overcome the wetness. Providing coarser textured base material helps to prevent the damage caused by frost action. Adapting the design of the roads to the natural slope or land shaping and grading help to overcome the slope.

The capability subclass is IIIe.

148D—Bomoseen and Pittstown soils, 15 to 25 percent slopes. These soils are moderately well drained and moderately steep. They are shallow or moderately deep to dense basal till and very deep to bedrock. They are on the top and sides of hills and ridges. Slopes are generally smooth. Areas are irregular in shape and range from 5 to 75 acres in size.

This unit is about 40 percent Bomoseen soil, 40 percent Pittstown soil, and 20 percent other soils. Some areas are mainly Bomoseen soil, some are mainly Pittstown soil, and some consist of both. These soils are so similar in use and management that separating them in mapping was not practical.

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

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

Subsoil:
7 to 11 inches, light olive brown channery fine sandy loam
11 to 17 inches, mottled, olive brown channery fine sandy loam
17 to 21 inches, mottled, light olive brown channery fine sandy loam
21 to 27 inches, mottled, olive channery silt loam

Substratum:
27 to 35 inches, mottled, firm, olive gray and olive channery silt loam
35 to 60 inches, mottled, firm, olive channery silt loam

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

Surface layer:
0 to 7 inches, dark brown silt loam

Subsoil:
7 to 15 inches, light olive brown silt loam
15 to 18 inches, mottled, olive silt loam
18 to 22 inches, mottled, olive gravelly silt loam

Substratum:
22 to 60 inches, mottled, very firm, olive gray gravelly silt loam

Some areas of this unit include soils that do not have gray mottles in the subsoil.

Included in this unit in mapping are small areas of the somewhat poorly drained and poorly drained Massena soils in depressions and drainageways. Also included, throughout the unit, are soils that have a friable substratum and areas where less than 1 percent to 3 percent of the surface is covered with stones.

Important soil properties—

Permeability: Bomoseen—moderate in the subsoil and very slow in the substratum; Pittstown—moderate in the subsoil and slow or moderately slow in the substratum
Available water capacity: Moderate
Soil reaction: Bomoseen—moderately acid to neutral in the surface layer and subsoil and slightly acid to moderately alkaline in the substratum; Pittstown—very strongly acid to moderately acid throughout the profile
Depth to dense basal till: Bomoseen—15 to 35 inches; Pittstown—15 to 30 inches
Depth to bedrock: More than 60 inches
Water table: Perched at a depth of 1.5 to 3.0 feet in late fall, in winter, and in spring
Root zone: Typically extends to the firm substratum
Potential for frost action: Moderate

Most areas of this unit are used for hay or pasture or woodland. Other areas are developed.

This unit is suited to hay and pasture. Erosion is a hazard, and the slope is a limitation. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, harvesting at the proper stage of plant growth, and weed and brush control increase the quantity and quality of feed and forage and help to control erosion. Operating equipment up and down the slope helps to overcome the equipment limitation caused by the slope (fig. 14).

The slope and the seasonal high water table severely limit the use of this unit for cultivated crops. Erosion is a hazard. Using the unit for long-term hay or pasture is effective in controlling erosion.

The potential productivity of this unit is moderate for sugar maple and very high for eastern white pine. Erosion and windthrow are hazards. The main problem affecting timber production and harvesting is the equipment limitation. Logging during winter or during dry periods, constructing skid trails and logging roads across the slope, and installing culverts and water bars as necessary help to control erosion. The firm substratum restricts rooting depth and results in the uprooting of some trees during windy periods. Selective cutting minimizes the windthrow hazard. Operating logging equipment in the less steep areas of the unit

Figure 14.—Bomoseen and Pittsown soils, 15 to 25 percent slopes, are on the dome-shaped drumlin in the center.

minimizes the equipment limitation caused by the slope.

The slope and the seasonal high water table limit the use of this unit as a site for dwellings with basements. Extensive land shaping and grading are needed to overcome the slope. Installing footing drains, sealing foundations, and land grading that diverts surface water away from the dwellings help to prevent wetness in basements. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing a plant cover in disturbed areas during or soon after construction help to control erosion. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for dwellings with basements.

This unit is generally unsuitable as a site for septic tank absorption fields because of the slope, the seasonal high water table, and the slow or very slow permeability in the substratum. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use.

The slope limits the use of this unit as a site for local roads and streets. The seasonal high water table and the potential for frost action also are limitations. Installing drainage systems and providing coarser textured base material help to overcome the wetness and prevent the damage caused by frost action. Constructing the roads across the slope or on the contour helps to overcome the slope. Extensive land shaping and grading are necessary in some areas.

The capability subclass is IVe.

149B—Bomoseen and Pittstown soils, 3 to 8 percent slopes, very stony. These soils are moderately well drained and nearly level and gently sloping. They are shallow or moderately deep to dense basal till and very deep to bedrock. They are on the top

and sides of hills and ridges. Slopes are generally smooth. Areas are irregular in shape and range from 5 to 75 acres in size. Flagstones cover less than 1 percent to 3 percent of the surface and are typically 5 to 25 feet apart.

This unit is about 40 percent Bomoseen soil, 40 percent Pittstown soil, and 20 percent other soils. Some areas are mainly Bomoseen soil, some are mainly Pittstown soil, and some consist of both. These soils are so similar in use and management that separating them in mapping was not practical.

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

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

Subsoil:
8 to 11 inches, light olive brown channery fine sandy loam
11 to 17 inches, mottled, olive brown channery fine sandy loam
17 to 21 inches, mottled, light olive brown channery fine sandy loam
21 to 27 inches, mottled, olive channery silt loam

Substratum:
27 to 35 inches, mottled, firm, olive gray and olive channery silt loam
35 to 60 inches, mottled, firm, olive channery silt loam

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

Surface layer:
0 to 7 inches, dark brown silt loam

Subsoil:
7 to 15 inches, light olive brown silt loam
15 to 18 inches, mottled, olive silt loam
18 to 22 inches, mottled, olive gravelly silt loam

Substratum:
22 to 60 inches, mottled, very firm, olive gray gravelly silt loam

Some areas of this unit include soils that do not have gray mottles in the subsoil.

Included in this unit in mapping are small areas of the somewhat poorly drained and poorly drained Massena soils in depressions and drainageways. Also included, throughout the unit, are soils that have a friable substratum and areas where more than 3 percent of the surface is covered with flagstones.

Important soil properties—

Permeability: Bomoseen—moderate in the subsoil and very slow in the substratum; Pittstown—moderate in the subsoil and slow or moderately slow in the substratum
Available water capacity: Moderate
Soil reaction: Bomoseen—moderately acid to neutral in the surface layer and subsoil and slightly acid to moderately alkaline in the substratum; Pittstown—very strongly acid to moderately acid throughout the profile
Depth to dense basal till: Bomoseen—15 to 35 inches; Pittstown—15 to 30 inches
Depth to bedrock: More than 60 inches
Water table: Perched at a depth of 1.5 to 3.0 feet in late fall, in winter, and in spring
Root zone: Typically extends to the firm substratum
Potential for frost action: Moderate

Most areas of this unit are used as woodland or unimproved pasture. Other areas are developed.

