	GM, GW-GM, ML	A-1, A-2, A-4, A-5	0-20	0-60	30-100	25-100	20-100	10-90	20-50	NP-10
	18-22	uwb (none)			---	---	---	---	---	---	---	---
86F:												
Ricker----------	0-8	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	8-12	uwb (none)			---	---	---	---	---	---	---	---
Londonderry-----	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-8	vfsl, fsl (gr)	CL, ML, SM, CL-ML	A-2-4, A-4	1-5	0-10	85-100	80-95	50-95	25-85	15-30	NP-10
	8-12	uwb (none)			---	---	---	---	---	---	---	---
Rock Outcrop----	0-65	uwb (none)			---	---	---	---	---	---	---	---
88D:												
Houghtonville---	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-5	l, fsl (gr)	SM, ML	A-2-4, A-4, A-5	1-5	1-10	85-100	80-95	50-90	30-70	20-50	NP-10
	5-33	fsl, sl (gr)	SM, ML	A-2-4, A-4	0-5	0-5	75-100	70-95	50-90	30-70	20-50	NP-10
	33-66	fsl, sl (gr)	SM, ML, GC-GM, CL	A-2-4, A-4	0-5	0-10	60-95	55-90	40-90	25-80	0-30	NP-10
89E:												
Houghtonville---	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-5	l, fsl (gr)	ML, SM	A-2-4, A-4, A-5	1-5	1-10	85-100	80-95	50-90	30-70	20-50	NP-10
	5-33	fsl, sl (gr)	ML, SM	A-2-4, A-4	0-5	0-5	75-100	70-95	50-90	30-70	20-50	NP-10
	33-66	fsl, sl (gr)	CL, GC-GM, ML, SM	A-2-4, A-4	0-5	0-10	60-95	55-90	40-90	25-80	0-30	NP-10

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
90B:												
Dummerston------	0-4	sil, l, vfsl, fsl (cn-gr)	CL, ML, SC, SM	A-4, A-6	0-1	0-5	85-100	80-95	60-95	35-85	15-35	NP-15
	4-26	sil, l, vfsl, fsl (cn-gr)	ML, SM, CL, SC	A-2, A-4, A-6	0-5	0-15	75-100	70-95	50-95	30-85	15-30	NP-15
	26-65	sil, vfsl, fsl (cn-gr)	SM, CL, ML, SC	A-2, A-4, A-6	0-5	0-15	50-90	45-85	30-85	20-75	15-30	NP-15
90C:												
Dummerston------	0-4	sil, l, vfsl, fsl (cn-gr)	CL, ML, SC, SM	A-4, A-6	0-1	0-5	85-100	80-95	60-95	35-85	15-35	NP-15
	4-26	sil, l, vfsl, fsl (cn-gr)	ML, CL, SM, SC	A-2, A-4, A-6	0-5	0-15	75-100	70-95	50-95	30-85	15-30	NP-15
	26-65	sil, vfsl, fsl (cn-gr)	ML, CL, SC, SM	A-2, A-4, A-6	0-5	0-15	50-90	45-85	30-85	20-75	15-30	NP-15
90D:												
Dummerston------	0-4	sil, l, vfsl, fsl (cn-gr)	CL, ML, SC, SM	A-4, A-6	0-1	0-5	85-100	80-95	60-95	35-85	15-35	NP-15
	4-26	sil, l, vfsl, fsl (cn-gr)	SM, CL, ML, SC	A-2, A-4, A-6	0-5	0-15	75-100	70-95	50-95	30-85	15-30	NP-15
	26-65	sil, vfsl, fsl (cn-gr)	SM, CL, ML, SC	A-2, A-4, A-6	0-5	0-15	50-90	45-85	30-85	20-75	15-30	NP-15
91C:												
Dummerston------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, l, vfsl, fsl (cn-gr)	SM, SC, CL, ML	A-4, A-6	1-5	1-10	85-100	80-95	60-95	35-85	15-35	NP-15
	4-24	sil, l, vfsl, fsl (cn-gr)	SM, CL, ML, SC	A-2, A-4, A-6	0-5	0-15	60-100	55-95	40-95	20-85	15-30	NP-15
	24-60	sil, vfsl, fsl (cn-gr)	SC, CL, ML, SM	A-2, A-4, A-6	0-5	0-15	50-90	45-85	30-85	20-75	15-30	NP-15
91D:												
Dummerston------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, l, vfsl, fsl (cn-gr)	CL, ML, SC, SM	A-4, A-6	1-5	1-10	85-100	80-95	60-95	35-85	15-35	NP-15
	4-24	sil, l, vfsl, fsl (cn-gr)	SM, CL, ML, SC	A-2, A-4, A-6	0-5	0-15	60-100	55-95	40-95	20-85	15-30	NP-15
	24-60	sil, vfsl, fsl (cn-gr)	CL, ML, SC, SM	A-2, A-4, A-6	0-5	0-15	50-90	45-85	30-85	20-75	15-30	NP-15

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
92B:												
Buckland--------	0-5	sil, l, vfsl (cn-gr)	ML, SM	A-4, A-5	0-1	0-10	85-100	75-95	55-95	40-85	15-47	NP-8
	5-20	sil, vfsl (cn-gr)	ML, SM	A-4	0-5	5-20	85-100	75-95	55-90	35-70	15-37	NP-6
	20-65	sil, vfsl (cn-gr)	SM, CL-ML, ML, SC-SM	A-4	0-5	5-20	85-100	75-95	55-90	35-70	15-27	NP-6
92C:												
Buckland--------	0-5	sil, l, vfsl (cn-gr)	SM, ML	A-4, A-5	0-1	0-10	85-100	75-95	55-95	40-85	15-47	NP-8
	5-20	sil, vfsl (cn-gr)	ML, SM	A-4	0-5	5-20	85-100	75-95	55-90	35-70	15-37	NP-6
	20-65	sil, vfsl (cn-gr)	ML, CL-ML, SC-SM, SM	A-4	0-5	5-20	85-100	75-95	55-90	35-70	15-27	NP-6
92D:												
Buckland--------	0-5	sil, l, vfsl (cn-gr)	SM, ML	A-4, A-5	0-1	0-10	85-100	75-95	55-95	40-85	15-47	NP-8
	5-20	sil, vfsl (cn-gr)	SM, ML	A-4	0-5	5-20	85-100	75-95	55-90	35-70	15-37	NP-6
	20-65	sil, vfsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-4	0-5	5-20	85-100	75-95	55-90	35-70	15-27	NP-6
93B:												
Buckland--------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-5	sil, l, vfsl (cn-gr)	SM, ML, GM	A-4, A-5	1-5	0-10	85-100	75-95	55-95	40-85	0-47	NP-8
	5-28	sil, vfsl (cn-gr)	ML, SM	A-4	0-5	0-20	85-100	75-90	60-90	35-70	0-37	NP-6
	28-61	sil, vfsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-4	0-5	0-20	85-100	75-85	60-85	35-70	0-27	NP-6
93C:												
Buckland--------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-5	sil, l, vfsl (cn-gr)	SM, ML, GM	A-4, A-5	1-5	0-10	85-100	75-95	55-95	40-85	0-47	NP-8
	5-28	sil, vfsl (cn-gr)	ML, SM	A-4	0-5	0-20	85-100	75-90	60-90	35-70	0-37	NP-6
	28-61	sil, vfsl (cn-gr)	ML, SC-SM, SM, CL-ML	A-4	0-5	0-20	85-100	75-85	60-85	35-70	0-27	NP-6

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
93D:												
Buckland--------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-5	sil, l, vfsl (cn-gr)	GM, SM, ML	A-4, A-5	1-5	0-10	85-100	75-95	55-95	40-85	0-47	NP-8
	5-28	sil, vfsl (cn-gr)	ML, SM	A-4	0-5	0-20	85-100	75-90	60-90	35-70	0-37	NP-6
	28-61	sil, vfsl (cn-gr)	SM, SC-SM, CL-ML, ML	A-4	0-5	0-20	85-100	75-85	60-85	35-70	0-27	NP-6
96D:												
Peru------------	0-3	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	3-4	l, fsl (cn-gr)	CL-ML, SM, SC-SM, ML	A-1, A-2, A-4	1-5	5-15	75-95	60-90	35-85	20-70	0-25	NP-10
	4-32	l, fsl, sl (cn-gr)	ML, SM, SC-SM, CL-ML	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
	32-67	fsl, sl (cn-gr)	CL-ML, ML, SC-SM, SM	A-1, A-2, A-4	0-10	0-15	75-95	60-90	35-85	20-70	0-25	NP-10
98B:												
Cabot-----------	0-1	spm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-9	sil, l, vfsl, fsl (cn-gr)	ML, SM, SC-SM, CL-ML	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	9-17	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	17-61	sil, l, vfsl, fsl (cn-gr)	SM, SC-SM, ML, CL-ML	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
98C:												
Cabot-----------	0-1	spm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-9	sil, l, vfsl, fsl (cn-gr)	CL-ML, ML, SC-SM, SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	9-17	sil, l, vfsl, fsl (cn-gr)	SC-SM, SM, CL-ML, ML	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5
	17-61	sil, l, vfsl, fsl (cn-gr)	ML, CL-ML, SM, SC-SM	A-2, A-4	0-5	0-15	60-95	55-90	40-90	20-80	15-25	NP-5

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
99C:												
Colonel---------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	fsl, sl (cn-gr)	SC-SM, SM, ML, CL-ML	A-2, A-4	0-5	1-10	75-95	60-90	35-85	20-70	0-25	NP-10
	4-17	fsl, sl (cn-gr)	CL-ML, ML, SC-SM, SM	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
	17-66	fsl, sl (cn-gr)	CL-ML, ML, SM, SC-SM	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
99D:												
Colonel---------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	fsl, sl (cn-gr)	SM, SC-SM, ML, CL-ML	A-2, A-4	1-5	1-10	75-95	60-90	35-85	20-70	0-25	NP-10
	4-17	fsl, sl (cn-gr)	ML, SM, SC-SM, CL-ML	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
	17-66	fsl, sl (cn-gr)	SM, ML, SC-SM, CL-ML	A-1, A-2, A-4	0-10	0-10	75-95	60-90	35-85	20-70	0-25	NP-10
100:												
Pits, Sand------	0-10	cos (none)	SP, SW	A-1, A-3	0	0	100	80-100	30-60	0-5	0-14	NP
	10-60	s, cos (gr)	SW, SP	A-1, A-3	0	0	80-100	50-100	20-60	0-5	0-14	NP
Pits, Gravel----	0-6	cos (grv)	GW	A-1	---	0-25	10-25	5-25	0-15	0-5	0-14	NP
	6-60	s, cos (grx-grv)	SW, GP, GW, SP	A-1	---	0-25	10-55	5-50	0-15	0-5	0-14	NP
102:												
Pits------------	0-60	uwb (none)			---	---	---	---	---	---	0-14	---
Dumps-----------	0-60	var (none)			---	---	---	---	---	---	0-14	---
103:												
Udorthents------	0-60	sl (gr)	ML, SM, GM, GP	A-1, A-2, A-3, A-4	---	0-30	25-100	20-100	10-90	2-80	0-35	NP-10
104:												
Urban Land------	0-60	var (none)			---	---	---	---	---	---	0-14	---
Udipsamments----	0-65	s (none)	SP	A-1, A-3	---	0-2	85-100	50-100	25-90	0-5	0-14	NP