Because of the flagstones on the surface, this unit is unsuited to hay and improved pasture. The flagstones must be removed before the unit is suitable for these uses. Some areas are used as unimproved pasture. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, and weed and brush control increase the quantity and quality of forage.

This unit is unsuited to cultivated crops if the surface is not cleared of flagstones. If cleared of flagstones the soil is well suited to cultivation. The seasonal high water table is a limitation, and erosion is a hazard. Tillage and harvesting are often delayed because of wetness. Subsurface drainage can be used to lower the seasonal high water table if a suitable outlet is available. Growing cover crops, including grasses and legumes in the cropping system, applying a system of conservation tillage that leaves some or all of the crop residue on the surface, and tilling on the contour help to control erosion. Diversion ditches help to control runoff and erosion.

The potential productivity of this unit is moderate for sugar maple and very high for eastern white pine. Windthrow is a hazard. The firm substratum and the seasonal high water table restrict the rooting depth, resulting in the uprooting of some trees during windy periods. Selective cutting minimizes the windthrow hazard. Included areas where flagstones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones.

The seasonal high water table limits the use of this

unit as a site for dwellings with basements. Installing footing drains and sealing foundations help to prevent wetness in basements. Land grading can divert surface water away from the dwellings and thus also helps to prevent wetness in basements.

The seasonal high water table and the slow or very slow permeability in the substratum limit the use of this unit as a site for septic tank absorption fields. Special designs are needed to overcome these limitations. Installing diversions and drains to intercept water from the higher areas helps to overcome the wetness. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for septic tank absorption fields.

The seasonal high water table and the potential for frost action limit the use of this unit as a site for local roads and streets. Constructing the roads on raised fill material and installing drainage systems help to overcome the wetness. Providing coarser textured base material helps to prevent the damage caused by frost action.

The capability subclass is VIs.

149C—Bomoseen and Pittstown soils, 8 to 15 percent slopes, very stony. These soils are moderately well drained and strongly sloping. They are shallow or moderately deep to dense basal till and very deep to bedrock. They are on the top and sides of hills and ridges. Slopes are generally smooth. Areas are irregular in shape and range from 5 to 100 acres in size. Flagstones cover less than 1 percent to 3 percent of the surface and are typically 5 to 25 feet apart.

This unit is about 40 percent Bomoseen soil, 40 percent Pittstown soil, and 20 percent other soils. Some areas are mainly Bomoseen soil, some are mainly Pittstown soil, and some consist of both. These soils are so similar in use and management that separating them in mapping was not practical.

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

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

Subsoil:
8 to 11 inches, light olive brown channery fine sandy loam
11 to 17 inches, mottled, olive brown channery fine sandy loam
17 to 21 inches, mottled, light olive brown channery fine sandy loam
21 to 27 inches, mottled, olive channery silt loam

Substratum:
27 to 35 inches, mottled, firm, olive gray and olive channery silt loam
35 to 60 inches, mottled, firm, olive channery silt loam

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

Surface layer:
0 to 7 inches, dark brown silt loam

Subsoil:
7 to 15 inches, light olive brown silt loam
15 to 18 inches, mottled, olive silt loam
18 to 22 inches, mottled, olive gravelly silt loam

Substratum:
22 to 60 inches, mottled, very firm, olive gray gravelly silt loam

Some areas of this unit include soils that do not have gray mottles in the subsoil.

Included in this unit in mapping are small areas of the somewhat poorly drained and poorly drained Massena soils in depressions and drainageways. Also included, throughout the unit, are soils that have a friable substratum and areas where more than 3 percent of the surface is covered with flagstones.

Important soil properties—

Permeability: Bomoseen—moderate in the subsoil and very slow in the substratum; Pittstown—moderate in the subsoil and slow or moderately slow in the substratum
Available water capacity: Moderate
Soil reaction: Bomoseen—moderately acid to neutral in the surface layer and subsoil and slightly acid to moderately alkaline in the substratum; Pittstown—very strongly acid to moderately acid throughout the profile
Depth to dense basal till: Bomoseen—15 to 35 inches; Pittstown—15 to 30 inches
Depth to bedrock: More than 60 inches
Water table: Perched at a depth of 1.5 to 3.0 feet in late fall, in winter, and in spring
Root zone: Typically extends to the firm substratum
Potential for frost action: Moderate

Most areas of this unit are used as woodland. Other areas are in unimproved pasture or are developed.

Because of the flagstones on the surface, this unit is unsuited to hay and improved pasture. The flagstones must be removed before the unit is suitable for these uses. Erosion is a hazard. Some areas are used as unimproved pasture. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, and

weed and brush control increase the quantity and quality of forage and help to control erosion.

This unit is unsuited to cultivated crops if the surface is not cleared of flagstones. If this unit is cleared of flagstones it is suited to cultivation. The seasonal high water table is a limitation, and erosion is a hazard. Growing cover crops, including grasses and legumes in the cropping system, applying a system of conservation tillage that leaves some or all of the crop residue on the surface, and tilling on the contour help to control erosion. Diversion ditches help to control runoff and erosion. Tillage and harvesting are often delayed because of wetness. Subsurface drainage can be used to lower the seasonal high water table if a suitable outlet is available.

The potential productivity of this unit is moderate for sugar maple and very high for eastern white pine. Windthrow is a hazard. The firm substratum and the seasonal high water table restrict the rooting depth, resulting in the uprooting of some trees during windy periods. Selective cutting minimizes the windthrow hazard. Included areas where flagstones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones.

The seasonal high water table limits the use of this unit as a site for dwellings with basements. The slope also is a limitation. Installing footing drains and sealing foundations help to prevent wetness in basements. Land grading can divert surface water away from the dwellings and thus also helps to prevent wetness in basements. Designing the buildings so that they conform to the natural slope or land shaping and grading help to overcome the slope. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing a plant cover in disturbed areas during or soon after construction help to control erosion.

The seasonal high water table and the slow or very slow permeability in the substratum limit the use of this unit as a site for septic tank absorption fields. The slope also is a limitation. Special designs such as installing diversions and drains to intercept water from the higher areas, increasing the size of the absorption field, and installing the effluent lines on the contour are needed to overcome these limitations. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for septic tank absorption fields.

The seasonal high water table, the potential for frost action, and the slope limit the use of this unit as a site for local roads and streets. Constructing the roads on fill material and installing drainage systems help to overcome the wetness. Providing coarser textured base material helps to prevent the damage caused by frost action. Adapting the design of the roads to the natural slope or land shaping and grading help to overcome the slope.