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
116B:												
Mundal----------	0-5	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	5-7	l, fsl (gr)	SM, ML	A-2-4, A-4, A-5	1-5	5-20	80-100	70-95	50-90	30-70	20-50	NP-10
	7-25	l, fsl (gr)	ML, SM	A-2-4, A-4, A-5	0-5	0-10	80-100	75-100	45-95	20-75	20-50	NP-10
	25-70	l, fsl (gr)	GC, ML, SM, CL	A-2-4, A-4	0-5	0-20	70-95	55-90	35-85	20-70	0-30	NP-10
116C:												
Mundal----------	0-5	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	5-7	l, fsl (gr)	SM, ML	A-2-4, A-4, A-5	1-5	5-20	80-100	70-95	50-90	30-70	20-50	NP-10
	7-25	l, fsl (gr)	SM, ML	A-2-4, A-4, A-5	0-5	0-10	80-100	75-100	45-95	20-75	20-50	NP-10
	25-70	l, fsl (gr)	SM, ML, CL, GC	A-2-4, A-4	0-5	0-20	70-95	55-90	35-85	20-70	0-30	NP-10
116D:												
Mundal----------	0-5	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	5-7	l, fsl (gr)	ML, SM	A-2-4, A-4, A-5	1-5	5-20	80-100	70-95	50-90	30-70	20-50	NP-10
	7-25	l, fsl (gr)	ML, SM	A-2-4, A-4, A-5	0-5	0-10	80-100	75-100	45-95	20-75	20-50	NP-10
	25-70	l, fsl (gr)	CL, GC, ML, SM	A-2-4, A-4	0-5	0-20	70-95	55-90	35-85	20-70	0-30	NP-10
151F:												
Hogback---------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-4	l, fsl (cn-gr)	ML, SM	A-2-4, A-4, A-5	1-5	5-20	85-100	80-95	55-90	30-70	20-50	NP-10
	4-15	l, fsl (cn-gr)	ML, SM	A-2-4, A-4, A-5	0-5	0-20	75-100	70-95	50-90	30-70	20-50	NP-10
	15-19	uwb (none)			---	---	---	---	---	---	---	---
Rock Outcrop----	0-65	uwb (none)			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
Rawsonville-----	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, fsl (gr)	ML, SM	A-4, A-5	1-5	1-10	85-100	80-95	50-90	30-70	20-50	NP-10
	4-26	sil, l, fsl (gr)	SM, ML	A-2-4, A-4, A-5	0-5	0-10	75-100	70-95	50-95	30-70	20-50	NP-10
	26-30	uwb (none)			---	---	---	---	---	---	---	---
162D:												
Houghtonville---	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-5	l, fsl (gr)	ML, SM	A-2-4, A-4, A-5	1-5	1-10	85-100	80-95	50-90	30-70	20-50	NP-10
	5-33	fsl, sl (gr)	ML, SM	A-2-4, A-4	0-5	0-5	75-100	70-95	50-90	30-70	20-50	NP-10
	33-66	fsl, sl (gr)	CL, GC-GM, ML, SM	A-2-4, A-4	0-5	0-10	60-95	55-90	40-90	25-80	0-30	NP-10
Rawsonville-----	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, fsl (gr)	ML, SM	A-4, A-5	1-5	1-10	85-100	80-95	50-90	30-70	20-50	NP-10
	4-26	sil, l, fsl (gr)	ML, SM	A-2-4, A-4, A-5	0-5	0-10	75-100	70-95	50-95	30-70	20-50	NP-10
	26-30	uwb (none)			---	---	---	---	---	---	---	---
162E:												
Houghtonville---	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-5	l, fsl (gr)	ML, SM	A-2-4, A-4, A-5	1-5	1-10	85-100	80-95	50-90	30-70	20-50	NP-10
	5-33	fsl, sl (gr)	ML, SM	A-2-4, A-4	0-5	0-5	75-100	70-95	50-90	30-70	20-50	NP-10
	33-66	fsl, sl (gr)	GC-GM, CL, SM, ML	A-2-4, A-4	0-5	0-10	60-95	55-90	40-90	25-80	0-30	NP-10
Rawsonville-----	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, fsl (gr)	SM, ML	A-4, A-5	1-5	1-10	85-100	80-95	50-90	30-70	20-50	NP-10
	4-26	sil, l, fsl (gr)	ML, SM	A-2-4, A-4, A-5	0-5	0-10	75-100	70-95	50-95	30-70	20-50	NP-10
	26-30	uwb (none)			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
163C:												
Houghtonville---	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-5	l, fsl (gr)	ML, SM	A-2-4, A-4, A-5	1-5	1-10	85-100	80-95	50-90	30-70	20-50	NP-10
	5-33	fsl, sl (gr)	SM, ML	A-2-4, A-4, A-5	0-5	0-5	75-100	70-95	50-90	30-70	20-50	NP-10
	33-66	fsl, sl (gr)	CL, CL-ML, ML, SM	A-2-4, A-4	0-5	0-10	60-95	55-90	40-90	25-80	0-30	NP-10
163D:												
Houghtonville---	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-5	l, fsl (gr)	SM, ML	A-2-4, A-4, A-5	1-5	1-10	85-100	80-95	50-90	30-70	20-50	NP-10
	5-33	fsl, sl (gr)	ML, SM	A-2-4, A-4, A-5	0-5	0-5	75-100	70-95	50-90	30-70	20-50	NP-10
	33-66	fsl, sl (gr)	CL, CL-ML, ML, SM	A-2-4, A-4	0-5	0-10	60-95	55-90	40-90	25-80	0-30	NP-10
163E:												
Houghtonville---	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-5	l, fsl (gr)	ML, SM	A-2-4, A-4, A-5	1-5	1-10	85-100	80-95	50-90	30-70	20-50	NP-10
	5-33	fsl, sl (gr)	SM, ML	A-2-4, A-4, A-5	0-5	0-5	75-100	70-95	50-90	30-70	20-50	NP-10
	33-66	fsl, sl (gr)	SM, CL, CL-ML, ML	A-2-4, A-4	0-5	0-10	60-95	55-90	40-90	25-80	0-30	NP-10
168C:												
Hogback---------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-4	l, fsl (cn-gr)	SM, ML	A-2-4, A-4, A-5	1-5	5-20	85-100	80-95	55-90	30-70	20-50	NP-10
	4-15	l, fsl (cn-gr)	SM, ML	A-2-4, A-4, A-5	0-5	0-20	75-100	70-95	50-90	30-70	20-50	NP-10
	15-19	uwb (none)			---	---	---	---	---	---	---	---
Rawsonville-----	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, fsl (gr)	SM, ML	A-4, A-5	1-5	1-10	75-100	70-90	50-90	30-70	20-50	NP-10
	4-26	sil, l, fsl (gr)	ML, SM	A-2-4, A-4, A-5	0-5	0-10	75-100	70-95	50-95	30-70	20-50	NP-10
	26-30	uwb (none)			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
168D:												
Hogback----------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-4	l, fsl (cn-gr)	ML, SM	A-2-4, A-4, A-5	1-5	5-20	85-100	80-95	55-90	30-70	20-50	NP-10
	4-15	l, fsl (cn-gr)	SM, ML	A-2-4, A-4, A-5	0-5	0-20	75-100	70-95	50-90	30-70	20-50	NP-10
	15-19	uwb (none)			---	---	---	---	---	---	---	---
Rawsonville-----	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, fsl (gr)	SM, ML	A-4, A-5	1-5	1-10	75-100	70-90	50-90	30-70	20-50	NP-10
	4-26	sil, l, fsl (gr)	SM, ML	A-2-4, A-4, A-5	0-5	0-10	75-100	70-95	50-95	30-70	20-50	NP-10
	26-30	uwb (none)			---	---	---	---	---	---	---	---
168E:												
Hogback----------	0-1	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	1-4	l, fsl (cn-gr)	SM, ML	A-2-4, A-4, A-5	1-5	5-20	85-100	80-95	55-90	30-70	20-50	NP-10
	4-15	l, fsl (cn-gr)	ML, SM	A-2-4, A-4, A-5	0-5	0-20	75-100	70-95	50-90	30-70	20-50	NP-10
	15-19	uwb (none)			---	---	---	---	---	---	---	---
Rawsonville-----	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, fsl (gr)	SM, ML	A-4, A-5	1-5	1-10	75-100	70-90	50-90	30-70	20-50	NP-10
	4-26	sil, l, fsl (gr)	SM, ML	A-2-4, A-4, A-5	0-5	0-10	75-100	70-95	50-95	30-70	20-50	NP-10
	26-30	uwb (none)			---	---	---	---	---	---	---	---
172F:												
Taconic----------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-6	sil, l (cn-cnv-gr-grv)	SM, CL-ML, CL, ML	A-2, A-4, A-6	0-1	5-40	55-80	50-75	40-75	30-70	15-35	3-15
	6-16	sil, l (cn-cnv-gr-grv)	GC, GC-GM, GM	A-1, A-2, A-4, A-6	0	5-15	30-60	25-55	20-55	15-50	15-30	3-15
	16-20	uwb (none)			---	---	---	---	---	---	---	---

Table 14.—Engineering Index Properties—Continued

Map symbol and soil name	Depth	USDA texture (texture modifiers allowed)	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	
Hubbardton------	0-2	spm, mpm, hpm (none)	PT	A-8	---	---	---	---	---	---	---	---
	2-4	sil, vfsl, fsl (cnv-grv)	SM, SC-SM, GM, GC-GM	A-1, A-2, A-4	1-5	5-25	35-55	30-50	20-50	10-45	25-37	4-10
	4-9	sil, vfsl, fsl (cnv-grv)	GC-GM, SC-SM, GM, SM	A-1, A-2, A-4	0-5	5-25	35-55	30-50	20-50	10-45	25-35	4-10
	9-13	uwb (none)			---	---	---	---	---	---	---	---
Rock Outcrop----	0-65	uwb (none)			---	---	---	---	---	---	---	---

Table 15.—Physical and Chemical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Soil reaction pH
										Kw	Kf	T	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
2A:													
Ondawa----------	0-8	45-80	12-50	1-9	1.15-1.40	0.6-6	0.12-0.24	0.0-2.9	4.0-8.0	.24	.24	3	4.5-6.0
	8-24	40-80	12-50	1-9	1.15-1.45	0.6-6	0.12-0.22	0.0-2.9	1.0-5.0	.37	.37		4.5-6.0
	24-65	70-100	0-30	0-3	1.30-1.50	6-20	0.04-0.13	0.0-2.9	0.5-3.0	.20	.24		4.5-6.0
3A:													
Rumney----------	0-7	45-79	12-50	1-9	1.10-1.40	0.6-6	0.12-0.24	0.0-2.9	4.0-8.0	.24	.24	3	4.5-6.5
	7-27	41-79	12-50	1-9	1.15-1.45	0.6-6	0.12-0.22	0.0-2.9	0.0-2.0	.37	.37		4.5-6.5
	27-65	70-100	0-30	0-3	1.30-1.50	6-20	0.04-0.13	0.0-2.9	0.0-1.0	.20	.24		4.5-6.5
4A:													
Sunny-----------	0-8	0-48	0-88	2-18	1.20-1.45	0.6-2	0.20-0.24	0.0-2.9	2.0-6.0	.32	.32	3	5.1-6.5
	8-34	0-85	0-88	2-18	1.25-1.50	0.6-2	0.17-0.22	0.0-2.9	0.5-3.0	.43	.43		5.1-6.5
	34-65	70-100	0-30	0-3	1.35-1.55	6-20	0.05-0.10	0.0-2.9	0.0-1.0	.10	.15		5.1-6.5
9A:													
Rifle-----------	0-6	---	---	---	0.20-0.35	0.2-6	0.35-0.55	---	70-90	---	---	3	5.6-7.3
	6-65	---	---	---	0.08-0.20	0.6-6	0.45-0.55	---	70-90	---	---		5.6-7.3
14B:													
Colonel---------	0-9	40-80	15-50	3-10	0.90-1.20	0.6-2	0.20-0.30	0.0-2.9	4.0-8.0	.20	.20	2	4.5-6.5
	9-16	40-80	15-50	3-10	1.00-1.60	0.6-2	0.15-0.25	0.0-2.9	0.5-4.0	.24	.28		4.5-6.5
	16-60	40-80	15-50	3-10	1.65-1.95	0.06-0.6	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		4.5-6.5
14C:													
Colonel---------	0-9	40-80	15-50	3-10	0.90-1.20	0.6-2	0.20-0.30	0.0-2.9	4.0-8.0	.20	.20	2	4.5-6.5
	9-16	40-80	15-50	3-10	1.00-1.60	0.6-2	0.15-0.25	0.0-2.9	0.5-4.0	.24	.28		4.5-6.5
	16-60	40-80	15-50	3-10	1.65-1.95	0.06-0.6	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		4.5-6.5
14D:													
Colonel---------	0-9	40-80	15-50	3-10	0.90-1.20	0.6-2	0.20-0.30	0.0-2.9	4.0-8.0	.20	.20	2	4.5-6.5
	9-16	40-80	15-50	3-10	1.00-1.60	0.6-2	0.15-0.25	0.0-2.9	0.5-4.0	.24	.28		4.5-6.5
	16-60	40-80	15-50	3-10	1.65-1.95	0.06-0.6	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		4.5-6.5
17A:													
Cabot-----------	0-4	35-80	15-65	1-15	0.70-1.10	0.6-2	0.18-0.24	0.0-2.9	4.0-12	.32	.32	2	5.1-7.3
	4-11	35-80	15-65	1-15	1.30-1.70	0.6-2	0.10-0.22	0.0-2.9	0.5-4.0	.28	.32		5.1-7.3
	11-60	35-80	15-65	1-15	1.70-1.90	0.0015-0.2	0.08-0.12	0.0-2.9	0.0-1.0	.28	.37		5.6-7.3
17B:													
Cabot-----------	0-4	35-80	15-65	1-15	0.70-1.10	0.6-2	0.18-0.24	0.0-2.9	4.0-12	.32	.32	2	5.1-7.3
	4-11	35-80	15-65	1-15	1.30-1.70	0.6-2	0.10-0.22	0.0-2.9	0.5-4.0	.28	.32		5.1-7.3
	11-60	35-80	15-65	1-15	1.70-1.90	0.0015-0.2	0.08-0.12	0.0-2.9	0.0-1.0	.28	.37		5.6-7.3

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
17C:													
Cabot-----------	0-4	35-80	15-65	1-15	0.70-1.10	0.6-2	0.18-0.24	0.0-2.9	4.0-12	.32	.32	2	5.1-7.3
	4-11	35-80	15-65	1-15	1.30-1.70	0.6-2	0.10-0.22	0.0-2.9	0.5-4.0	.28	.32		5.1-7.3
	11-60	35-80	15-65	1-15	1.70-1.90	0.0015-0.2	0.08-0.12	0.0-2.9	0.0-1.0	.28	.37		5.6-7.3
18B:													
Cabot-----------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	1-9	35-80	15-65	1-15	0.70-1.10	0.6-2	0.14-0.24	0.0-2.9	4.0-12	.28	.32		5.1-7.3
	9-17	35-80	15-65	1-15	1.30-1.70	0.6-2	0.10-0.22	0.0-2.9	0.5-4.0	.28	.32		5.1-7.3
	17-61	35-80	15-65	1-15	1.70-1.90	0.0015-0.2	0.08-0.12	0.0-2.9	0.0-1.0	.28	.32		5.6-7.3
18C:													
Cabot-----------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	1-9	35-80	15-65	1-15	0.70-1.10	0.6-2	0.14-0.24	0.0-2.9	4.0-12	.28	.32		5.1-7.3
	9-17	35-80	15-65	1-15	1.30-1.70	0.6-2	0.10-0.22	0.0-2.9	0.5-4.0	.28	.32		5.1-7.3
	17-61	35-80	15-65	1-15	1.70-1.90	0.0015-0.2	0.08-0.12	0.0-2.9	0.0-1.0	.28	.32		5.6-7.3
19B:													
Colonel---------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	40-80	15-50	3-10	0.90-1.20	0.6-2	0.15-0.25	0.0-2.9	4.0-8.0	.17	.20		4.5-6.5
	4-17	40-80	15-50	3-10	1.00-1.60	0.6-2	0.15-0.25	0.0-2.9	0.5-4.0	.24	.28		4.5-6.5
	17-66	40-80	15-50	3-10	1.65-1.95	0.06-0.6	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		4.5-6.5
19C:													
Colonel---------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	40-80	15-50	3-10	0.90-1.20	0.6-2	0.15-0.25	0.0-2.9	4.0-8.0	.17	.20		4.5-6.5
	4-17	40-80	15-50	3-10	1.00-1.60	0.6-2	0.15-0.25	0.0-2.9	0.5-4.0	.24	.28		4.5-6.5
	17-66	40-80	15-50	3-10	1.65-1.95	0.06-0.6	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		4.5-6.5
19D:													
Colonel---------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	40-80	15-50	3-10	0.90-1.20	0.6-2	0.15-0.25	0.0-2.9	4.0-8.0	.17	.20		4.5-6.5
	4-17	40-80	15-50	3-10	1.00-1.60	0.6-2	0.15-0.25	0.0-2.9	0.5-4.0	.24	.28		4.5-6.5
	17-66	40-80	15-50	3-10	1.65-1.95	0.06-0.6	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		4.5-6.5
20A:													
Peacham---------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	2-12	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---		3.6-5.5
	12-28	35-80	15-65	3-10	1.20-1.40	0.6-2	0.11-0.22	0.0-2.9	0.5-2.0	.28	.32		5.1-6.5
	28-67	35-80	15-65	3-10	1.80-2.00	0.0015-0.2	0.02-0.06	0.0-2.9	0.0-0.5	.28	.32		5.1-6.5
21A:													
Sunday----------	0-10	86-100	0-12	0-5	1.25-1.55	6-20	0.07-0.09	0.0-2.9	1.0-2.0	.15	.15	5	4.5-6.5
	10-65	80-100	0-20	0-2	1.25-1.55	6-20	0.01-0.10	0.0-2.9	0.0-0.5	.15	.15		4.5-6.5