The capability subclass is VIs.

149D—Bomoseen and Pittstown soils, 15 to 25 percent slopes, very stony. These soils are moderately well drained and moderately steep. They are shallow or moderately deep to dense basal till and very deep to bedrock. They are on the top and sides of hills and ridges. Slopes are generally smooth. Areas are irregular in shape and range from 5 to 150 acres in size. Flagstones cover less than 1 percent to 3 percent of the surface and are typically 5 to 25 feet apart.

This unit is about 40 percent Bomoseen soil, 40 percent Pittstown soil, and 20 percent other soils. Some areas are mainly Bomoseen soil, some are mainly Pittstown soil, and some consist of both. These soils are so similar in use and management that separating them in mapping was not practical.

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

Surface layer:

0 to 8 inches, very dark grayish brown channery loam

Subsoil:

8 to 11 inches, light olive brown channery fine sandy loam
11 to 17 inches, mottled, olive brown channery fine sandy loam
17 to 21 inches, mottled, light olive brown channery fine sandy loam
21 to 27 inches, mottled, olive channery silt loam

Substratum:

27 to 35 inches, mottled, firm, olive gray and olive channery silt loam
35 to 60 inches, mottled, firm, olive channery silt loam

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

Surface layer:

0 to 7 inches, dark brown silt loam

Subsoil:

7 to 15 inches, light olive brown silt loam
15 to 18 inches, mottled, olive silt loam
18 to 22 inches, mottled, olive gravelly silt loam

Substratum:
22 to 60 inches, mottled, very firm, olive gray gravelly silt loam

Some areas of this unit include soils that do not have gray mottles in the subsoil.

Included in this unit in mapping are small areas of the somewhat poorly drained and poorly drained Massena soils in depressions and drainageways. Also included, throughout the unit, are soils that have a friable substratum and areas where more than 3 percent of the surface is covered with flagstones.

Important soil properties—

Permeability: Bomoseen—moderate in the subsoil and very slow in the substratum; Pittstown—moderate in the subsoil and slow or moderately slow in the substratum
Available water capacity: Moderate
Soil reaction: Bomoseen—moderately acid to neutral in the surface layer and subsoil and slightly acid to moderately alkaline in the substratum; Pittstown—very strongly acid to moderately acid throughout the profile
Depth to dense basal till: Bomoseen—15 to 35 inches; Pittstown—15 to 30 inches
Depth to bedrock: More than 60 inches
Water table: Perched at a depth of 1.5 to 3.0 feet in late fall, in winter, and in spring
Root zone: Typically extends to the firm substratum
Potential for frost action: Moderate

Most areas of this unit are used as woodland. Other areas are in unimproved pasture or are developed.

Because of the flagstones on the surface, this unit is unsuited to hay and improved pasture. The flagstones must be removed before the unit is suitable for these uses. Erosion is a hazard, and the slope is a limitation. Some areas are used as unimproved pasture. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, and weed and brush control increase the quantity and quality of forage and help to control erosion. Operating equipment up and down the slope helps to overcome the equipment limitation caused by the slope.

This unit is unsuited to cultivated crops because of the slope and flagstones on the surface. Erosion is a hazard. Using the unit for long-term hay and pasture is effective in controlling erosion.

The potential productivity of this unit is moderate for sugar maple and very high for eastern white pine. Erosion and windthrow are hazards. The main problem affecting timber production and harvesting is the equipment limitation. Logging during winter or during dry periods, constructing skid trails and logging roads across the slope, and installing culverts and water bars as necessary help to control erosion. Operating logging equipment in the less steep areas of the unit minimizes the equipment limitation caused by the slope. The firm substratum and the seasonal high water table restrict the rooting depth, resulting in the uprooting of some trees during windy periods. Selective cutting minimizes the windthrow hazard. Included areas where stones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones.

The slope and the seasonal high water table limit the use of this unit as a site for dwellings with basements. Extensive land shaping and grading are needed to overcome the slope. Installing footing drains, sealing foundations, and land grading that diverts surface water away from the dwellings help to prevent wetness in basements. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing a plant cover in disturbed areas during or soon after construction help to control erosion. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for dwellings with basements.

This unit is generally unsuitable as a site for septic tank absorption fields because of the slope, the seasonal high water table, and the very slow or slow permeability in the substratum. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use.

The slope limits the use of this unit as a site for local roads and streets. The seasonal high water table and the potential for frost action also are limitations. Installing drainage systems and providing coarser textured base material help to overcome the wetness and prevent the damage caused by frost action. Constructing the roads across the slope or on the contour helps to overcome the slope. Extensive land shaping and grading are necessary in some areas.

The capability subclass is VIs.

149E—Bomoseen and Pittstown soils, 25 to 40 percent slopes, very stony. These soils are moderately well drained and steep. They are shallow or moderately deep to dense basal till and very deep to bedrock. They are on the top and sides of hills and ridges. Areas are or irregular in shape and range from 5 to 100 acres in size. Flagstones cover less than 1 percent to 3 percent of the surface and are typically 5 to 25 feet apart.

This unit is about 40 percent Bomoseen soil, 40 percent Pittstown soil, and 20 percent other soils. Some areas are mainly Bomoseen soil, some are mainly

Pittstown soil, and some consist of both. These soils are so similar in use and management that separating them in mapping was not practical.

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

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

Subsoil:
8 to 11 inches, light olive brown channery fine sandy loam
11 to 17 inches, mottled, olive brown channery fine sandy loam
17 to 21 inches, mottled, light olive brown channery fine sandy loam
21 to 27 inches, mottled, olive channery silt loam

Substratum:
27 to 35 inches, mottled, firm, olive gray and olive channery silt loam
35 to 60 inches, mottled, firm, olive channery silt loam

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

Surface layer:
0 to 7 inches, dark brown silt loam

Subsoil:
7 to 15 inches, light olive brown silt loam
15 to 18 inches, mottled, olive silt loam
18 to 22 inches, mottled, olive gravelly silt loam

Substratum:
22 to 60 inches, mottled, very firm, olive gray gravelly silt loam

Some areas of this unit include soils that do not have gray mottles in the subsoil.

Included in this unit in mapping are small areas of the somewhat poorly drained and poorly drained Massena soils in depressions and drainageways. Also included, throughout the unit, are soils that have a friable substratum and areas where more than 3 percent of the surface is covered with flagstones.

Important soil properties—

Permeability: Bomoseen—moderate in the subsoil and very slow in the substratum; Pittstown—moderate in the subsoil and slow or moderately slow in the substratum
Available water capacity: Moderate
Soil reaction: Bomoseen—moderately acid to neutral in the surface layer and subsoil and slightly acid to moderately alkaline in the substratum; Pittstown—very strongly acid to moderately acid throughout the profile
Depth to dense basal till: Bomoseen—15 to 35 inches; Pittstown—15 to 30 inches
Depth to bedrock: More than 60 inches
Water table: Perched at a depth of 1.5 to 3.0 feet in late fall, in winter, and in spring
Root zone: Typically extends to the firm substratum
Potential for frost action: Moderate

Most areas of this unit are used as woodland. Other areas are in unimproved pasture.