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
26A:													
Adams-----------	0-8	70-88	7-30	0-5	1.00-1.30	6-20	0.06-0.12	0.0-2.9	2.0-5.0	.17	.17	5	4.5-5.5
	8-31	70-100	0-30	0-5	1.10-1.45	6-20	0.03-0.10	0.0-2.9	1.0-3.0	.17	.17		4.5-5.5
	31-65	86-100	0-12	0-5	1.20-1.50	20-100	0.03-0.04	0.0-2.9	0.0-0.5	.17	.17		4.5-6.0
26B:													
Adams-----------	0-8	70-88	7-30	0-5	1.00-1.30	6-20	0.06-0.12	0.0-2.9	2.0-5.0	.17	.17	5	4.5-5.5
	8-31	70-100	0-30	0-5	1.10-1.45	6-20	0.03-0.10	0.0-2.9	1.0-3.0	.17	.17		4.5-5.5
	31-65	86-100	0-12	0-5	1.20-1.50	20-100	0.03-0.04	0.0-2.9	0.0-0.5	.17	.17		4.5-6.0
26C:													
Adams-----------	0-8	70-88	7-30	0-5	1.00-1.30	6-20	0.06-0.12	0.0-2.9	2.0-5.0	.17	.17	5	4.5-5.5
	8-31	70-100	0-30	0-5	1.10-1.45	6-20	0.03-0.10	0.0-2.9	1.0-3.0	.17	.17		4.5-5.5
	31-65	86-100	0-12	0-5	1.20-1.50	20-100	0.03-0.04	0.0-2.9	0.0-0.5	.17	.17		4.5-6.0
26D:													
Adams-----------	0-8	70-88	7-30	0-5	1.00-1.30	6-20	0.06-0.12	0.0-2.9	2.0-5.0	.17	.17	5	4.5-5.5
	8-31	70-100	0-30	0-5	1.10-1.45	6-20	0.03-0.10	0.0-2.9	1.0-3.0	.17	.17		4.5-5.5
	31-65	86-100	0-12	0-5	1.20-1.50	20-100	0.03-0.04	0.0-2.9	0.0-0.5	.17	.17		4.5-6.0
26E:													
Adams-----------	0-8	70-88	7-30	0-5	1.00-1.30	6-20	0.06-0.12	0.0-2.9	2.0-5.0	.17	.17	5	4.5-5.5
	8-31	70-100	0-30	0-5	1.10-1.45	6-20	0.03-0.10	0.0-2.9	1.0-3.0	.17	.17		4.5-5.5
	31-65	86-100	0-12	0-5	1.20-1.50	20-100	0.03-0.04	0.0-2.9	0.0-0.5	.17	.17		4.5-6.0
33A:													
Machias---------	0-8	15-80	6-80	5-12	0.85-1.15	2-6	0.12-0.24	0.0-2.9	2.0-6.0	.17	.17	3	4.5-5.5
	8-22	8-82	6-80	5-12	0.90-1.20	2-6	0.06-0.15	0.0-2.9	0.5-2.0	.10	.15		4.5-6.0
	22-65	70-100	0-30	0-5	1.40-1.70	6-20	0.01-0.08	0.0-2.9	0.0-0.5	.10	.17		4.5-6.0
33B:													
Machias---------	0-8	15-80	6-80	5-12	0.85-1.15	2-6	0.12-0.24	0.0-2.9	2.0-6.0	.17	.17	3	4.5-5.5
	8-22	8-82	6-80	5-12	0.90-1.20	2-6	0.06-0.15	0.0-2.9	0.5-2.0	.10	.15		4.5-6.0
	22-65	70-100	0-30	0-5	1.40-1.70	6-20	0.01-0.08	0.0-2.9	0.0-0.5	.10	.17		4.5-6.0
33C:													
Machias---------	0-8	15-80	6-80	5-12	0.85-1.15	2-6	0.12-0.24	0.0-2.9	2.0-6.0	.17	.17	3	4.5-5.5
	8-22	8-82	6-80	5-12	0.90-1.20	2-6	0.06-0.15	0.0-2.9	0.5-2.0	.10	.15		4.5-6.0
	22-65	70-100	0-30	0-5	1.40-1.70	6-20	0.01-0.08	0.0-2.9	0.0-0.5	.10	.17		4.5-6.0
37B:													
Stetson---------	0-8	40-52	38-50	5-10	1.00-1.30	0.6-6	0.12-0.25	0.0-2.9	2.0-6.0	.17	.17	3	5.6-6.5
	8-20	42-78	14-50	2-8	1.00-1.30	0.6-6	0.08-0.18	0.0-2.9	1.0-4.0	.10	.15		5.6-6.5
	20-25	47-87	10-50	0-3	1.15-1.45	0.6-6	0.05-0.11	0.0-2.9	0.5-2.0	.10	.15		5.6-6.5
	25-65	86-100	0-12	0-2	1.40-1.65	6-20	0.01-0.06	0.0-2.9	0.0-0.5	.05	.17		5.6-6.5

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
37C:													
Stetson----------	0-8	40-52	38-50	5-10	1.00-1.30	0.6-6	0.12-0.25	0.0-2.9	2.0-6.0	.17	.17	3	5.6-6.5
	8-20	42-78	14-50	2-8	1.00-1.30	0.6-6	0.08-0.18	0.0-2.9	1.0-4.0	.10	.15		5.6-6.5
	20-25	47-87	10-50	0-3	1.15-1.45	0.6-6	0.05-0.11	0.0-2.9	0.5-2.0	.10	.15		5.6-6.5
	25-65	86-100	0-12	0-2	1.40-1.65	6-20	0.01-0.06	0.0-2.9	0.0-0.5	.05	.17		5.6-6.5
37D:													
Stetson----------	0-8	40-52	38-50	5-10	1.00-1.30	0.6-6	0.12-0.25	0.0-2.9	2.0-6.0	.17	.17	3	5.6-6.5
	8-20	42-78	14-50	2-8	1.00-1.30	0.6-6	0.08-0.18	0.0-2.9	1.0-4.0	.10	.15		5.6-6.5
	20-25	47-87	10-50	0-3	1.15-1.45	0.6-6	0.05-0.11	0.0-2.9	0.5-2.0	.10	.15		5.6-6.5
	25-65	86-100	0-12	0-2	1.40-1.65	6-20	0.01-0.06	0.0-2.9	0.0-0.5	.05	.17		5.6-6.5
37E:													
Stetson----------	0-8	41-52	28-50	4-9	1.00-1.30	0.6-6	0.09-0.25	0.0-2.9	1.0-5.0	.10	.17	3	5.6-6.5
	8-20	42-78	14-50	2-8	1.00-1.30	0.6-6	0.08-0.18	0.0-2.9	1.0-4.0	.10	.15		5.6-6.5
	20-25	47-87	10-50	0-3	1.15-1.45	0.6-6	0.05-0.11	0.0-2.9	0.5-2.0	.10	.15		5.6-6.5
	25-65	86-100	0-12	0-2	1.40-1.65	6-20	0.01-0.06	0.0-2.9	0.0-0.5	.05	.17		5.6-6.5
39A:													
Colton-----------	0-7	71-88	7-28	1-5	1.10-1.40	6-20	0.03-0.07	0.0-2.9	2.0-6.0	.15	.17	5	3.6-6.0
	7-30	70-100	0-30	0-5	1.25-1.55	6-20	0.02-0.05	0.0-2.9	0.0-0.5	.15	.17		3.6-6.0
	30-65	70-100	0-30	0-3	1.45-1.65	20-100	0.01-0.02	0.0-2.9	0.0-0.5	.10	.17		4.5-6.5
39B:													
Colton-----------	0-7	71-88	7-28	1-5	1.10-1.40	6-20	0.03-0.07	0.0-2.9	2.0-6.0	.15	.17	5	3.6-6.0
	7-30	70-100	0-30	0-5	1.25-1.55	6-20	0.02-0.05	0.0-2.9	0.0-0.5	.15	.17		3.6-6.0
	30-65	70-100	0-30	0-3	1.45-1.65	20-100	0.01-0.02	0.0-2.9	0.0-0.5	.10	.17		4.5-6.5
39C:													
Colton-----------	0-7	71-88	7-28	1-5	1.10-1.40	6-20	0.03-0.07	0.0-2.9	2.0-6.0	.15	.17	5	3.6-6.0
	7-30	70-100	0-30	0-5	1.25-1.55	6-20	0.02-0.05	0.0-2.9	0.0-0.5	.15	.17		3.6-6.0
	30-65	70-100	0-30	0-3	1.45-1.65	20-100	0.01-0.02	0.0-2.9	0.0-0.5	.10	.17		4.5-6.5
39D:													
Colton-----------	0-7	71-88	7-28	1-5	1.10-1.40	6-20	0.03-0.07	0.0-2.9	2.0-6.0	.15	.17	5	3.6-6.0
	7-30	70-100	0-30	0-5	1.25-1.55	6-20	0.02-0.05	0.0-2.9	0.0-0.5	.15	.17		3.6-6.0
	30-65	70-100	0-30	0-3	1.45-1.65	20-100	0.01-0.02	0.0-2.9	0.0-0.5	.10	.17		4.5-6.5
39E:													
Colton-----------	0-7	71-88	7-28	1-5	1.10-1.40	6-20	0.03-0.07	0.0-2.9	2.0-6.0	.15	.17	5	3.6-6.0
	7-30	70-100	0-30	0-5	1.25-1.55	6-20	0.02-0.05	0.0-2.9	0.0-0.5	.15	.17		3.6-6.0
	30-65	70-100	0-30	0-3	1.45-1.65	20-100	0.01-0.02	0.0-2.9	0.0-0.5	.10	.17		4.5-6.5

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
41D:													
Buxton----------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	1-3	0-20	40-70	20-60	0.90-1.20	0.2-2	0.25-0.30	0.0-2.9	3.0-8.0	.32	.32		5.1-6.5
	3-13	0-20	40-70	20-60	1.10-1.55	0.06-0.6	0.13-0.28	3.0-5.9	0.5-3.0	.49	.49		5.6-7.3
	13-26	0-10	40-70	30-60	1.40-1.80	0.0015-0.2	0.10-0.16	3.0-5.9	0.0-1.0	.49	.49		5.6-7.3
	26-66	0-10	30-70	30-60	1.40-1.80	0.0015-0.2	0.06-0.16	3.0-5.9	0.0-0.5	.49	.49		5.6-7.3
41E:													
Buxton----------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	1-3	0-20	40-70	20-60	0.90-1.20	0.2-2	0.25-0.30	0.0-2.9	3.0-8.0	.32	.32		5.1-6.5
	3-13	0-20	40-70	20-60	1.10-1.55	0.06-0.6	0.13-0.28	3.0-5.9	0.5-3.0	.49	.49		5.6-7.3
	13-26	0-10	40-70	30-60	1.40-1.80	0.0015-0.2	0.10-0.16	3.0-5.9	0.0-1.0	.49	.49		5.6-7.3
	26-66	0-10	30-70	30-60	1.40-1.80	0.0015-0.2	0.06-0.16	3.0-5.9	0.0-0.5	.49	.49		5.6-7.3
43B:													
Salmon----------	0-6	0-60	30-90	2-18	0.90-1.50	0.6-2	0.13-0.30	0.0-2.9	2.0-6.0	.49	.49	5	3.6-6.0
	6-30	0-60	30-90	2-18	1.10-1.50	0.6-2	0.12-0.26	0.0-2.9	0.5-3.0	.64	.64		3.6-6.0
	30-60	0-60	30-90	2-18	1.45-1.65	0.6-2	0.09-0.26	0.0-2.9	0.0-1.0	.64	.64		5.1-6.0
43C:													
Salmon----------	0-6	0-60	30-90	2-18	0.90-1.50	0.6-2	0.13-0.30	0.0-2.9	2.0-6.0	.49	.49	5	3.6-6.0
	6-30	0-60	30-90	2-18	1.10-1.50	0.6-2	0.12-0.26	0.0-2.9	0.5-3.0	.64	.64		3.6-6.0
	30-60	0-60	30-90	2-18	1.45-1.65	0.6-2	0.09-0.26	0.0-2.9	0.0-1.0	.64	.64		5.1-6.0
43D:													
Salmon----------	0-3	0-60	30-90	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	3-7	0-60	30-90	2-18	0.90-1.50	0.6-2	0.13-0.30	0.0-2.9	2.0-6.0	.49	.49		3.6-6.0
	7-19	0-60	30-90	2-18	1.10-1.50	0.6-2	0.12-0.26	0.0-2.9	0.5-3.0	.64	.64		3.6-6.0
	19-68	0-60	30-90	2-18	1.45-1.65	0.6-2	0.12-0.26	0.0-2.9	0.0-1.0	.64	.64		5.1-6.0
43E:													
Salmon----------	0-3	0-60	30-90	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	3-7	0-60	30-90	2-18	0.90-1.50	0.6-2	0.13-0.30	0.0-2.9	2.0-6.0	.49	.49		3.6-6.0
	7-19	0-60	30-90	2-18	1.10-1.50	0.6-2	0.12-0.26	0.0-2.9	0.5-3.0	.64	.64		3.6-6.0
	19-68	0-60	30-90	2-18	1.45-1.65	0.6-2	0.12-0.26	0.0-2.9	0.0-1.0	.64	.64		5.1-6.0
44B:													
Lamoine---------	0-10	0-20	40-70	15-30	0.90-1.20	0.2-2	0.25-0.30	0.0-2.9	3.0-8.0	.32	.32	2	5.1-6.5
	10-17	0-20	40-70	20-45	1.10-1.55	0.06-0.6	0.13-0.28	3.0-5.9	0.5-3.0	.49	.49		5.6-7.3
	17-65	0-10	30-70	35-55	1.40-1.80	0.0015-0.2	0.06-0.16	3.0-5.9	0.0-0.5	.49	.49		5.6-7.3
44C:													
Lamoine---------	0-10	0-20	40-70	15-30	0.90-1.20	0.2-2	0.25-0.30	0.0-2.9	3.0-8.0	.32	.32	2	5.1-6.5
	10-17	0-20	40-70	20-45	1.10-1.55	0.06-0.6	0.13-0.28	3.0-5.9	0.5-3.0	.49	.49		5.6-7.3
	17-65	0-10	30-70	35-55	1.40-1.80	0.0015-0.2	0.06-0.16	3.0-5.9	0.0-0.5	.49	.49		5.6-7.3

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
45A:													
Scantic	0-8	0-20	40-70	15-40	1.05-1.22	0.2-2	0.24-0.34	0.0-2.9	3.0-9.0	.32	.32	3	5.1-6.5
	8-30	0-20	40-70	20-55	1.15-1.75	0.0015-0.2	0.13-0.28	3.0-5.9	0.5-3.0	.49	.49		5.6-6.5
	30-65	0-10	30-70	35-55	1.40-1.80	0.0015-0.2	0.06-0.16	3.0-5.9	0.0-0.5	.49	.49		5.6-6.5
55B:													
Nicholville	0-8	0-60	30-88	3-18	1.20-1.50	0.6-2	0.16-0.22	0.0-2.9	2.0-6.0	.49	.49	5	4.5-6.0
	8-14	0-60	30-88	3-18	1.20-1.50	0.6-2	0.15-0.20	0.0-2.9	0.5-3.0	.64	.64		4.5-6.0
	14-65	0-60	30-88	3-18	1.45-1.65	0.6-2	0.10-0.20	0.0-2.9	0.0-1.0	.64	.64		4.5-6.0
58A:													
Grange	0-8	10-50	10-80	1-10	0.95-1.25	0.6-2	0.20-0.25	0.0-2.9	2.0-7.0	.43	.43	4	5.1-6.5
	8-22	10-80	10-80	1-10	1.30-1.60	0.6-2	0.10-0.25	0.0-2.9	0.5-2.0	.43	.43		5.1-6.5
	22-65	86-100	0-12	1-5	1.40-1.60	2-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15		5.6-6.5
59A:													
Waitsfield	0-9	15-70	30-88	2-15	1.20-1.45	0.6-2	0.16-0.24	0.0-2.9	1.0-4.0	.32	.37	3	5.1-6.5
	9-20	0-85	0-88	2-15	1.20-1.45	0.6-2	0.15-0.22	0.0-2.9	0.5-3.0	.43	.43		5.1-6.5
	20-65	70-100	0-30	0-3	1.30-1.50	6-20	0.02-0.10	0.0-2.9	0.0-1.0	.10	.15		5.1-6.5
60A:													
Weider	0-6	0-80	15-88	2-18	1.20-1.45	0.6-2	0.16-0.24	0.0-2.9	1.0-4.0	.32	.32	3	4.5-6.5
	6-25	0-80	15-88	2-18	1.25-1.50	0.6-2	0.15-0.22	0.0-2.9	0.5-3.0	.43	.43		4.5-6.5
	25-65	70-100	0-30	0-3	1.35-1.55	6-20	0.02-0.10	0.0-2.9	0.0-1.0	.10	.15		4.5-6.5
62B:													
Berkshire	0-8	45-80	10-50	3-10	1.10-1.15	0.6-6	0.10-0.22	0.0-2.9	2.0-5.0	.24	.24	5	4.5-6.0
	8-26	40-80	15-50	3-10	1.15-1.30	0.6-6	0.10-0.20	0.0-2.9	0.5-4.5	.32	.37		4.5-6.0
	26-60	40-80	15-50	1-10	1.30-1.60	0.6-6	0.10-0.18	0.0-2.9	0.0-1.0	.24	.28		4.5-6.0
62C:													
Berkshire	0-8	45-80	10-50	3-10	1.10-1.15	0.6-6	0.10-0.22	0.0-2.9	2.0-5.0	.24	.24	5	4.5-6.0
	8-26	40-80	15-50	3-10	1.15-1.30	0.6-6	0.10-0.20	0.0-2.9	0.5-4.5	.32	.37		4.5-6.0
	26-60	40-80	15-50	1-10	1.30-1.60	0.6-6	0.10-0.18	0.0-2.9	0.0-1.0	.24	.28		4.5-6.0
62D:													
Berkshire	0-8	45-80	10-50	3-10	1.10-1.15	0.6-6	0.10-0.22	0.0-2.9	2.0-5.0	.24	.24	5	4.5-6.0
	8-26	40-80	15-50	3-10	1.15-1.30	0.6-6	0.10-0.20	0.0-2.9	0.5-4.5	.32	.37		4.5-6.0
	26-60	40-80	15-50	1-10	1.30-1.60	0.6-6	0.10-0.18	0.0-2.9	0.0-1.0	.24	.28		4.5-6.0
63B:													
Berkshire	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	2-6	45-80	10-50	3-10	1.10-1.15	0.6-6	0.06-0.22	0.0-2.9	2.0-5.0	.20	.24		4.5-6.0
	6-38	40-80	15-50	3-10	1.15-1.30	0.6-6	0.10-0.20	0.0-2.9	0.5-4.5	.32	.37		4.5-6.0
	38-67	40-80	15-50	1-10	1.30-1.60	0.6-6	0.10-0.18	0.0-2.9	0.0-1.0	.24	.28		4.5-6.0