This unit is poorly suited to unimproved pasture and generally unsuited to hay and improved pasture. Erosion is a hazard, and the slope and the stones on the surfaces are limitations. Some areas are used as unimproved pasture. Timely deferment of grazing, rotational grazing, and weed and brush control increase the quantity and quality of forage and help to control erosion. Operating equipment in the adjacent areas or up and down the slope helps to overcome the equipment limitation caused by the slope.

This unit is unsuited to cultivated crops because of the slope. Erosion is a hazard. Using the unit for long-term hay is effective in controlling erosion.

The potential productivity of this unit is moderate for sugar maple and very high for eastern white pine. Erosion and windthrow are hazards. The main problem affecting timber production and harvesting is the equipment limitation. Logging during winter or during dry periods, constructing skid trails and logging roads across the slope, and installing culverts and water bars as necessary help to control erosion. Operating logging equipment in the less steep areas of the unit minimizes the equipment limitation caused by the slope. The firm substratum and the seasonal high water table restrict the rooting depth, resulting in the uprooting of some trees during windy periods. Selective cutting minimizes the windthrow hazard. Included areas where stones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones.

This unit is generally unsuitable as a site for dwellings with basements because of the slope and the seasonal high water table. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use.

This unit is generally unsuitable as a site for septic tank absorption fields because of the slope, the seasonal high water table, and the very slow or slow permeability in the substratum. Onsite investigation is

needed to identify included or adjacent areas that may be better suited to this use.

The slope limits the use of this unit as a site for local roads and streets. The seasonal high water table and the potential for frost action also are limitations. Installing drainage systems and providing coarser textured base material help to overcome the wetness and prevent the damage caused by frost action. Constructing the roads across the slope or on the contour helps to overcome the slope. Extensive land shaping and grading are necessary in most places.

The capability subclass is VIIs.

150A—Peacham muck, 0 to 8 percent slopes. This soil is very poorly drained and nearly level and gently sloping. It is shallow to dense basal till and very deep to bedrock. It is in swamps and depressions and on toe slopes of hills and mountains. Ponding is common in fall, winter, spring, and early summer. Areas are irregular in shape and range from 3 to 75 acres in size.

Typically, this soil is covered by a layer of slightly decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 5 inches, very dark gray muck

Subsoil:
5 to 10 inches, mottled, grayish brown gravelly sandy loam

Substratum:
10 to 60 inches, mottled, firm, grayish brown sandy loam

Included in this unit in mapping are small areas of the very poorly drained Adrian and Linwood soils and soils that are subject to flooding. Also included, throughout the unit, are soils that have a friable substratum. Adrian and Linwood soils are near the center of the unit, and the soils that are subject to flooding are along streams and drainageways. Included soils make up 10 to 15 percent of the unit.

Important soil properties—

Permeability: Moderately slow to moderately rapid in the surface layer and subsoil and slow or very slow in the substratum
Available water capacity: Very low to moderate
Soil reaction: Very strongly acid to neutral
Depth to dense basal till: 8 to 20 inches
Depth to bedrock: More than 60 inches
Depth to the water table: Above the surface or within 0.5 foot of the surface in fall, winter, spring, and early summer
Root zone: Typically extends into the substratum but is restricted by the seasonal high water table
Potential for frost action: High

Most areas of this unit are in scrub woodland or pasture.

This unit is poorly suited to hay and pasture. The seasonal high water table is a limitation. Wetness limits the choice of plants and the period of cutting or grazing and increases the risk of winterkill. In some areas excessive water can be removed by surface ditches or tile drains if a suitable outlet is available. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, harvesting at the proper stage of plant growth, and weed and brush control increase the quantity and quality of feed and forage and help to control erosion.

This unit is poorly suited to cultivated crops if it is not drained. If drained it is suited to cultivation. The seasonal high water table is a limitation. Tillage and harvesting are often delayed because of wetness. Where suitable outlets are available subsurface drainage can be used to lower the seasonal high water table.

The potential productivity of this unit is moderate for red maple. The main problem affecting timber production and harvesting is the equipment limitation. Windthrow and seedling mortality are hazards. Operating logging equipment is difficult because of the wetness caused by the seasonal high water table. Logging activities are more efficiently carried out during winter or during dry periods. The seasonal high water table restricts the rooting depth, resulting in the uprooting of some trees during windy periods. Selective cutting minimizes the windthrow hazard. A high rate of seedling mortality is caused by the wetness associated with the seasonal high water table and ponding.

This unit is generally unsuitable as a site for dwellings with basements because of the ponding caused by the seasonal high water table. Onsite investigation is needed to identify adjacent areas that may be better suited to this use.

This unit is generally unsuitable as a site for septic tank absorption fields because of the ponding caused by the seasonal high water table and because of the very slow permeability in the substratum. Onsite investigation is needed to identify adjacent areas that may be better suited to this use.

Ponding associated with the seasonal high water table and the potential for frost action limit the use of this unit as a site for local roads and streets. Constructing the roads on raised fill material and installing drainage systems help to overcome the

wetness. Providing coarser textured base material helps to prevent the damage caused by frost action.

The capability subclass is Vw.

152—Lyons silt loam. This soil is very deep, poorly drained and very poorly drained, and nearly level. It is in swamps and depressions and on toe slopes of hills and mountains. Ponding is common in fall, winter, spring, and early summer. Areas are irregular in shape and range from 3 to 75 acres in size.

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

Surface layer:
0 to 7 inches, black silt loam
7 to 10 inches, very dark gray silt loam

Subsoil:
10 to 20 inches, mottled, gray silt loam
20 to 34 inches, mottled, gray gravelly loam

Substratum:
34 to 60 inches, mottled, grayish brown gravelly loam

Some areas of this unit include soils that have a subsoil of sandy loam. Other areas include soils that do not have carbonates within a depth of 40 inches.

Included in this unit in mapping are small areas of the moderately well drained Amenia and Georgia soils and the poorly drained and somewhat poorly drained Massena soils. Also included, throughout the unit, are areas where less than 1 percent to 3 percent of the surface is covered with stones and soils that have a firm substratum. Amenia and Georgia soils are on knolls and in convex areas. Massena soils are on the sides of drainageways and depressions. Included soils make up 15 to 20 percent of the unit.

Important soil properties—

Permeability: Moderate or moderately slow in the subsoil and slow or very slow in the substratum
Available water capacity: High
Soil reaction: Neutral in the surface layer and subsoil and mildly alkaline in the substratum
Depth to bedrock: More than 60 inches
Depth to the water table: Above the surface or within 0.5 foot of the surface in late fall, in winter and spring, and in early summer
Root zone: Typically extends to the substratum
Potential for frost action: High

Most areas of this unit are in scrub woodland or pasture.

This unit is poorly suited to hay and pasture. The seasonal high water table is a limitation. Wetness limits the choice of plants and the period of cutting or grazing and increases the risk of winterkill. In some areas excessive water can be removed by surface ditches or tile drains if a suitable outlet is available. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, harvesting at the proper stage of plant growth, and weed and brush control increase the quantity and quality of feed and forage and help to control erosion.

This unit is poorly suited to cultivated crops if it is not drained. If drained it is well suited to cultivation. The seasonal high water table is a limitation. Tillage and harvesting are often delayed because of wetness. Where suitable outlets are available subsurface drainage can be used to lower the seasonal high water table.

The potential productivity of this unit is moderate for red maple. The main problem affecting timber production and harvesting is the equipment limitation. Windthrow and seedling mortality are hazards. Operating logging equipment is difficult because of the wetness caused by the seasonal high water table. Logging activities are more efficiently carried out during winter or during dry periods. The seasonal high water table restricts the rooting depth, resulting in the uprooting of some trees during windy periods. Selective cutting minimizes the windthrow hazard. A high rate of seedling mortality is caused by the wetness associated with the seasonal high water table and ponding.

This unit is generally unsuitable as a site for dwellings with basements because of the seasonal high water table. Onsite investigation is needed to identify adjacent areas that may be better suited to this use.

This unit is generally unsuitable as a site for septic tank absorption fields because of the seasonal high water table and the slow or very slow permeability in the substratum. Onsite investigation is needed to identify adjacent areas that may be better suited to this use.

The seasonal high water table and the potential for frost action limit the use of this unit as a site for local roads and streets. Constructing the roads on raised fill material and installing drainage systems help to overcome the wetness. Providing coarser textured base material helps to prevent the damage caused by frost action.

The capability subclass is Vw in undrained areas, and the capability class is I in drained areas.

161A—Elmridge sandy loam, 0 to 3 percent slopes. This soil is very deep, moderately well drained, and nearly level. It is on broad upland areas. Areas are irregular in shape and range from 5 to 50 acres in size.

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

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

Subsoil:
9 to 14 inches, mottled, light olive brown sandy loam
14 to 30 inches, mottled, yellowish brown sandy loam

Substratum:
30 to 60 inches, dark yellowish brown silty clay loam and strata of grayish brown silt and very fine sand

Some areas of this unit include soils that have a surface layer and subsoil of loamy sand.

Included in this unit in mapping are small areas of the moderately well drained Deerfield and Vergennes soils and the somewhat poorly drained Kingsbury soils. These soils are in landscape positions similar to those of the Elmridge soil. Included soils make up 15 to 20 percent of the unit.

Important soil properties—

Permeability: Moderately rapid in the subsoil and slow or very slow in the substratum
Available water capacity: High
Soil reaction: Very strongly acid to slightly acid in the surface layer and subsoil and moderately acid to mildly alkaline in the substratum
Depth to bedrock: More than 60 inches
Water table: Perched at a depth of 1.5 to 2.5 feet in late fall, in winter, and in spring
Root zone: Typically extends to the substratum
Potential for frost action: High

Most areas of this unit are used for row crops, mainly silage corn. Other crops include grain corn and truck crops. Some areas are used as pasture or woodland or are developed.

This unit is well suited to hay and pasture. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, harvesting at the proper stage of plant growth, and weed and brush control increase the quantity and quality of feed and forage.

This unit is well suited to cultivated crops. The seasonal high water table is a limitation. Tillage and harvesting are often delayed because of wetness. Where suitable outlets are available subsurface drainage can be used to lower the seasonal high water table.

The potential productivity of this unit is very high for eastern white pine. Few limitations affect timber production and harvesting.

The seasonal high water table limits the use of this unit as a site for dwellings with basements. Installing footing drains and sealing foundations help to prevent wetness in basements. Land grading can divert surface water away from the dwellings and thus also helps to prevent wetness in basements.

The seasonal high water table and the slow or very slow permeability in the substratum limit the use of this unit as a site for septic tank absorption fields. Special designs are needed to overcome these limitations. Installing diversions and drains to intercept water from the higher areas helps to overcome the wetness. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for septic tank absorption fields.

The potential for frost action and low strength limit the use of this unit as a site for local roads and streets. Providing coarser textured base material helps to overcome these limitations.

The capability subclass is IIw.

161B—Elmridge sandy loam, 3 to 8 percent slopes. This soil is very deep, moderately well drained, and gently sloping. It is on knolls and broad upland areas. Areas are irregular in shape and range from 5 to 50 acres in size.

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

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

Subsoil:
9 to 14 inches, mottled, light olive brown sandy loam
14 to 30 inches, mottled, yellowish brown sandy loam

Substratum:
30 to 60 inches, dark yellowish brown silty clay loam and strata of grayish brown silt and very fine sand

Some areas of this unit include soils that have a surface layer and subsoil of loamy sand.

Included in this unit in mapping are small areas of the moderately well drained Deerfield and Vergennes soils and the somewhat poorly drained Kingsbury soils. These soils are in landscape positions similar to those of the Elmridge soil. Included soils make up 15 to 20 percent of the unit.

Important soil properties—

Permeability: Moderately rapid in the subsoil and slow or very slow in the substratum

Available water capacity: High
Soil reaction: Very strongly acid to slightly acid in the surface layer and subsoil and moderately acid to mildly alkaline in the substratum
Depth to bedrock: More than 60 inches
Water table: Perched at a depth of 1.5 to 2.5 feet in late fall, in winter, and in spring
Root zone: Typically extends to the substratum
Potential for frost action: High

Most areas of this unit are used for row crops, mainly silage corn. Other crops include grain corn and truck crops. Some areas are used as pasture or woodland or are developed.

This unit is well suited to hay and pasture. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, harvesting at the proper stage of plant growth, and weed and brush control increase the quantity and quality of feed and forage.

This unit is well suited to cultivated crops. The seasonal high water table is a limitation, and erosion is a hazard. Tillage and harvesting are often delayed because of the wetness caused by the seasonal high water table. Subsurface drainage can be used to lower the seasonal high water table if a suitable outlet is available. Growing cover crops, including grasses and legumes in the cropping system, applying a system of conservation tillage that leaves some or all of the crop residue on the surface, and tilling on the contour help to control erosion. Diversion ditches that intercept runoff also help to control erosion.

The potential productivity of this unit is very high for eastern white pine. Few limitations affect timber production and harvesting.

The seasonal high water table limits the use of this unit as a site for dwellings with basements. Installing footing drains and sealing foundations help to prevent wetness in basements. Land grading can divert surface water away from the dwellings and thus also helps to prevent wetness in basements.