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
63C:													
Berkshire-------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	2-6	45-80	10-50	3-10	1.10-1.15	0.6-6	0.06-0.22	0.0-2.9	2.0-5.0	.20	.24		4.5-6.0
	6-38	40-80	15-50	3-10	1.15-1.30	0.6-6	0.10-0.20	0.0-2.9	0.5-4.5	.32	.37		4.5-6.0
	38-67	40-80	15-50	1-10	1.30-1.60	0.6-6	0.10-0.18	0.0-2.9	0.0-1.0	.24	.28		4.5-6.0
63D:													
Berkshire-------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	2-6	45-80	10-50	3-10	1.10-1.15	0.6-6	0.06-0.22	0.0-2.9	2.0-5.0	.20	.24		4.5-6.0
	6-38	40-80	15-50	3-10	1.15-1.30	0.6-6	0.10-0.20	0.0-2.9	0.5-4.5	.32	.37		4.5-6.0
	38-67	40-80	15-50	1-10	1.30-1.60	0.6-6	0.10-0.18	0.0-2.9	0.0-1.0	.24	.28		4.5-6.0
63E:													
Berkshire-------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	2-6	45-80	10-50	3-10	1.10-1.15	0.6-6	0.06-0.22	0.0-2.9	2.0-5.0	.20	.24		4.5-6.0
	6-38	40-80	15-50	3-10	1.15-1.30	0.6-6	0.10-0.20	0.0-2.9	0.5-4.5	.32	.37		4.5-6.0
	38-67	40-80	15-50	1-10	1.30-1.60	0.6-6	0.10-0.18	0.0-2.9	0.0-1.0	.24	.28		4.5-6.0
64C:													
Salmon----------	0-3	0-60	30-90	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	3-7	0-60	30-90	2-18	0.90-1.50	0.6-2	0.13-0.30	0.0-2.9	2.0-6.0	.49	.49		3.6-6.0
	7-19	0-60	30-90	2-18	1.10-1.50	0.6-2	0.12-0.26	0.0-2.9	0.5-3.0	.64	.64		3.6-6.0
	19-68	0-60	30-90	2-18	1.45-1.65	0.6-2	0.12-0.26	0.0-2.9	0.0-1.0	.64	.64		5.1-6.0
Adamant---------	0-4	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	4-9	10-60	30-80	1-10	1.00-1.50	0.6-6	0.20-0.24	0.0-2.9	1.0-8.0	.49	.49		4.5-6.0
	9-22	10-60	30-80	1-10	1.20-1.60	0.6-6	0.17-0.22	0.0-2.9	0.5-3.0	.49	.49		4.5-6.0
	22-28	10-60	30-80	1-10	1.50-1.70	0.6-6	0.15-0.22	0.0-2.9	0.5-3.0	.49	.49		4.5-6.0
	28-32	---	---	---	---	0.01-20	---	---	---	---	---		---
64D:													
Salmon----------	0-3	0-60	30-90	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	3-7	0-60	30-90	2-18	0.90-1.50	0.6-2	0.13-0.30	0.0-2.9	2.0-6.0	.49	.49		3.6-6.0
	7-19	0-60	30-90	2-18	1.10-1.50	0.6-2	0.12-0.26	0.0-2.9	0.5-3.0	.64	.64		3.6-6.0
	19-68	0-60	30-90	2-18	1.45-1.65	0.6-2	0.12-0.26	0.0-2.9	0.0-1.0	.64	.64		5.1-6.0
Adamant---------	0-4	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	4-9	10-60	30-80	1-10	1.00-1.50	0.6-6	0.20-0.24	0.0-2.9	1.0-8.0	.49	.49		4.5-6.0
	9-22	10-60	30-80	1-10	1.20-1.60	0.6-6	0.17-0.22	0.0-2.9	0.5-3.0	.49	.49		4.5-6.0
	22-28	10-60	30-80	1-10	1.50-1.70	0.6-6	0.15-0.22	0.0-2.9	0.5-3.0	.49	.49		4.5-6.0
	28-32	---	---	---	---	0.01-20	---	---	---	---	---		---
64E:													
Salmon----------	0-3	0-60	30-90	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	3-7	0-60	30-90	2-18	0.90-1.50	0.6-2	0.13-0.30	0.0-2.9	2.0-6.0	.49	.49		3.6-6.0
	7-19	0-60	30-90	2-18	1.10-1.50	0.6-2	0.12-0.26	0.0-2.9	0.5-3.0	.64	.64		3.6-6.0
	19-68	0-60	30-90	2-18	1.45-1.65	0.6-2	0.12-0.26	0.0-2.9	0.0-1.0	.64	.64		5.1-6.0

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
Adamant---------	0-4	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	4-9	10-60	30-80	1-10	1.00-1.50	0.6-6	0.20-0.24	0.0-2.9	1.0-8.0	.49	.49		4.5-6.0
	9-22	10-60	30-80	1-10	1.20-1.60	0.6-6	0.17-0.22	0.0-2.9	0.5-3.0	.49	.49		4.5-6.0
	22-28	10-60	30-80	1-10	1.50-1.70	0.6-6	0.15-0.22	0.0-2.9	0.5-3.0	.49	.49		4.5-6.0
	28-32	---	---	---	---	0.01-20	---	---	---	---	---		---
66B:													
Vershire--------	0-9	35-80	15-65	4-18	1.00-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-4.0	.37	.37	2	4.5-6.5
	9-17	35-80	15-65	4-18	1.20-1.60	0.6-2	0.12-0.19	0.0-2.9	0.5-3.0	.24	.28		4.5-6.5
	17-36	35-80	15-65	4-18	1.40-1.70	0.6-2	0.11-0.19	0.0-2.9	0.5-3.0	.24	.28		4.5-6.5
	36-40	---	---	---	---	0.01-20	---	---	---	---	---		---
Dummerston------	0-4	35-80	15-65	2-10	1.00-1.20	0.6-2	0.14-0.24	0.0-2.9	2.0-4.0	.32	.32	5	4.5-6.0
	4-26	35-80	15-65	2-10	1.20-1.40	0.6-2	0.10-0.21	0.0-2.9	0.5-3.0	.28	.28		4.5-6.0
	26-65	35-80	15-65	2-10	1.40-1.60	0.6-2	0.09-0.20	0.0-2.9	0.0-1.0	.28	.32		4.5-6.0
66C:													
Vershire--------	0-9	35-80	15-65	4-18	1.00-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-4.0	.37	.37	2	4.5-6.5
	9-17	35-80	15-65	4-18	1.20-1.60	0.6-2	0.12-0.19	0.0-2.9	0.5-3.0	.24	.28		4.5-6.5
	17-36	35-80	15-65	4-18	1.40-1.70	0.6-2	0.11-0.19	0.0-2.9	0.5-3.0	.24	.28		4.5-6.5
	36-40	---	---	---	---	0.01-20	---	---	---	---	---		---
Dummerston------	0-4	35-80	15-65	2-10	1.00-1.20	0.6-2	0.14-0.24	0.0-2.9	2.0-4.0	.32	.32	5	4.5-6.0
	4-26	35-80	15-65	2-10	1.20-1.40	0.6-2	0.10-0.21	0.0-2.9	0.5-3.0	.28	.28		4.5-6.0
	26-65	35-80	15-65	2-10	1.40-1.60	0.6-2	0.09-0.20	0.0-2.9	0.0-1.0	.28	.32		4.5-6.0
66D:													
Vershire--------	0-9	35-80	15-65	4-18	1.00-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-4.0	.37	.37	2	4.5-6.5
	9-17	35-80	15-65	4-18	1.20-1.60	0.6-2	0.12-0.19	0.0-2.9	0.5-3.0	.24	.28		4.5-6.5
	17-36	35-80	15-65	4-18	1.40-1.70	0.6-2	0.11-0.19	0.0-2.9	0.5-3.0	.24	.28		4.5-6.5
	36-40	---	---	---	---	0.01-20	---	---	---	---	---		---
Dummerston------	0-4	35-80	15-65	2-10	1.00-1.20	0.6-2	0.14-0.24	0.0-2.9	2.0-4.0	.32	.32	5	4.5-6.0
	4-26	35-80	15-65	2-10	1.20-1.40	0.6-2	0.10-0.21	0.0-2.9	0.5-3.0	.28	.28		4.5-6.0
	26-65	35-80	15-65	2-10	1.40-1.60	0.6-2	0.09-0.20	0.0-2.9	0.0-1.0	.28	.32		4.5-6.0
66E:													
Vershire--------	0-9	35-80	15-65	4-18	1.00-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-4.0	.37	.37	2	4.5-6.5
	9-17	35-80	15-65	4-18	1.20-1.60	0.6-2	0.12-0.19	0.0-2.9	0.5-3.0	.24	.28		4.5-6.5
	17-36	35-80	15-65	4-18	1.40-1.70	0.6-2	0.11-0.19	0.0-2.9	0.5-3.0	.24	.28		4.5-6.5
	36-40	---	---	---	---	0.01-20	---	---	---	---	---		---
Dummerston------	0-4	35-80	15-65	2-10	1.00-1.20	0.6-2	0.14-0.24	0.0-2.9	2.0-4.0	.32	.32	5	4.5-6.0
	4-26	35-80	15-65	2-10	1.20-1.40	0.6-2	0.10-0.21	0.0-2.9	0.5-3.0	.28	.28		4.5-6.0
	26-65	35-80	15-65	2-10	1.40-1.60	0.6-2	0.09-0.20	0.0-2.9	0.0-1.0	.28	.32		4.5-6.0

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Soil reaction pH
										Kw	Kf	T	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
67C:													
Glover----------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	2-4	35-80	15-65	4-18	0.60-0.80	0.6-2	0.14-0.20	0.0-2.9	2.0-8.0	.32	.37		4.5-6.0
	4-17	35-80	15-65	4-18	0.70-1.00	0.6-2	0.10-0.18	0.0-2.9	0.5-3.0	.20	.24		4.5-6.0
	17-21	---	---	---	---	0.01-20	---	---	---	---	---		---
Vershire--------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	35-80	15-65	4-18	1.00-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-4.0	.32	.37		4.5-6.5
	4-26	35-80	15-65	4-18	1.20-1.60	0.6-2	0.12-0.19	0.0-2.9	0.5-3.0	.24	.28		4.5-6.5
	26-30	0-85	0-88	---	---	0.01-20	---	---	---	---	---		---
67D:													
Glover----------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	2-4	35-80	15-65	4-18	0.60-0.80	0.6-2	0.14-0.20	0.0-2.9	2.0-8.0	.32	.37		4.5-6.0
	4-17	35-80	15-65	4-18	0.70-1.00	0.6-2	0.10-0.18	0.0-2.9	0.5-3.0	.20	.24		4.5-6.0
	17-21	---	---	---	---	0.01-20	---	---	---	---	---		---
Vershire--------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	35-80	15-65	4-18	1.00-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-4.0	.32	.37		4.5-6.5
	4-26	35-80	15-65	4-18	1.20-1.60	0.6-2	0.12-0.19	0.0-2.9	0.5-3.0	.24	.28		4.5-6.5
	26-30	0-85	0-88	---	---	0.01-20	---	---	---	---	---		---
67E:													
Glover----------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	2-4	35-80	15-65	4-18	0.60-0.80	0.6-2	0.14-0.20	0.0-2.9	2.0-8.0	.32	.37		4.5-6.0
	4-17	35-80	15-65	4-18	0.70-1.00	0.6-2	0.10-0.18	0.0-2.9	0.5-3.0	.20	.24		4.5-6.0
	17-21	---	---	---	---	0.01-20	---	---	---	---	---		---
Vershire--------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	35-80	15-65	4-18	1.00-1.20	0.6-2	0.15-0.21	0.0-2.9	1.0-4.0	.32	.37		4.5-6.5
	4-26	35-80	15-65	4-18	1.20-1.60	0.6-2	0.12-0.19	0.0-2.9	0.5-3.0	.24	.28		4.5-6.5
	26-30	0-85	0-88	---	---	0.01-20	---	---	---	---	---		---
68D:													
Stratton--------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	1-2	35-80	15-65	1-7	0.80-1.50	0.6-6	0.15-0.22	0.0-2.9	8.0-20	.43	.49		3.6-5.5
	2-18	35-80	15-65	1-12	0.60-1.10	0.6-6	0.14-0.45	0.0-2.9	5.0-20	.64	.64		3.6-5.5
	18-22	---	---	---	---	0.01-20	---	---	---	---	---		---
Glebe-----------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	1-2	35-80	15-65	1-7	0.80-1.00	2-6	0.15-0.19	0.0-2.9	8.0-20	.43	.55		3.6-5.5
	2-34	35-80	15-65	1-12	0.60-1.00	2-6	0.35-0.45	0.0-2.9	5.0-20	.64	.64		3.6-5.5
	34-38	---	---	---	---	0.01-20	---	---	---	---	---		---