The seasonal high water table and the slow or very slow permeability in the substratum limit the use of this unit as a site for septic tank absorption fields. Special designs are needed to overcome these limitations. Installing diversions and drains to intercept water from the higher areas helps to overcome the wetness. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for septic tank absorption fields.

The potential for frost action and low strength limit the use of this unit as a site for local roads and streets. Providing coarser textured base material helps to overcome these limitations.

The capability subclass is IIw.

163—Canandaigua silt loam. This soil is very deep, poorly drained, and nearly level. It is on broad flats. Areas are irregular in shape and range from 3 to 100 acres in size.

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

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

Subsoil:
8 to 12 inches, mottled, grayish brown silt loam
12 to 25 inches, mottled, greenish gray silty clay loam

Substratum:
25 to 56 inches, dark greenish gray and olive brown silty clay loam
56 to 60 inches, dark greenish gray and greenish gray silty clay loam

Included in this unit in mapping are small areas of the moderately well drained Belgrade soils, the very poorly drained Birdsall soils, and the poorly drained Raynham soils. Belgrade soils are on knolls and in convex areas, Birdsall soils are in depressions and drainageways, and Raynham soils are in landscape positions similar to those of the Canandaigua soil. Included soils make up 15 to 20 percent of the unit.

Important soil properties—

Permeability: Moderate in the surface and moderately slow in the subsoil and substratum
Available water capacity: High
Soil reaction: Moderately acid to mildly alkaline in the surface layer, slightly acid to mildly alkaline in the subsoil and neutral to moderately alkaline in the substratum
Depth to bedrock: More than 60 inches
Depth to the water table: Above the surface or within 1 foot of the surface in late fall, winter, spring, and early summer
Root zone: Typically extends to the substratum
Potential for frost action: High

Most areas of this unit are drained and used for row crops or hay and pasture. Other areas are wooded or are developed.

This unit is suited to hay and pasture. The seasonal high water table is a limitation. Wetness limits the choice of plants and the period of cutting or grazing and increases the risk of winterkill. Excessive water usually can be removed by surface ditches or tile drains if a suitable outlet is available. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, harvesting at the proper stage of plant growth, and

weed and brush control increase the quantity and quality of feed and forage.

This unit is poorly suited to cultivated crops if it is not drained. If drained it is suited to cultivation. The seasonal high water table is a limitation. Tillage and harvesting are often delayed because of wetness. Where suitable outlets are available subsurface drainage can be used to lower the seasonal high water table.

The potential productivity of this unit is moderate for red maple. The main problem affecting timber production and harvesting is the equipment limitation. Windthrow and seedling mortality are hazards. Operating logging equipment is difficult because of the wetness caused by the seasonal high water table. Logging activities are more efficiently carried out during winter or during dry periods. The seasonal high water table restricts the rooting depth, resulting in the uprooting of some trees during windy periods. Selective cutting minimizes the windthrow hazard. A high rate of seedling mortality is caused by the wetness associated with the seasonal high water table.

This unit is generally unsuitable as a site for dwellings with basements because of the seasonal high water table. Onsite investigation is needed to identify adjacent areas that may be better suited to this use.

This unit is generally unsuitable as a site for septic tank absorption fields because of the seasonal high water table and the moderately slow permeability in the substratum. Onsite investigation is needed to identify adjacent areas that may be better suited to this use.

The seasonal high water table and the potential for frost action limit the use of this unit as a site for local roads and streets. Constructing the roads on raised fill material and installing drainage systems help to overcome the wetness. Providing coarser textured base material helps to prevent the damage caused by frost action.

The capability subclass is IIIw.

175—Wappinger silt loam. This soil is very deep, well drained, and nearly level. It is on flood plains. The soil is occasionally flooded for brief periods in late fall, in winter, and in spring. Areas are long and narrow or irregular in shape and range from 5 to 75 acres in size.

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

Surface layer:
0 to 10 inches, very dark grayish brown silt loam

Subsoil:
10 to 22 inches, olive brown and brown silt loam
22 to 30 inches, dark grayish brown and olive brown loam and pockets of fine sandy loam and silt loam

Substratum:
30 to 36 inches, variegated very gravelly fine sand
36 to 60 inches, variegated and stratified sand, gravel, and cobblestones

Some areas of this unit include soils that do not have a gravelly substratum.

Included in this unit in mapping are small areas of the moderately well drained and somewhat poorly drained Middlebury soils, the moderately well drained Pawling soils, and the well drained Tioga soils. Middlebury and Pawling soils are in depressions and drainageways, and Tioga soils are in landscape positions similar to those of the Wappinger soil. Included soils make up 15 to 20 percent of the unit.

Important soil properties—

Permeability: Moderate in the subsoil and rapid to moderately rapid in the substratum
Available water capacity: High
Soil reaction: Strongly acid to moderately acid in the surface layer and moderately acid to neutral in the subsoil and substratum
Depth to bedrock: More than 60 inches
Depth to the water table: 3.0 to 5.0 feet in late winter and in spring
Root zone: Typically extends to a depth of more than 60 inches
Potential for frost action: Moderate

Most areas of this unit are used for row crops, mainly silage corn. Other crops include grain corn and truck crops. Some areas are used as pasture or woodland.

This unit is well suited to hay and pasture. Flooding is a hazard. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, harvesting at the proper stage of plant growth, and weed and brush control increase the quantity and quality of feed and forage and help to control erosion caused by floodwater.

This unit is well suited to cultivated crops. Flooding is a hazard. Flooding is of short duration and usually occurs in spring, delaying spring tillage. Growing cover crops, including grasses and legumes in the cropping system, and applying a system of conservation tillage that leaves some or all of the crop residue on the surface help to control the erosion caused by floodwater. Land shaping and ditching to provide surface drainage will allow the unit to be tilled soon after flooding. Maintaining a permanent plant cover on streambanks helps to control streambank erosion.

The potential productivity of this unit is moderate for sugar maple. Few limitations affect timber production and harvesting. The seedling mortality rate is high because of the flooding. Planting in late spring reduces the mortality rate.

This unit is generally unsuitable as a site for dwellings with basements because of the flooding. Onsite investigation is needed to identify adjacent areas that may be better suited to this use.

This unit is generally unsuitable as a site for septic tank absorption fields because of the flooding, a poor filtering capacity in the soil, and the seasonal high water table. Onsite investigation is needed to identify adjacent areas that may be better suited to this use.

Flooding limits the use of this unit as a site for local roads and streets. The potential for frost action also is a limitation. Constructing the roads on raised fill material helps to overcome the flooding. Providing coarser textured base material helps to prevent the damage caused by frost action.

The capability class is I.

177—Pawling silt loam. This soil is very deep, moderately well drained, and nearly level. It is on flood plains. The soil is occasionally flooded for brief periods in late fall, in winter, and in spring. Areas are long and narrow or irregular in shape and range from 3 to 50 acres in size.