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
68E:													
Stratton--------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	1-2	35-80	15-65	1-7	0.80-1.50	0.6-6	0.15-0.22	0.0-2.9	8.0-20	.43	.49		3.6-5.5
	2-18	35-80	15-65	1-12	0.60-1.10	0.6-6	0.14-0.45	0.0-2.9	5.0-20	.64	.64		3.6-5.5
	18-22	---	---	---	---	0.01-20	---	---	---	---	---		---
Glebe-----------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	1-2	35-80	15-65	1-7	0.80-1.00	2-6	0.15-0.19	0.0-2.9	8.0-20	.43	.55		3.6-5.5
	2-34	35-80	15-65	1-12	0.60-1.00	2-6	0.35-0.45	0.0-2.9	5.0-20	.64	.64		3.6-5.5
	34-38	---	---	---	---	0.01-20	---	---	---	---	---		---
69D:													
Sisk------------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.0
	2-5	40-80	15-50	3-10	0.90-1.10	0.6-2	0.15-0.25	0.0-2.9	4.0-8.0	.28	.32		3.6-5.0
	5-26	40-80	15-50	3-15	1.20-1.50	0.6-2	0.15-0.25	0.0-2.9	0.5-10	.32	.37		3.6-5.0
	26-67	40-80	15-50	3-15	1.60-1.90	0.06-0.6	0.06-0.12	0.0-2.9	0.0-0.5	.32	.37		4.5-5.5
Glebe-----------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	1-2	35-80	15-65	1-7	0.80-1.00	2-6	0.15-0.22	0.0-2.9	8.0-20	.43	.49		3.6-5.5
	2-34	35-80	15-65	1-12	0.60-1.00	2-6	0.35-0.45	0.0-2.9	5.0-20	.64	.64		3.6-5.5
	34-38	---	---	---	---	0.01-20	---	---	---	---	---		---
69E:													
Sisk------------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.0
	2-5	40-80	15-50	3-10	0.90-1.10	0.6-2	0.15-0.25	0.0-2.9	4.0-8.0	.28	.32		3.6-5.0
	5-26	40-80	15-50	3-15	1.20-1.50	0.6-2	0.15-0.25	0.0-2.9	0.5-10	.32	.37		3.6-5.0
	26-67	40-80	15-50	3-15	1.60-1.90	0.06-0.6	0.06-0.12	0.0-2.9	0.0-0.5	.32	.37		4.5-5.5
Glebe-----------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	1-2	35-80	15-65	1-7	0.80-1.00	2-6	0.12-0.16	0.0-2.9	8.0-20	.43	.43		3.6-5.5
	2-34	35-80	15-65	1-12	0.60-1.00	2-6	0.35-0.45	0.0-2.9	5.0-20	.64	.64		3.6-5.5
	34-38	---	---	---	---	0.01-20	---	---	---	---	---		---
71C:													
Tunbridge-------	0-6	35-80	15-65	5-9	0.80-1.20	0.6-6	0.14-0.23	0.0-2.9	2.0-8.0	.24	.24	2	3.6-6.0
	6-16	40-80	15-50	3-9	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	0.5-4.5	.20	.20		3.6-6.0
	16-22	40-80	15-50	3-7	1.20-1.50	0.6-6	0.09-0.15	0.0-2.9	0.0-1.0	.20	.24		5.1-6.5
	22-26	---	---	---	---	0.01-20	---	---	---	---	---		---
Lyman-----------	0-7	40-80	15-50	2-10	0.75-1.20	2-6	0.08-0.25	0.0-2.9	2.0-8.0	.28	.28	1	3.6-6.0
	7-15	40-80	15-50	2-10	0.90-1.40	2-6	0.08-0.28	0.0-2.9	2.0-8.0	.32	.37		3.6-6.0
	15-19	---	---	---	---	0.01-20	---	---	---	---	---		---

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Soil reaction
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				pH
72B:													
Tunbridge-------	0-3	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	3-4	35-80	15-65	5-9	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24		3.6-6.0
	4-17	40-80	15-50	3-9	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	0.5-4.5	.20	.24		3.6-6.0
	17-25	40-80	15-50	3-7	1.20-1.50	0.6-6	0.09-0.15	0.0-2.9	0.0-1.0	.20	.24		5.1-6.5
	25-29	---	---	---	---	0.01-20	---	---	---	---	---		---
Lyman-----------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	1-2	40-80	15-50	2-10	0.75-1.20	2-6	0.13-0.24	0.0-2.9	2.0-8.0	.20	.28		3.6-6.0
	2-15	40-80	15-50	2-10	0.90-1.40	2-6	0.08-0.28	0.0-2.9	2.0-8.0	.32	.37		3.6-6.0
	15-19	---	---	---	---	0.01-20	---	---	---	---	---		---
72C:													
Tunbridge-------	0-3	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	3-4	35-80	15-65	5-9	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24		3.6-6.0
	4-17	40-80	15-50	3-9	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	0.5-4.5	.20	.24		3.6-6.0
	17-25	40-80	15-50	3-7	1.20-1.50	0.6-6	0.09-0.15	0.0-2.9	0.0-1.0	.20	.24		5.1-6.5
	25-29	---	---	---	---	0.01-20	---	---	---	---	---		---
Lyman-----------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	1-2	40-80	15-50	2-10	0.75-1.20	2-6	0.13-0.24	0.0-2.9	2.0-8.0	.20	.28		3.6-6.0
	2-15	40-80	15-50	2-10	0.90-1.40	2-6	0.08-0.28	0.0-2.9	2.0-8.0	.32	.37		3.6-6.0
	15-19	---	---	---	---	0.01-20	---	---	---	---	---		---
72D:													
Tunbridge-------	0-3	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	3-4	35-80	15-65	5-9	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24		3.6-6.0
	4-17	40-80	15-50	3-9	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	0.5-4.5	.20	.24		3.6-6.0
	17-25	40-80	15-50	3-7	1.20-1.50	0.6-6	0.09-0.15	0.0-2.9	0.0-1.0	.20	.24		5.1-6.5
	25-29	---	---	---	---	0.01-20	---	---	---	---	---		---
Lyman-----------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	1-2	40-80	15-50	2-10	0.75-1.20	2-6	0.13-0.24	0.0-2.9	2.0-8.0	.20	.28		3.6-6.0
	2-15	40-80	15-50	2-10	0.90-1.40	2-6	0.08-0.28	0.0-2.9	2.0-8.0	.32	.37		3.6-6.0
	15-19	---	---	---	---	0.01-20	---	---	---	---	---		---
72E:													
Tunbridge-------	0-3	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	3-4	35-80	15-65	5-9	0.80-1.20	0.6-6	0.11-0.21	0.0-2.9	2.0-8.0	.20	.24		3.6-6.0
	4-17	40-80	15-50	3-9	1.20-1.40	0.6-6	0.10-0.21	0.0-2.9	0.5-4.5	.20	.24		3.6-6.0
	17-25	40-80	15-50	3-7	1.20-1.50	0.6-6	0.09-0.15	0.0-2.9	0.0-1.0	.20	.24		5.1-6.5
	25-29	---	---	---	---	0.01-20	---	---	---	---	---		---
Lyman-----------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	1-2	40-80	15-50	2-10	0.75-1.20	2-6	0.13-0.24	0.0-2.9	2.0-8.0	.20	.28		3.6-6.0
	2-15	40-80	15-50	2-10	0.90-1.40	2-6	0.08-0.28	0.0-2.9	2.0-8.0	.32	.37		3.6-6.0
	15-19	---	---	---	---	0.01-20	---	---	---	---	---		---

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
76C:													
Berkshire-------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	2-6	45-80	10-50	3-10	1.10-1.15	0.6-6	0.06-0.22	0.0-2.9	2.0-5.0	.20	.32		4.5-6.0
	6-38	40-80	15-50	3-10	1.15-1.30	0.6-6	0.10-0.20	0.0-2.9	0.5-4.5	.32	.55		4.5-6.0
	38-67	40-80	15-50	1-10	1.30-1.60	0.6-6	0.10-0.18	0.0-2.9	0.0-1.0	.24	.43		4.5-6.0
76D:													
Berkshire-------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	2-6	45-80	10-50	3-10	1.10-1.15	0.6-6	0.06-0.22	0.0-2.9	2.0-5.0	.20	.32		4.5-6.0
	6-38	40-80	15-50	3-10	1.15-1.30	0.6-6	0.10-0.20	0.0-2.9	0.5-4.5	.32	.55		4.5-6.0
	38-67	40-80	15-50	1-10	1.30-1.60	0.6-6	0.10-0.18	0.0-2.9	0.0-1.0	.24	.43		4.5-6.0
76E:													
Berkshire-------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	2-6	45-80	10-50	3-10	1.10-1.15	0.6-6	0.06-0.22	0.0-2.9	2.0-5.0	.20	.32		4.5-6.0
	6-38	40-80	15-50	3-10	1.15-1.30	0.6-6	0.10-0.20	0.0-2.9	0.5-4.5	.32	.55		4.5-6.0
	38-67	40-80	15-50	1-10	1.30-1.60	0.6-6	0.10-0.18	0.0-2.9	0.0-1.0	.24	.43		4.5-6.0
77B:													
Peru------------	0-7	40-80	15-50	3-10	1.10-1.30	0.6-2	0.12-0.20	0.0-2.9	2.0-6.0	.20	.24	3	4.5-6.0
	7-20	40-80	15-50	3-10	1.30-1.60	0.6-2	0.06-0.20	0.0-2.9	---	.32	.37		4.5-6.0
	20-60	40-80	15-50	3-10	1.60-2.05	0.06-0.6	0.05-0.12	0.0-2.9	---	.24	.28		4.5-6.0
77C:													
Peru------------	0-7	40-80	15-50	3-10	1.10-1.30	0.6-2	0.12-0.20	0.0-2.9	2.0-6.0	.20	.24	3	4.5-6.0
	7-20	40-80	15-50	3-10	1.30-1.60	0.6-2	0.06-0.20	0.0-2.9	---	.32	.37		4.5-6.0
	20-60	40-80	15-50	3-10	1.60-2.05	0.06-0.6	0.05-0.12	0.0-2.9	---	.24	.28		4.5-6.0
77D:													
Peru------------	0-7	40-80	15-50	3-10	1.10-1.30	0.6-2	0.12-0.20	0.0-2.9	2.0-6.0	.20	.24	3	4.5-6.0
	7-20	40-80	15-50	3-10	1.30-1.60	0.6-2	0.06-0.20	0.0-2.9	---	.32	.37		4.5-6.0
	20-60	40-80	15-50	3-10	1.60-2.05	0.06-0.6	0.05-0.12	0.0-2.9	---	.24	.28		4.5-6.0
78C:													
Peru------------	0-3	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	3-4	40-80	15-50	3-10	0.80-1.00	0.6-2	0.16-0.24	0.0-2.9	---	.20	.24		4.5-6.0
	4-32	40-80	15-50	3-10	1.30-1.60	0.6-2	0.06-0.20	0.0-2.9	---	.32	.37		4.5-6.0
	32-67	40-80	15-50	3-10	1.60-2.05	0.06-0.6	0.05-0.12	0.0-2.9	---	.24	.28		4.5-6.0
78D:													
Peru------------	0-3	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	3-4	40-80	15-50	3-10	0.80-1.00	0.6-2	0.16-0.24	0.0-2.9	---	.20	.24		4.5-6.0
	4-32	40-80	15-50	3-10	1.30-1.60	0.6-2	0.06-0.20	0.0-2.9	---	.32	.37		4.5-6.0
	32-67	40-80	15-50	3-10	1.60-2.05	0.06-0.6	0.05-0.12	0.0-2.9	---	.24	.28		4.5-6.0

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
78E:													
Peru------------	0-3	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	3-4	40-80	15-50	3-10	0.80-1.00	0.6-2	0.16-0.24	0.0-2.9	---	.20	.24		4.5-6.0
	4-32	40-80	15-50	3-10	1.30-1.60	0.6-2	0.06-0.20	0.0-2.9	---	.32	.37		4.5-6.0
	32-67	40-80	15-50	3-10	1.60-2.05	0.06-0.6	0.05-0.12	0.0-2.9	---	.24	.28		4.5-6.0
79A:													
Markey----------	0-42	---	---	---	0.15-0.45	0.2-6	0.35-0.45	---	55-85	---	---	2	5.6-6.5
	42-65	85-100	0-15	0-10	1.40-1.65	20-100	0.03-0.08	0.0-2.9	0.0-0.5	.10	.15		5.6-6.5
Wonsqueak-------	0-9	---	---	---	0.10-0.30	0.2-6	0.20-0.40	---	80-99	---	---	2	5.6-6.5
	9-42	---	---	---	0.10-0.30	0.2-6	0.20-0.40	---	80-99	---	---		5.6-6.5
	42-65	0-85	0-88	5-30	1.50-1.70	0.2-2	0.06-0.16	0.0-2.9	0.0-2.0	.49	.49		5.6-6.5
82A:													
Peacham---------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	2-12	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---		3.6-5.5
	12-28	35-80	15-65	3-10	1.20-1.40	0.6-2	0.11-0.22	0.0-2.9	0.5-2.0	.28	.32		5.1-6.5
	28-67	35-80	15-65	3-10	1.80-2.00	0.0015-0.2	0.02-0.06	0.0-2.9	0.0-0.5	.28	.32		5.1-6.5
85E:													
Ricker----------	0-8	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-4.4
	8-12	---	---	---	---	0.01-20	---	---	---	---	---		---
Londonderry-----	0-3	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.0
	3-8	45-77	16-50	2-7	1.10-1.30	0.6-2	0.12-0.24	0.0-2.9	2.0-8.0	.43	.43		3.6-5.0
	8-12	---	---	---	---	0.01-20	---	---	---	---	---		---
Stratton--------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	1-2	35-80	15-65	1-7	0.80-1.50	0.6-6	0.15-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-5.5
	2-18	35-80	15-65	1-12	0.60-1.10	0.6-6	0.14-0.45	0.0-2.9	---	.64	.64		3.6-5.5
	18-22	---	---	---	---	0.01-20	---	---	---	---	---		---
86F:													
Ricker----------	0-8	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-4.4
	8-12	---	---	---	---	0.01-20	---	---	---	---	---		---
Londonderry-----	0-3	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.0
	3-8	45-77	16-50	2-7	1.10-1.30	0.6-2	0.12-0.24	0.0-2.9	2.0-8.0	.43	.43		3.6-5.0
	8-12	---	---	---	---	0.01-20	---	---	---	---	---		---
Rock Outcrop----	0-65	---	---	0-0	---	0.01-20	0.00-0.00	---	---	---	---	--	---

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Soil reaction
										Kw	Kf	T	pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
88D:													
Houghtonville---	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	1-5	40-80	15-50	3-10	0.70-1.00	0.6-6	0.11-0.23	0.0-2.9	4.0-8.0	.43	.49		3.6-6.0
	5-33	40-80	15-50	3-10	0.80-1.10	0.6-6	0.13-0.45	0.0-2.9	2.0-6.0	.64	.64		3.6-6.0
	33-66	40-80	15-50	3-10	1.50-1.80	0.6-6	0.08-0.15	0.0-2.9	0.5-2.0	.28	.32		3.6-6.0
89E:													
Houghtonville---	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	1-5	40-80	15-50	3-10	0.70-1.00	0.6-6	0.09-0.21	0.0-2.9	4.0-8.0	.37	.49		3.6-6.0
	5-33	40-80	15-50	3-10	0.80-1.10	0.6-6	0.13-0.45	0.0-2.9	2.0-6.0	.64	.64		3.6-6.0
	33-66	40-80	15-50	3-10	1.50-1.80	0.6-6	0.08-0.15	0.0-2.9	0.5-2.0	.28	.32		3.6-6.0
90B:													
Dummerston------	0-4	35-80	15-65	2-10	1.00-1.20	0.6-2	0.14-0.24	0.0-2.9	2.0-4.0	.32	.32	5	4.5-6.0
	4-26	35-80	15-65	2-10	1.20-1.40	0.6-2	0.10-0.21	0.0-2.9	0.5-3.0	.28	.28		4.5-6.0
	26-65	35-80	15-65	2-10	1.40-1.60	0.6-2	0.09-0.20	0.0-2.9	0.0-1.0	.28	.32		4.5-6.0
90C:													
Dummerston------	0-4	35-80	15-65	2-10	1.00-1.20	0.6-2	0.14-0.24	0.0-2.9	2.0-4.0	.32	.32	5	4.5-6.0
	4-26	35-80	15-65	2-10	1.20-1.40	0.6-2	0.10-0.21	0.0-2.9	0.5-3.0	.28	.28		4.5-6.0
	26-65	35-80	15-65	2-10	1.40-1.60	0.6-2	0.09-0.20	0.0-2.9	0.0-1.0	.28	.32		4.5-6.0
90D:													
Dummerston------	0-4	35-80	15-65	2-10	1.00-1.20	0.6-2	0.14-0.24	0.0-2.9	2.0-4.0	.32	.32	5	4.5-6.0
	4-26	35-80	15-65	2-10	1.20-1.40	0.6-2	0.10-0.21	0.0-2.9	0.5-3.0	.28	.28		4.5-6.0
	26-65	35-80	15-65	2-10	1.40-1.60	0.6-2	0.09-0.20	0.0-2.9	0.0-1.0	.28	.32		4.5-6.0
91C:													
Dummerston------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	2-4	35-80	15-65	2-10	1.00-1.20	0.6-2	0.11-0.19	0.0-2.9	2.0-4.0	.28	.32		4.5-6.0
	4-24	35-80	15-65	2-10	1.20-1.40	0.6-2	0.10-0.21	0.0-2.9	0.5-3.0	.28	.32		4.5-6.0
	24-60	35-80	15-65	2-10	1.40-1.60	0.6-2	0.09-0.20	0.0-2.9	0.0-1.0	.28	.32		4.5-6.0
91D:													
Dummerston------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	5	3.6-5.5
	2-4	35-80	15-65	2-10	1.00-1.20	0.6-2	0.11-0.19	0.0-2.9	2.0-4.0	.28	.32		4.5-6.0
	4-24	35-80	15-65	2-10	1.20-1.40	0.6-2	0.10-0.21	0.0-2.9	0.5-3.0	.28	.32		4.5-6.0
	24-60	35-80	15-65	2-10	1.40-1.60	0.6-2	0.09-0.20	0.0-2.9	0.0-1.0	.28	.32		4.5-6.0
92B:													
Buckland--------	0-5	30-80	15-65	5-10	0.70-1.00	0.6-2	0.19-0.23	0.0-2.9	3.0-8.0	.32	.32	3	5.6-7.3
	5-20	35-80	15-65	5-10	0.80-1.20	0.6-2	0.14-0.20	0.0-2.9	0.5-2.0	.37	.43		5.6-7.3
	20-65	35-80	15-65	7-14	1.60-1.80	0.06-0.2	0.06-0.12	0.0-2.9	0.0-1.0	.28	.32		5.6-7.3