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

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

Subsoil:
9 to 18 inches, olive silt loam
18 to 27 inches, mottled, olive brown loam

Substratum:
27 to 33 inches, dark grayish brown gravelly sand
33 to 60 inches, dark grayish brown very gravelly loamy sand

Some areas of this unit include soils that do not have a gravelly substratum. Other areas include soils that do not have gray mottles in the subsoil.

Included in this unit in mapping are small areas of the poorly drained Limerick soils, the moderately well drained and somewhat poorly drained Middlebury soils, and the well drained Tioga and Wappinger soils. Limerick soils are in depressions and drainageways, and Middlebury, Tioga, and Wappinger soils are in landscape positions similar to those of the Pawling soil. Included soils make up 15 to 20 percent of the unit.

Important soil properties—

Permeability: Moderate in the subsoil and rapid to moderately rapid in the substratum
Available water capacity: High
Soil reaction: Strongly acid to moderately acid in the surface layer and moderately acid to neutral in the subsoil and substratum
Depth to bedrock: More than 60 inches
Depth to the water table: 1.5 to 2.0 feet in late winter and in spring
Root zone: Typically extends to the substratum
Potential for frost action: High

Most areas of this unit are used for row crops, mainly silage corn. Other crops include grain corn and truck crops. Some areas are used as pasture or woodland.

This unit is well suited to hay and pasture. Flooding is a hazard. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, harvesting at the proper stage of plant growth, and weed and brush control increase the quantity and quality of feed and forage and help to control erosion caused by floodwater.

This unit is well suited to cultivated crops. The seasonal high water table is a limitation. Flooding is a hazard. Flooding is of short duration and usually occurs in spring, delaying spring tillage. Land shaping and ditching to provide surface drainage helps to dry the unit after flooding. Where suitable outlets are available subsurface drainage can be used to lower the water table. Growing cover crops, including grasses and legumes in the cropping system, and applying a system of conservation tillage that leaves some or all of the crop residue on the surface help to control the erosion caused by floodwater. Maintaining a permanent plant cover on streambanks helps to control streambank erosion.

The potential productivity of this unit is moderate for sugar maple. Few limitations affect timber production and harvesting. The seedling mortality rate is high because of the flooding. Planting in late spring reduces the mortality rate.

This unit is generally unsuitable as a site for dwellings with basements because of the flooding and the seasonal high water table. Onsite investigation is needed to identify adjacent areas that may be better suited to this use.

This unit is generally unsuitable as a site for septic tank absorption fields because of the flooding and the seasonal high water table. Onsite investigation is needed to identify adjacent areas that may be better suited to this use.

The flooding and the potential for frost action limit the

use of this unit as a site for local roads and streets. The seasonal high water table also is a limitation. Constructing the roads on raised fill material and installing drainage systems help to overcome the flooding and the wetness. Providing coarser textured base material helps to prevent the damage caused by frost action.

The capability subclass is IIw.

202E—Rawsonville-Killington association, very hilly, very rocky. This unit consists of soils on the top and sides of hills and mountains. Slopes range from 30 to 50 percent. This unit generally is between elevations of 2,000 and 2,500 feet. Areas are irregular in shape and range from 8 to 800 acres in size. Stones cover less than 1 percent to 3 percent of the surface and typically are 5 to 25 feet apart.

This unit is about 40 percent moderately deep, well drained Rawsonville soil; 40 percent shallow, well drained Killington soil; and 15 percent other soils. Rock outcrops make up about 5 percent of the unit. The Killington soil is near the the outcrops, and the Rawsonville soil is in troughs between the outcrops. The areas of the Rawsonville and Killington soils are together in a repeating pattern and are individually large enough to be mapped separately. Because of the objective of the survey, however, mapping them separately was not considered necessary.

Typically, the Rawsonville soil is covered by a thin layer of slightly decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 3 inches, very dark gray gravelly fine sandy loam

Subsoil:
3 to 10 inches, dark brown gravelly fine sandy loam
10 to 23 inches, dark yellowish brown gravelly fine sandy loam
23 to 30 inches, yellowish brown gravelly sandy loam

Bedrock:
30 inches, schist

Typically, the Killington soil is covered by a thin layer of slightly decomposed and moderately decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 1 inch, black very cobbly loam

Subsoil:
1 to 6 inches, dark reddish brown very cobbly loam
6 to 17 inches, reddish brown very stony loam

Bedrock:
17 inches, schist

Some areas of this unit include shallow soils that are less than 35 percent rock fragments.

Included in this unit in mapping are small areas of the very deep, well drained Houghtonville soils; the very shallow, well drained Londonderry soils; the moderately deep, well drained Tunbridge soils; and the shallow, somewhat excessively drained Lyman soils. Also included, throughout the unit, are areas where stones cover more than 3 percent of the surface. Houghtonville soils are in troughs between rock outcrops and are slightly lower on the landscape than the Killington and Rawsonville soils. Londonderry soils are close to rock outcrops. Lyman and Tunbridge soils are generally in areas less than 2,000 feet in elevation. Lyman soils are close to the rock outcrops, and Tunbridge soils are on the flanks of the outcrops or in troughs.

Important soil properties—

Permeability: Rawsonville—moderate or moderately rapid; Killington—moderately rapid
Available water capacity: Rawsonville—high Killington—very low
Soil reaction: Rawsonville—extremely acid to strongly acid; Killington—very strongly acid or strongly acid
Depth to bedrock: Rawsonville—20 to 40 inches; Killington—10 to 20 inches
Depth to the water table: At least 60 inches
Root zone: Typically extends to bedrock
Potential for frost action: Moderate

Most areas of this unit are wooded. This unit also is used for hiking trails and other types of low intensity recreation.

These soils are generally unsuited to hay and pasture. Erosion is a hazard. The slope, stones on the surface, rock outcrops, and the depth to bedrock in the very shallow included soils are limitations.

This unit is unsuited to cultivated crops because of the slope, rock outcrops, stones on the surface, and the depth to bedrock. Erosion is a hazard. Using the unit for long-term hay and is effective in controlling erosion.

The potential productivity of this unit is moderate for sugar maple. Erosion is a hazard. The main problem affecting timber production and harvesting is the equipment limitation. Constructing skid trails and logging roads across the slope and installing culverts and water bars as necessary help to control erosion. Harvesting during winter or during dry periods reduces

the hazard of erosion. Operating logging equipment in the less steep areas of the unit minimizes the equipment limitation caused by the slope. In some areas rock outcrops interfere with the operation of equipment. Included areas where stones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones and rock outcrops.