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
92C:													
Buckland	0-5	30-80	15-65	5-10	0.70-1.00	0.6-2	0.19-0.23	0.0-2.9	3.0-8.0	.32	.32	3	5.6-7.3
	5-20	35-80	15-65	5-10	0.80-1.20	0.6-2	0.14-0.20	0.0-2.9	0.5-2.0	.37	.43		5.6-7.3
	20-65	35-80	15-65	7-14	1.60-1.80	0.06-0.2	0.06-0.12	0.0-2.9	0.0-1.0	.28	.32		5.6-7.3
92D:													
Buckland	0-5	30-80	15-65	5-10	0.70-1.00	0.6-2	0.19-0.23	0.0-2.9	3.0-8.0	.32	.32	3	5.6-7.3
	5-20	35-80	15-65	5-10	0.80-1.20	0.6-2	0.14-0.20	0.0-2.9	0.5-2.0	.37	.43		5.6-7.3
	20-65	35-80	15-65	7-14	1.60-1.80	0.06-0.2	0.06-0.12	0.0-2.9	0.0-1.0	.28	.32		5.6-7.3
93B:													
Buckland	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	1-5	30-80	15-65	5-10	0.70-1.00	0.6-2	0.15-0.21	0.0-2.9	3.0-8.0	.28	.32		5.6-7.3
	5-28	35-80	15-65	5-10	0.80-1.20	0.6-2	0.14-0.20	0.0-2.9	0.5-2.0	.37	.43		5.6-7.3
	28-61	35-80	15-65	7-14	1.60-1.80	0.06-0.2	0.06-0.12	0.0-2.9	0.5-2.0	.28	.32		5.6-7.3
93C:													
Buckland	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	1-5	30-80	15-65	5-10	0.70-1.00	0.6-2	0.15-0.21	0.0-2.9	3.0-8.0	.28	.32		5.6-7.3
	5-28	35-80	15-65	5-10	0.80-1.20	0.6-2	0.14-0.20	0.0-2.9	0.5-2.0	.37	.43		5.6-7.3
	28-61	35-80	15-65	7-14	1.60-1.80	0.06-0.2	0.06-0.12	0.0-2.9	0.5-2.0	.28	.32		5.6-7.3
93D:													
Buckland	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	1-5	30-80	15-65	5-10	0.70-1.00	0.6-2	0.15-0.21	0.0-2.9	3.0-8.0	.28	.32		5.6-7.3
	5-28	35-80	15-65	5-10	0.80-1.20	0.6-2	0.14-0.20	0.0-2.9	0.5-2.0	.37	.43		5.6-7.3
	28-61	35-80	15-65	7-14	1.60-1.80	0.06-0.2	0.06-0.12	0.0-2.9	0.5-2.0	.28	.32		5.6-7.3
96D:													
Peru	0-3	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	3-4	40-80	15-50	3-10	0.90-1.20	0.6-2	0.16-0.24	0.0-2.9	4.0-8.0	.15	.20		4.5-6.0
	4-32	40-80	15-50	3-10	1.00-1.60	0.6-2	0.06-0.20	0.0-2.9	0.5-4.0	.24	.28		4.5-6.0
	32-67	40-80	15-50	3-10	1.65-1.95	0.06-0.6	0.05-0.12	0.0-2.9	0.0-0.5	.20	.24		4.5-6.0
98B:													
Cabot	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	1-9	35-80	15-65	1-15	0.70-1.10	0.6-2	0.14-0.24	0.0-2.9	4.0-12	.15	.32		5.1-7.3
	9-17	35-80	15-65	1-15	1.30-1.70	0.6-2	0.10-0.22	0.0-2.9	0.5-4.0	.28	.32		5.1-7.3
	17-61	35-80	15-65	1-15	1.70-1.90	0.0015-0.2	0.08-0.12	0.0-2.9	0.0-1.0	.28	.32		5.6-7.3
98C:													
Cabot	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	1-9	35-80	15-65	1-15	0.70-1.10	0.6-2	0.14-0.24	0.0-2.9	4.0-12	.15	.32		5.1-7.3
	9-17	35-80	15-65	1-15	1.30-1.70	0.6-2	0.10-0.22	0.0-2.9	0.5-4.0	.28	.32		5.1-7.3
	17-61	35-80	15-65	1-15	1.70-1.90	0.0015-0.2	0.08-0.12	0.0-2.9	0.0-1.0	.28	.32		5.6-7.3

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
99C:													
Colonel---------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	40-80	15-50	3-10	0.90-1.20	0.6-2	0.12-0.22	0.0-2.9	4.0-8.0	.15	.20		4.5-6.5
	4-17	40-80	15-50	3-10	1.00-1.60	0.6-2	0.15-0.25	0.0-2.9	0.5-4.0	.24	.28		4.5-6.5
	17-66	40-80	15-50	3-10	1.65-1.95	0.06-0.6	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		4.5-6.5
99D:													
Colonel---------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	40-80	15-50	3-10	0.90-1.20	0.6-2	0.12-0.22	0.0-2.9	4.0-8.0	.15	.20		4.5-6.5
	4-17	40-80	15-50	3-10	1.00-1.60	0.6-2	0.15-0.25	0.0-2.9	0.5-4.0	.24	.28		4.5-6.5
	17-66	40-80	15-50	3-10	1.65-1.95	0.06-0.6	0.08-0.15	0.0-2.9	0.0-0.5	.20	.24		4.5-6.5
100:													
Pits, Sand------	0-10	---	---	0-1	---	6-20	0.03-0.05	0.0-2.9	0.0-0.1	.17	---	--	---
	10-60	---	---	0-1	---	6-20	0.02-0.05	0.0-2.9	---	.15	---		---
Pits, Gravel----	0-6	---	---	0-1	---	6-20	0.01-0.02	0.0-2.9	0.0-0.1	.02	---	--	---
	6-60	---	---	0-1	---	6-20	0.01-0.02	0.0-2.9	---	.02	---		---
102:													
Pits------------	0-60	---	---	0-0	---	0.01-20	0.00-0.00	---	0.0-0.1	---	---	--	---
Dumps-----------	0-60	---	---	---	---	0.0015-0.06	0.00-0.00	---	0.0-0.1	---	---	--	---
103:													
Udorthents------	0-60	---	---	1-15	1.00-2.00	0.06-20	0.01-0.20	0.0-2.9	0.5-10	---	---	--	4.5-7.8
104:													
Urban Land------	0-60	---	---	---	---	0.0015-0.06	0.00-0.00	---	---	---	---	--	---
Udipsamments----	0-65	---	---	0-1	1.30-1.70	20-100	0.02-0.05	0.0-2.9	0.0-0.5	.10	.15	--	5.6-7.8
116B:													
Mundal----------	0-5	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	5-7	40-80	15-50	3-10	0.70-1.00	0.6-2	0.10-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-6.0
	7-25	40-80	15-50	3-10	0.80-1.10	0.6-2	0.13-0.45	0.0-2.9	2.0-6.0	.64	.64		3.6-6.0
	25-70	40-80	15-50	3-10	1.80-2.00	0.06-0.6	0.06-0.10	0.0-2.9	0.5-2.0	.37	.43		5.1-6.5
116C:													
Mundal----------	0-5	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	5-7	40-80	15-50	3-10	0.70-1.00	0.6-2	0.10-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-6.0
	7-25	40-80	15-50	3-10	0.80-1.10	0.6-2	0.13-0.45	0.0-2.9	2.0-6.0	.64	.64		3.6-6.0
	25-70	40-80	15-50	3-10	1.80-2.00	0.06-0.6	0.06-0.10	0.0-2.9	0.5-2.0	.37	.43		5.1-6.5

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Soil reaction
										Kw	Kf	T	pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
116D:													
Mundal----------	0-5	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	5-7	40-80	15-50	3-10	0.70-1.00	0.6-2	0.10-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-6.0
	7-25	40-80	15-50	3-10	0.80-1.10	0.6-2	0.13-0.45	0.0-2.9	2.0-6.0	.64	.64		3.6-6.0
	25-70	40-80	15-50	3-10	1.80-2.00	0.06-0.6	0.06-0.10	0.0-2.9	0.5-2.0	.37	.43		5.1-6.5
151F:													
Hogback---------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	1-4	45-80	15-50	3-12	0.60-1.00	2-6	0.13-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-5.5
	4-15	40-80	15-50	3-12	0.60-1.00	2-6	0.13-0.45	0.0-2.9	---	.64	.64		3.6-5.5
	15-19	---	---	---	---	0.01-20	---	---	---	---	---		---
Rock Outcrop----	0-65	---	---	0-0	---	0.01-20	0.00-0.00	---	---	---	---	--	---
Rawsonville-----	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	45-80	10-50	3-10	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-5.5
	4-26	35-80	15-65	3-10	0.70-1.00	0.6-6	0.13-0.45	0.0-2.9	---	.64	.64		3.6-5.5
	26-30	---	---	---	---	0.01-20	---	---	---	---	---		---
162D:													
Houghtonville---	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	1-5	40-80	15-50	3-10	0.70-1.00	0.6-6	0.11-0.23	0.0-2.9	4.0-8.0	.43	.49		3.6-6.0
	5-33	40-80	15-50	3-10	0.80-1.10	0.6-6	0.13-0.45	0.0-2.9	2.0-6.0	.64	.64		3.6-6.0
	33-66	40-80	15-50	3-10	1.50-1.80	0.6-6	0.08-0.15	0.0-2.9	0.5-2.0	.28	.32		3.6-6.0
Rawsonville-----	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	45-80	10-50	3-10	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-5.5
	4-26	35-80	15-65	3-10	0.70-1.00	0.6-6	0.13-0.45	0.0-2.9	2.0-8.0	.64	.64		3.6-5.5
	26-30	---	---	---	---	0.01-20	---	---	---	---	---		---
162E:													
Houghtonville---	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	1-5	40-80	15-50	3-10	0.70-1.00	0.6-6	0.11-0.23	0.0-2.9	4.0-8.0	.43	.49		3.6-6.0
	5-33	40-80	15-50	3-10	0.80-1.10	0.6-6	0.13-0.45	0.0-2.9	2.0-6.0	.64	.64		3.6-6.0
	33-66	40-80	15-50	3-10	1.50-1.80	0.6-6	0.08-0.15	0.0-2.9	0.5-2.0	.28	.32		3.6-6.0
Rawsonville-----	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	45-80	10-50	3-10	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-5.5
	4-26	35-80	15-65	3-10	0.70-1.00	0.6-6	0.13-0.45	0.0-2.9	2.0-8.0	.64	.64		3.6-5.5
	26-30	---	---	---	---	0.01-20	---	---	---	---	---		---
163C:													
Houghtonville---	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	1-5	40-80	15-50	3-10	0.70-1.00	0.6-6	0.10-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-6.0
	5-33	40-80	15-50	3-10	0.80-1.10	0.6-6	0.13-0.45	0.0-2.9	2.0-6.0	.64	.64		3.6-6.0
	33-66	40-80	15-50	3-10	1.50-1.80	0.6-6	0.08-0.15	0.0-2.9	0.5-2.0	.28	.32		3.6-6.0

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
163D:													
Houghtonville---	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	1-5	40-80	15-50	3-10	0.70-1.00	0.6-6	0.10-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-6.0
	5-33	40-80	15-50	3-10	0.80-1.10	0.6-6	0.13-0.45	0.0-2.9	2.0-6.0	.64	.64		3.6-6.0
	33-66	40-80	15-50	3-10	1.50-1.80	0.6-6	0.08-0.15	0.0-2.9	0.5-2.0	.28	.32		3.6-6.0
163E:													
Houghtonville---	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	3	3.6-5.5
	1-5	40-80	15-50	3-10	0.70-1.00	0.6-6	0.10-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-6.0
	5-33	40-80	15-50	3-10	0.80-1.10	0.6-6	0.13-0.45	0.0-2.9	2.0-6.0	.64	.64		3.6-6.0
	33-66	40-80	15-50	3-10	1.50-1.80	0.6-6	0.08-0.15	0.0-2.9	0.5-2.0	.28	.32		3.6-6.0
168C:													
Hogback---------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	1-4	45-80	15-50	3-12	0.60-1.00	2-6	0.13-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-5.5
	4-15	40-80	15-50	3-12	0.60-1.00	2-6	0.13-0.45	0.0-2.9	4.0-8.0	.64	.64		3.6-5.5
	15-19	---	---	---	---	0.01-20	---	---	---	---	---		---
Rawsonville-----	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	45-80	10-50	3-10	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-5.5
	4-26	35-80	15-65	3-10	0.70-1.00	0.6-6	0.13-0.45	0.0-2.9	2.0-8.0	.64	.64		3.6-5.5
	26-30	---	---	---	---	0.01-20	---	---	---	---	---		---
168D:													
Hogback---------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	1-4	45-80	15-50	3-12	0.60-1.00	2-6	0.13-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-5.5
	4-15	40-80	15-50	3-12	0.60-1.00	2-6	0.13-0.45	0.0-2.9	4.0-8.0	.64	.64		3.6-5.5
	15-19	---	---	---	---	0.01-20	---	---	---	---	---		---
Rawsonville-----	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	45-80	10-50	3-10	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-5.5
	4-26	35-80	15-65	3-10	0.70-1.00	0.6-6	0.13-0.45	0.0-2.9	2.0-8.0	.64	.64		3.6-5.5
	26-30	---	---	---	---	0.01-20	---	---	---	---	---		---
168E:													
Hogback---------	0-1	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	1-4	45-80	15-50	3-12	0.60-1.00	2-6	0.13-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-5.5
	4-15	40-80	15-50	3-12	0.60-1.00	2-6	0.13-0.45	0.0-2.9	4.0-8.0	.64	.64		3.6-5.5
	15-19	---	---	---	---	0.01-20	---	---	---	---	---		---
Rawsonville-----	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	2	3.6-5.5
	2-4	45-80	10-50	3-10	0.70-1.00	0.6-6	0.13-0.22	0.0-2.9	4.0-8.0	.43	.49		3.6-5.5
	4-26	35-80	15-65	3-10	0.70-1.00	0.6-6	0.13-0.45	0.0-2.9	4.0-8.0	.64	.64		3.6-5.5
	26-30	---	---	---	---	0.01-20	---	---	---	---	---		---

Table 15.—Physical and Chemical Properties of the Soils—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Soil reaction pH
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct				
172F:													
Taconic---------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	2-6	25-50	30-65	10-27	1.10-1.40	0.6-6	0.09-0.15	0.0-2.9	2.0-6.0	.24	.37		4.5-5.5
	6-16	25-50	30-65	10-27	1.20-1.50	0.6-6	0.04-0.11	0.0-2.9	0.0-1.0	.24	.32		4.5-5.5
	16-20	---	---	---	---	0.01-20	---	---	---	---	---		---
Hubbardton------	0-2	---	---	---	0.07-0.60	2-6	0.35-0.65	0.0-2.9	25-95	---	---	1	3.6-5.5
	2-4	35-80	15-65	3-7	1.10-1.40	0.6-6	0.08-0.15	0.0-2.9	1.0-4.0	.24	.28		4.5-5.5
	4-9	35-80	15-65	3-7	1.10-1.40	0.6-6	0.07-0.12	0.0-2.9	---	.20	.28		4.5-5.5
	9-13	---	---	---	---	0.01-20	---	---	---	---	---		---
Rock Outcrop----	0-65	---	---	0-0	---	0.01-20	0.00-0.00	---	---	---	---	--	---

Table 16.—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				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
2A:									
Ondawa	---	---	---	---	---	---	Moderate	Low	Moderate
3A:									
Rumney	---	---	---	---	---	---	High	High	High
Ondawa	---	---	---	---	---	---	Moderate	Low	Moderate
4A:									
Sunny	---	---	---	---	---	---	High	High	High
9A:									
Rifle	---	---	---	---	---	---	High	High	Low
14B:									
Colonel	Dense material	10-30	120-120	Noncemented	---	---	High	Moderate	Moderate
14C:									
Colonel	Dense material	10-30	120-120	Noncemented	---	---	High	Moderate	Moderate
14D:									
Colonel	Dense material	10-30	120-120	Noncemented	---	---	High	Moderate	Moderate
17A:									
Cabot	Dense material	10-20	120-120	Noncemented	---	---	High	High	Moderate
17B:									
Cabot	Dense material	10-20	120-120	Noncemented	---	---	High	High	Moderate
17C:									
Cabot	Dense material	10-20	120-120	Noncemented	---	---	High	High	Moderate
18B:									
Cabot	Dense material	10-20	120-120	Noncemented	---	---	High	High	Moderate
18C:									
Cabot	Dense material	10-20	120-120	Noncemented	---	---	High	High	Moderate
19B:									
Colonel	Dense material	10-30	120-120	Noncemented	---	---	High	Moderate	Moderate
19C:									
Colonel	Dense material	10-30	120-120	Noncemented	---	---	High	Moderate	Moderate

Table 16.—Soil Features—Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
19D:									
Colonel	Dense material	10-30	120-120	Noncemented	---	---	High	Moderate	Moderate
20A:									
Peacham	Dense material	10-20	120-120	Noncemented	---	---	High	Moderate	High
21A:									
Sunday	---	---	---	---	---	---	Low	Low	Moderate
26A:									
Adams	---	---	---	---	---	---	Low	Low	High
Croghan	---	---	---	---	---	---	Moderate	Low	High
26B:									
Adams	---	---	---	---	---	---	Low	Low	High
Croghan	---	---	---	---	---	---	Moderate	Low	High
26C:									
Adams	---	---	---	---	---	---	Low	Low	High
Croghan	---	---	---	---	---	---	Moderate	Low	High
26D:									
Adams	---	---	---	---	---	---	Low	Low	High
Croghan	---	---	---	---	---	---	Moderate	Low	High
26E:									
Adams	---	---	---	---	---	---	Low	Low	High
Croghan	---	---	---	---	---	---	Moderate	Low	High
33A:									
Machias	---	---	---	---	---	---	Moderate	Low	Moderate
33B:									
Machias	---	---	---	---	---	---	Moderate	Low	Moderate
33C:									
Machias	---	---	---	---	---	---	Moderate	Low	Moderate
37B:									
Stetson	---	---	---	---	---	---	Low	Moderate	High

Table 16.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top (In)	Restrictive layer: Thickness (In)	Restrictive layer: Hardness	Subsidence: Initial (In)	Subsidence: Total (In)	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
37C:									
Stetson	---	---	---	---	---	---	Low	Moderate	High
37D:									
Stetson	---	---	---	---	---	---	Low	Moderate	High
37E:									
Stetson	---	---	---	---	---	---	Low	Moderate	High
39A:									
Colton	---	---	---	---	---	---	Low	Low	High
39B:									
Colton	---	---	---	---	---	---	Low	Low	High
39C:									
Colton	---	---	---	---	---	---	Low	Low	High
39D:									
Colton	---	---	---	---	---	---	Low	Low	High
39E:									
Colton	---	---	---	---	---	---	Low	Low	High
41D:									
Buxton	---	---	---	---	---	---	High	High	Moderate
41E:									
Buxton	---	---	---	---	---	---	High	High	Moderate
43B:									
Salmon	---	---	---	---	---	---	High	Low	Moderate
43C:									
Salmon	---	---	---	---	---	---	High	Low	Moderate
43D:									
Salmon	---	---	---	---	---	---	High	Low	Moderate
43E:									
Salmon	---	---	---	---	---	---	High	Low	Moderate
44B:									
Lamoine	---	---	---	---	---	---	High	High	Moderate
44C:									
Lamoine	---	---	---	---	---	---	High	High	Moderate

Table 16.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In		In	In			
45A:									
Scantic	---	---	---	---	---	---	High	High	Moderate
Lamoine	---	---	---	---	---	---	High	High	Moderate
55B:									
Nicholville	---	---	---	---	---	---	High	Low	Moderate
58A:									
Grange	---	---	---	---	---	---	High	High	Moderate
Machias	---	---	---	---	---	---	Moderate	Low	Moderate
59A:									
Waitsfield	---	---	---	---	---	---	Moderate	Low	Moderate
Ondawa	---	---	---	---	---	---	Moderate	Low	Moderate
60A:									
Weider	---	---	---	---	---	---	Moderate	Moderate	Moderate
62B:									
Berkshire	---	---	---	---	---	---	Moderate	Low	High
62C:									
Berkshire	---	---	---	---	---	---	Moderate	Low	High
62D:									
Berkshire	---	---	---	---	---	---	Moderate	Low	High
63B:									
Berkshire	---	---	---	---	---	---	Moderate	Low	High
63C:									
Berkshire	---	---	---	---	---	---	Moderate	Low	High
63D:									
Berkshire	---	---	---	---	---	---	Moderate	Low	High
63E:									
Berkshire	---	---	---	---	---	---	Moderate	Low	High
64C:									
Salmon	---	---	---	---	---	---	High	Low	Moderate
Adamant	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	Low	Moderate

Table 16.—Soil Features—Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
64D:									
Salmon	---	---	---	---	---	---	High	Low	Moderate
Adamant	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	Low	Moderate
64E:									
Salmon	---	---	---	---	---	---	High	Low	Moderate
Adamant	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	Low	Moderate
66B:									
Vershire	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	Low	Moderate
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
66C:									
Vershire	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	Low	Moderate
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
66D:									
Vershire	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	Low	Moderate
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
66E:									
Vershire	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	Low	Moderate
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
67C:									
Glover	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	Low	Low
Vershire	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	Low	Moderate
67D:									
Glover	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	Low	Low
Vershire	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	Low	Moderate
67E:									
Glover	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	Low	Low
Vershire	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	Low	Moderate

Table 16.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In		In	In			
68D:									
Stratton	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	High	High
Glebe	Bedrock (lithic)	20-40	120-120	Indurated	---	---	High	High	High
Londonderry	Bedrock (lithic)	2-10	120-120	Indurated	---	---	Moderate	High	High
68E:									
Stratton	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	High	High
Glebe	Bedrock (lithic)	20-40	120-120	Indurated	---	---	High	High	High
Londonderry	Bedrock (lithic)	2-10	120-120	Indurated	---	---	Moderate	High	High
69D:									
Sisk	Dense material	20-34	120-120	Noncemented	---	---	Moderate	Low	High
Glebe	Bedrock (lithic)	20-40	120-120	Indurated	---	---	High	High	High
69E:									
Sisk	Dense material	20-34	120-120	Noncemented	---	---	Moderate	Low	High
Glebe	Bedrock (lithic)	20-40	120-120	Indurated	---	---	High	High	High
71C:									
Tunbridge	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	High	High
Lyman	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	Low	High
Berkshire	---	---	---	---	---	---	Moderate	Low	High
72B:									
Tunbridge	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	High	High
Lyman	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	Low	High
72C:									
Tunbridge	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	High	High
Lyman	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	Low	High
72D:									
Tunbridge	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	High	High
Lyman	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	Low	High

Table 16.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In		In	In			
72E:									
Tunbridge	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	High	High
Lyman	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	Low	High
76C:									
Berkshire	---	---	---	---	---	---	Moderate	Low	High
76D:									
Berkshire	---	---	---	---	---	---	Moderate	Low	High
76E:									
Berkshire	---	---	---	---	---	---	Moderate	Low	High
77B:									
Peru	Dense material	20-36	120-120	Noncemented	---	---	High	Moderate	Moderate
77C:									
Peru	Dense material	20-36	120-120	Noncemented	---	---	High	Moderate	Moderate
77D:									
Peru	Dense material	20-36	120-120	Noncemented	---	---	High	Moderate	Moderate
78C:									
Peru	Dense material	20-36	120-120	Noncemented	---	---	High	Moderate	Moderate
78D:									
Peru	Dense material	20-36	120-120	Noncemented	---	---	High	Moderate	Moderate
78E:									
Peru	Dense material	20-36	120-120	Noncemented	---	---	High	Moderate	Moderate
79A:									
Markey	---	---	---	---	---	25-30	High	High	Low
Wonsqueak	---	---	---	---	---	---	High	Moderate	Moderate
82A:									
Peacham	Dense material	10-20	120-120	Noncemented	---	---	High	Moderate	High

Table 16.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In		In	In			
85E:									
Ricker	Bedrock (lithic)	2-26	120-120	Indurated	---	---	Low	High	High
Londonderry	Bedrock (lithic)	2-10	120-120	Indurated	---	---	Moderate	High	High
Stratton	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	High	High
Glebe	Bedrock (lithic)	20-40	120-120	Indurated	---	---	High	High	High
86F:									
Ricker	Bedrock (lithic)	2-26	120-120	Indurated	---	---	Low	High	High
Londonderry	Bedrock (lithic)	2-10	120-120	Indurated	---	---	Moderate	High	High
Rock outcrop	Bedrock (lithic)	0-0	120-120	Indurated	---	---	None	---	---
Stratton	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	High	High
88D:									
Houghtonville	---	---	---	---	---	---	Moderate	High	High
89E:									
Houghtonville	---	---	---	---	---	---	Moderate	High	High
90B:									
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
90C:									
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
90D:									
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
91C:									
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
91D:									
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
92B:									
Buckland	Dense material	20-30	120-120	Noncemented	---	---	High	Moderate	Moderate
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate

Table 16.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In		In	In			
92C:									
Buckland	Dense material	20-30	120-120	Noncemented	---	---	High	Moderate	Moderate
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
92D:									
Buckland	Dense material	20-30	120-120	Noncemented	---	---	High	Moderate	Moderate
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
93B:									
Buckland	Dense material	20-30	120-120	Noncemented	---	---	High	Moderate	Moderate
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
93C:									
Buckland	Dense material	20-30	120-120	Noncemented	---	---	High	Moderate	Moderate
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
93D:									
Buckland	Dense material	20-30	120-120	Noncemented	---	---	High	Moderate	Moderate
Dummerston	---	---	---	---	---	---	Moderate	Low	Moderate
96D:									
Peru	Dense material	20-36	120-120	Noncemented	---	---	High	Moderate	Moderate
98B:									
Cabot	Dense material	10-20	120-120	Noncemented	---	---	High	High	Moderate
98C:									
Cabot	Dense material	10-20	120-120	Noncemented	---	---	High	High	Moderate
99C:									
Colonel	Dense material	10-30	120-120	Noncemented	---	---	High	Moderate	Moderate
99D:									
Colonel	Dense material	10-30	120-120	Noncemented	---	---	High	Moderate	Moderate
100:									
Pits, sand	---	---	---	---	---	---	None	---	---
Pits, gravel	---	---	---	---	---	---	None	---	---

Table 16.—Soil Features—Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
102:									
Pits	Bedrock (lithic)	0-0	---	Indurated	---	---	None	---	---
Dumps	---	---	---	---	---	---	None	---	---
103:									
Udorthents	---	---	---	---	---	---	Moderate	---	---
104:									
Urban land	---	---	---	---	---	---	None	---	---
Udipsamments	---	---	---	---	---	---	Low	---	---
116B:									
Mundal	Dense material	20-30	120-120	Noncemented	---	---	Moderate	High	High
116C:									
Mundal	Dense material	20-30	120-120	Noncemented	---	---	Moderate	High	High
116D:									
Mundal	Dense material	20-30	120-120	Noncemented	---	---	Moderate	High	High
151F:									
Hogback	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	High	High
Rock outcrop	Bedrock (lithic)	0-0	120-120	Indurated	---	---	None	---	---
Rawsonville	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	High	High
162D:									
Houghtonville	---	---	---	---	---	---	Moderate	High	High
Rawsonville	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	High	High
162E:									
Houghtonville	---	---	---	---	---	---	Moderate	High	High
Rawsonville	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	High	High
163C:									
Houghtonville	---	---	---	---	---	---	Moderate	High	High
163D:									
Houghtonville	---	---	---	---	---	---	Moderate	High	High
163E:									
Houghtonville	---	---	---	---	---	---	Moderate	High	High

Table 16.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In		In	In			
168C:									
Hogback	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	High	High
Rawsonville	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	High	High
168D:									
Hogback	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	High	High
Rawsonville	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	High	High
168E:									
Hogback	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	High	High
Rawsonville	Bedrock (lithic)	20-40	120-120	Indurated	---	---	Moderate	High	High
172F:									
Taconic	Bedrock (lithic)	10-20	120-120	Indurated	---	---	Moderate	Low	High
Hubbardton	Bedrock (lithic)	2-10	120-120	Indurated	---	---	Moderate	Low	High
Rock outcrop	Bedrock (lithic)	0-0	120-120	Indurated	---	---	None	---	---
W:									
Water	---	---	---	---	---	---	---	---	---

Table 17.—Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
2A:										
Ondawa----------	B	Jan-Apr	>6.0	>6.0	---	---	---	None	Brief	Frequent
		May-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	None	Brief	Frequent
3A:										
Rumney----------	C	Jan-May	0.0-1.5	>6.0	Apparent	---	---	None	Brief	Frequent
		Jun-Sep	>6.0	>6.0	---	---	---	None	---	None
		Oct	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Nov-Dec	0.0-1.5	>6.0	Apparent	---	---	None	Brief	Frequent
4A:										
Sunny-----------	C	Jan-May	0.0-1.5	>6.0	Apparent	---	---	None	Brief	Frequent
		Jun-Sep	>6.0	>6.0	---	---	---	None	---	None
		Oct	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Nov-Dec	0.0-1.5	>6.0	Apparent	---	---	None	Brief	Frequent
9A:										
Rifle-----------	D	Jan-Dec	0.0-0.5	>6.0	Apparent	0.0-1.0	Long	Frequent	---	None
14B:										
Colonel---------	C	Jan-May	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
		Jun-Sep	>6.0	>6.0	---	---	---	None	---	None
		Oct-Dec	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
14C:										
Colonel---------	C	Jan-May	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
		Jun-Sep	>6.0	>6.0	---	---	---	None	---	None
		Oct-Dec	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
14D:										
Colonel---------	C	Jan-May	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
		Jun-Sep	>6.0	>6.0	---	---	---	None	---	None
		Oct-Dec	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
17A:										
Cabot-----------	D	Jan-May	0.0-1.5	>6.0	Apparent	---	---	None	---	None
		Jun-Sep	1.5-3.0	>6.0	Apparent	---	---	None	---	None
		Oct-Dec	0.0-1.5	>6.0	Apparent	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
17B:										
Cabot-----------	D	Jan-May	0.0-1.5	>6.0	Apparent	---	---	None	---	None
		Jun-Sep	1.5-3.0	>6.0	Apparent	---	---	None	---	None
		Oct-Dec	0.0-1.5	>6.0	Apparent	---	---	None	---	None
17C:										
Cabot-----------	D	Jan-May	0.0-1.5	>6.0	Apparent	---	---	None	---	None
		Jun-Sep	1.5-3.0	>6.0	Apparent	---	---	None	---	None
		Oct-Dec	0.0-1.5	>6.0	Apparent	---	---	None	---	None
18B:										
Cabot-----------	D	Jan-May	0.0-1.5	>6.0	Apparent	---	---	None	---	None
		Jun-Sep	1.5-3.0	>6.0	Apparent	---	---	None	---	None
		Oct-Dec	0.0-1.5	>6.0	Apparent	---	---	None	---	None
18C:										
Cabot-----------	D	Jan-May	0.0-1.5	>6.0	Apparent	---	---	None	---	None
		Jun-Sep	1.5-3.0	>6.0	Apparent	---	---	None	---	None
		Oct-Dec	0.0-1.5	>6.0	Apparent	---	---	None	---	None
19B:										
Colonel---------	C	Jan-May	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
		Jun-Sep	>6.0	>6.0	---	---	---	None	---	None
		Oct-Dec	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
19C:										
Colonel---------	C	Jan-May	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
		Jun-Sep	>6.0	>6.0	---	---	---	None	---	None
		Oct-Dec	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
19D:										
Colonel---------	C	Jan-May	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
		Jun-Sep	>6.0	>6.0	---	---	---	None	---	None
		Oct-Dec	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
20A:										
Peacham---------	D	Jan-Jun	0.0-0.5	>6.0	Apparent	0.0-1.0	Long	Frequent	---	None
		Jul-Sep	0.0-2.0	>6.0	Apparent	---	---	None	---	None
		Oct-Dec	0.0-0.5	>6.0	Apparent	0.0-1.0	Long	Frequent	---	None
21A:										
Sunday----------	A	Jan-Feb	>6.0	>6.0	---	---	---	None	---	None
		Mar-Oct	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Nov-Dec	>6.0	>6.0	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
26A:										
Adams	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
26B:										
Adams	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
26C:										
Adams	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
26D:										
Adams	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
26E:										
Adams	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
33A:										
Machias	B	Jan-Apr	1.5-2.5	>6.0	Apparent	---	---	None	---	None
		May-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-2.5	>6.0	Apparent	---	---	None	---	None
33B:										
Machias	B	Jan-Apr	1.5-2.5	>6.0	Apparent	---	---	None	---	None
		May-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-2.5	>6.0	Apparent	---	---	None	---	None
33C:										
Machias	B	Jan-Apr	1.5-2.5	>6.0	Apparent	---	---	None	---	None
		May-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-2.5	>6.0	Apparent	---	---	None	---	None
37B:										
Stetson	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
37C:										
Stetson	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
37D:										
Stetson	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
37E:										
Stetson	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
39A:										
Colton	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
39B:										
Colton----------	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
39C:										
Colton----------	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
39D:										
Colton----------	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
39E:										
Colton----------	A	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
41D:										
Buxton----------	C	Jan-May	1.5-3.0	2.0-4.6	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-3.0	2.0-4.6	Perched	---	---	None	---	None
41E:										
Buxton----------	C	Jan-May	1.5-3.0	2.0-4.6	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-3.0	2.0-4.6	Perched	---	---	None	---	None
43B:										
Salmon----------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
43C:										
Salmon----------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
43D:										
Salmon----------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
43E:										
Salmon----------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
44B:										
Lamoine---------	D	Jan-Jun	0.5-1.5	1.3-4.6	Perched	---	---	None	---	None
		Jul-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	0.5-1.5	1.3-4.6	Perched	---	---	None	---	None
44C:										
Lamoine---------	D	Jan-Jun	0.5-1.5	1.3-4.6	Perched	---	---	None	---	None
		Jul-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	0.5-1.5	1.3-4.6	Perched	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
45A:										
Scantic----------	D	Jan-Jun	0.0-1.0	1.3-4.6	Perched	---	---	None	---	None
		Jul-Sep	>6.0	>6.0	---	---	---	None	---	None
		Oct-Dec	0.0-1.0	1.3-4.6	Perched	---	---	None	---	None
55B:										
Nicholville------	B	Jan-May	1.5-2.0	>6.0	Apparent	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-2.0	>6.0	Apparent	---	---	None	---	None
58A:										
Grange-----------	C	Jan-May	0.0-1.5	>6.0	Apparent	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	0.0-1.5	>6.0	Apparent	---	---	None	---	None
59A:										
Waitsfield-------	B	Jan-May	>6.0	>6.0	---	---	---	None	Brief	Frequent
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	None	Brief	Frequent
60A:										
Weider-----------	B	Jan-May	1.5-3.0	>6.0	Apparent	---	---	None	Brief	Frequent
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-3.0	>6.0	Apparent	---	---	None	Brief	Frequent
62B:										
Berkshire--------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
62C:										
Berkshire--------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
62D:										
Berkshire--------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
63B:										
Berkshire--------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
63C:										
Berkshire--------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
63D:										
Berkshire--------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
63E:										
Berkshire--------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
64C:										
Salmon----------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Adamant---------	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
64D:										
Salmon----------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Adamant---------	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
64E:										
Salmon----------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Adamant---------	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
66B:										
Vershire--------	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Dummerston------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
66C:										
Vershire--------	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Dummerston------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
66D:										
Vershire--------	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Dummerston------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
66E:										
Vershire--------	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Dummerston------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
67C:										
Glover----------	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Vershire--------	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
67D:										
Glover----------	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Vershire--------	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
67E:										
Glover	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Vershire	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
68D:										
Stratton	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Glebe	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
68E:										
Stratton	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Glebe	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
69D:										
Sisk	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Glebe	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
69E:										
Sisk	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Glebe	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
71C:										
Tunbridge	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Lyman	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
72B:										
Tunbridge	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Lyman	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
72C:										
Tunbridge	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Lyman	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
72D:										
Tunbridge	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Lyman	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
72E:										
Tunbridge-------	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Lyman-----------	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
76C:										
Berkshire-------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
76D:										
Berkshire-------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
76E:										
Berkshire-------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
77B:										
Peru------------	C	Jan-May	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
77C:										
Peru------------	C	Jan-May	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
77D:										
Peru------------	C	Jan-May	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
78C:										
Peru------------	C	Jan-May	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
78D:										
Peru------------	C	Jan-May	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
78E:										
Peru------------	C	Jan-May	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydrologic group	Month	Water table			Ponding			Flooding	
			Upper limit	Lower limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
79A:										
Markey----------	D	Jan-Dec	0.0-0.5	>6.0	Apparent	0.0-1.0	Long	Frequent	---	None
Wonsqueak-------	D	Jan-Dec	0.0-0.5	>6.0	Apparent	0.0-1.0	Long	Frequent	---	None
82A:										
Peacham---------	D	Jan-Jun	0.0-0.5	>6.0	Apparent	0.0-1.0	Long	Frequent	---	None
		Jul-Sep	0.0-2.0	>6.0	Apparent	---	---	None	---	None
		Oct-Dec	0.0-0.5	>6.0	Apparent	0.0-1.0	Long	Frequent	---	None
85E:										
Ricker----------	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Londonderry-----	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Stratton--------	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
86F:										
Ricker----------	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Londonderry-----	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Rock Outcrop----	D	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
88D:										
Houghtonville---	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
89E:										
Houghtonville---	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
90B:										
Dummerston------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
90C:										
Dummerston------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
90D:										
Dummerston------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
91C:										
Dummerston------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
91D:										
Dummerston------	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
92B:										
Buckland--------	C	Jan-May	1.0-2.0	1.7-2.5	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.0-2.0	1.7-2.5	Perched	---	---	None	---	None
92C:										
Buckland--------	C	Jan-May	1.0-2.0	1.7-2.5	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.0-2.0	1.7-2.5	Perched	---	---	None	---	None
92D:										
Buckland--------	C	Jan-May	1.0-2.0	1.7-2.5	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.0-2.0	1.7-2.5	Perched	---	---	None	---	None
93B:										
Buckland--------	C	Jan-May	1.0-2.0	1.7-2.5	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.0-2.0	1.7-2.5	Perched	---	---	None	---	None
93C:										
Buckland--------	C	Jan-May	1.0-2.0	1.7-2.5	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.0-2.0	1.7-2.5	Perched	---	---	None	---	None
93D:										
Buckland--------	C	Jan-May	1.0-2.0	1.7-2.5	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.0-2.0	1.7-2.5	Perched	---	---	None	---	None
96D:										
Peru------------	C	Jan-May	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
		Jun-Oct	>6.0	>6.0	---	---	---	None	---	None
		Nov-Dec	1.5-2.5	2.0-3.0	Perched	---	---	None	---	None
98B:										
Cabot-----------	D	Jan-May	0.0-1.5	>6.0	Apparent	---	---	None	---	None
		Jun-Sep	1.5-3.0	>6.0	Apparent	---	---	None	---	None
		Oct-Dec	0.0-1.5	>6.0	Apparent	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
98C:										
Cabot	D	Jan-May	0.0-1.5	>6.0	Apparent	---	---	None	---	None
		Jun-Sep	1.5-3.0	>6.0	Apparent	---	---	None	---	None
		Oct-Dec	0.0-1.5	>6.0	Apparent	---	---	None	---	None
99C:										
Colonel	C	Jan-May	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
		Jun-Sep	>6.0	>6.0	---	---	---	None	---	None
		Oct-Dec	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
99D:										
Colonel	C	Jan-May	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
		Jun-Sep	>6.0	>6.0	---	---	---	None	---	None
		Oct-Dec	0.5-2.0	1.5-2.5	Perched	---	---	None	---	None
100:										
Pits, Sand	---	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
Pits, Gravel	---	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
102:										
Pits	---	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
Dumps	---	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
103:										
Udorthents	---	Jan-Dec	>6.0	>6.0	---	---	---	---	---	---
104:										
Urban Land	---	Jan-Feb	>6.0	>6.0	---	---	---	---	---	None
		Mar-May	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
Udipsamments	---	Jan-Feb	>6.0	>6.0	---	---	---	---	---	---
		Mar-May	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	---
116B:										
Mundal	C	Jan-May	1.5-2.5	2.0-2.5	Perched	---	---	None	---	None
		Jun-Aug	>6.0	>6.0	---	---	---	None	---	None
		Sep-Dec	1.5-2.5	2.0-2.5	Perched	---	---	None	---	None
116C:										
Mundal	C	Jan-May	1.5-2.5	2.0-2.5	Perched	---	---	None	---	None
		Jun-Aug	>6.0	>6.0	---	---	---	None	---	None
		Sep-Dec	1.5-2.5	2.0-2.5	Perched	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
116D:										
Mundal----------	C	Jan-May	1.5-2.5	2.0-2.5	Perched	---	---	None	---	None
		Jun-Aug	>6.0	>6.0	---	---	---	None	---	None
		Sep-Dec	1.5-2.5	2.0-2.5	Perched	---	---	None	---	None
151F:										
Hogback---------	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Rock Outcrop----	D	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
Rawsonville-----	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
162D:										
Houghtonville---	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Rawsonville-----	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
162E:										
Houghtonville---	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Rawsonville-----	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
163C:										
Houghtonville---	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
163D:										
Houghtonville---	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
163E:										
Houghtonville---	B	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
168C:										
Hogback---------	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Rawsonville-----	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
168D:										
Hogback---------	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Rawsonville-----	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
168E:										
Hogback---------	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Rawsonville-----	C	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None

Table 17.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Month	Water table			Ponding			Flooding	
			Upper limit	Lower limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
172F:										
Taconic	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Hubbardton	D	Jan-Dec	>6.0	>6.0	---	---	---	None	---	None
Rock Outcrop	D	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
W:										
Water	---	Jan-Dec	>6.0	>6.0	---	---	---	---	---	---

Table 18.—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
Adamant	Coarse-silty, mixed, frigid Typic Haplorthods
Adams	Sandy, mixed, frigid Typic Haplorthods
Berkshire	Coarse-loamy, mixed, frigid Typic Haplorthods
Buckland	Coarse-loamy, mixed, frigid Aquic Haplumbrepts
Buxton	Fine, illitic, frigid Aquic Dystric Eutrochrepts
Cabot	Coarse-loamy, mixed, nonacid, frigid Typic Humaquepts
Colonel	Coarse-loamy, mixed, frigid Aquic Haplorthods
Colton	Sandy-skeletal, mixed, frigid Typic Haplorthods
*Dummerston	Coarse-loamy, mixed, frigid Typic Dystrochrepts
Glebe	Coarse-loamy, mixed Typic Humicryods
Glover	Loamy, mixed, frigid Lithic Haplumbrepts
Grange	Coarse-loamy over sandy or sandy-skeletal, mixed, nonacid, frigid Aeric Endoaquepts
Hogback	Loamy, mixed, frigid Lithic Haplorthods
Houghtonville	Coarse-loamy, mixed, frigid Typic Haplorthods
Hubbardton	Loamy-skeletal, mixed, acid, frigid Lithic Udorthents
Lamoine	Fine, illitic, nonacid, frigid Aeric Epiaquepts
Londonderry	Loamy, mixed, acid Lithic Cryorthents
Lyman	Loamy, mixed, frigid Lithic Haplorthods
*Machias	Coarse-loamy over sandy or sandy-skeletal, mixed, frigid Aquic Haplorthods
Markey	Sandy or sandy-skeletal, mixed, euic Terric Borosaprists
Mundal	Coarse-loamy, mixed, frigid Aquic Haplorthods
*Nicholville	Coarse-silty, mixed, frigid Aquic Haplorthods
Ondawa	Coarse-loamy, mixed, frigid Fluventic Dystrochrepts
Peacham	Coarse-loamy, mixed, nonacid, frigid Histic Humaquepts
Peru	Coarse-loamy, mixed, frigid Aquic Haplorthods
Rawsonville	Coarse-loamy, mixed, frigid Typic Haplorthods
Ricker	Dysic Lithic Borofolists
Rifle	Euic Typic Borohemists
Rumney	Coarse-loamy, mixed, nonacid, frigid Aeric Fluvaquents
Salmon	Coarse-silty, mixed, frigid Typic Haplorthods
Scantic	Fine, illitic, nonacid, frigid Typic Epiaquepts
Sisk	Coarse-loamy, mixed Typic Humicryods
Stetson	Sandy-skeletal, mixed, frigid Typic Haplorthods
Stratton	Loamy-skeletal, mixed Lithic Humicryods
Sunday	Mixed, frigid Typic Udipsamments
Sunny	Coarse-loamy over sandy or sandy-skeletal, mixed, nonacid, frigid Typic Fluvaquents
Taconic	Loamy-skeletal, mixed, frigid Lithic Dystrochrepts
Tunbridge	Coarse-loamy, mixed, frigid Typic Haplorthods
Vershire	Coarse-loamy, mixed, frigid Typic Haplumbrepts
Waitsfield	Coarse-loamy over sandy or sandy-skeletal, mixed, frigid Fluvaquentic Dystrochrepts
Weider	Coarse-loamy over sandy or sandy-skeletal, mixed, frigid Fluvaquentic Dystrochrepts
Wonsqueak	Loamy, mixed, euic Terric Borosaprists