Beech and sugar maple are the dominant tree species in the climax community; a strongly associated component of red spruce is on the shallow Killington soils. Hemlock and balsam fir are minor components of the climax community. Yellow birch and paper birch are important subclimax species. They are competitive and persist well into the development of the climax community. White ash and red maple are present, but do not persist well. The early successional species, such as yellow birch, can be retained and increased with even-aged timber management. Striped maple, mountain maple, and hobblebush are the dominant shrub species. Where logging operations create openings, these shrubs and American beech strongly compete with desired timber species. The density of ground flora are high, and the common species are spinulose wood fern, true mosses, shining club moss, wood sorrel, Canada mayflower, starflower, and clintonia.

This unit is generally unsuitable as a site for dwellings with basements because of the depth to bedrock, the slope, and large stones in the Killington soil. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use.

This unit is generally unsuitable as a site for septic tank absorption fields because of the depth to bedrock, the slope, and large stones in the Killington soil. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use.

The depth to bedrock in the shallow Killington soil and the potential for frost action and the slope in areas of both soils limit the use of this unit as a site for local roads and streets. Careful planning of road grades and locations helps to avoid the need for removal of the bedrock. In some areas blasting is necessary to remove the bedrock. Providing coarser textured base material helps to prevent the damage caused by frost action. Adapting the design of the roads to the natural slope, land shaping and grading, and blasting help to overcome the slope.

This unit is poorly suited to camping and picknicking areas because of the slope and the stones on the surface. Erosion is a hazard. The slope is the main limitation on sites for paths and trails. Constructing log- or stone-reinforced water bars and steps on foot trails and establishing the trails on mountaintops, on ridgelines, and across the slope help to control erosion and overcome the slope.

The capability subclass is VIIs.

203D—Peru-Marlow association, hilly, very stony. This unit is on the foot slopes, back slopes, and shoulders of mounds, knolls, hills, and ridges. It generally is at elevations of less than 2,500 feet. Slopes range from 5 to 30 percent. Areas are irregular in shape and range from 5 to 750 acres in size. Stones cover less than 1 percent to 3 percent of the surface and typically are 5 to 25 feet apart.

This unit is about 45 percent moderately well drained Peru soil, 35 percent well drained Marlow soil, and 20 percent other soils. The Peru and Marlow soils are shallow or moderately deep to dense basal till and very deep to bedrock. The Peru soil is on foot slopes and back slopes, and the Marlow soil is on back slopes and shoulders. The areas of Peru and Marlow soils are together in a repeating pattern and are individually large enough to be mapped separately. Because of the objective of the survey, however, mapping them separately was not considered necessary.

Typically, the Peru soil is covered by a thin layer of slightly decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 3 inches, very dark grayish brown gravelly fine sandy loam

Subsoil:
3 to 7 inches, dark brown gravelly fine sandy loam
7 to 17 inches, mottled, dark yellowish brown gravelly fine sandy loam

Substratum:
17 to 29 inches, mottled, firm, light olive brown gravelly sandy loam
29 to 60 inches, mottled, very firm, light olive brown gravelly sandy loam

Typically, the Marlow soil is covered by a thin layer of slightly decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 4 inches, dark brown fine sandy loam

Subsoil:
4 to 13 inches, dark yellowish brown fine sandy loam
13 to 23 inches, light olive brown fine sandy loam

Substratum:
23 to 60 inches, very firm, olive gravelly fine sandy loam

Included in this unit in mapping are small areas of the well drained Berkshire soils, the somewhat poorly drained and poorly drained Brayton soils, and the moderately well drained Sunapee soils. Also included, throughout the unit, are areas where stones cover more than 3 percent of the surface. Berkshire soils are in landscape positions similar to those of the Marlow soil. Brayton soils are in depressions and drainageways. Sunapee soils are in landscape positions similar to those of the Peru soil.

Important soil properties—

Permeability: Moderate in the subsoil and moderately slow or slow in the substratum
Available water capacity: Moderate
Soil reaction: Extremely acid to moderately acid
Depth to dense basal till: Peru—16 to 33 inches; Marlow—14 to 35 inches
Depth to bedrock: More than 60 inches
Water table: Peru—perched at a depth of 1.5 to 2.5 feet in late fall, in winter, and in early spring; Marlow—perched at a depth of 2.0 to 3.5 feet in spring
Root zone: Typically extends to the bottom of the subsoil and is restricted by the firm and very firm substratum
Potential for frost action: Peru—high; Marlow—moderate

Most areas of this unit are wooded. Some areas have been cleared and are used for upland wildlife openings and unimproved pasture.

Because of the stones on the surface, this unit is unsuited to hay and improved pasture. The stones must be removed before the unit is suitable for these uses. Erosion is a hazard in the rolling and hilly areas, and the slope is a limitation. Some areas are used as unimproved pasture. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, and weed and brush control increase the quantity and quality of forage and help to control erosion. Operating equipment up and down the slope helps to overcome the equipment limitation caused by the slope.

This unit is unsuited to cultivated crops unless the stones are cleared from the surface. If cleared of stones, undulating areas are well suited, rolling areas are suited, and hilly areas are unsuited. The seasonal high water table and the slope are limitations, and erosion is a hazard. Tillage and harvesting are often delayed because of wetness. Subsurface drainage can be used to lower the seasonal high water table if a suitable outlet is available. Growing cover crops, including grasses and legumes in the cropping system, applying a system of conservation tillage that leaves some or all of the crop residue on the surface, and tilling on the contour help to control erosion. Diversion ditches help to control runoff and erosion.

The potential productivity of this unit is moderate for sugar maple and high for eastern white pine. Windthrow is a hazard on the Peru soils. In the undulating and rolling areas, few limitations affect timber production and harvesting. Erosion is a hazard. The firm substratum and the seasonal high water table increase the erosion hazard. The main problem affecting timber production and harvesting in the hilly areas is the equipment limitation. Logging during winter or during dry periods, constructing skid trails and logging roads across the slope and on the better drained soils, and installing culverts and log-reinforced water bars as necessary help to control erosion. Ditching around landings and using gravel help to minimize muddy conditions. Operating logging equipment in the less steep areas of the unit minimizes the equipment limitation caused by the slope. The firm substratum and the seasonal high water table restrict the rooting depth, resulting in the uprooting of some trees during windy periods. Selection or shelterwood cutting minimizes the windthrow hazard. Included areas where stones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones.

Sugar maple is the dominant tree species in the climax community. Red spruce is a minor component of the climax community. White ash, yellow birch, black cherry and red maple are the dominant subclimax species. These species are highly competitive and persistent. White pine and aspen are common pioneer species but do not persist well. Depending upon the type of management, the vegetation community can tend toward either the pioneer and subclimax successional stages or the climax. Striped maple, hobblebush, and raspberry are the dominant shrub species. Common ground flora are hayscented fern, spinulose wood fern, sessile bellwort, and wood sorrel. Wet site indicators include sensitive fern, false hellebore, purple avens, wood horsetail, tall meadow rue, wood nettle, and cinnamon fern. They are in the moderately well drained and poorly drained areas where surface seeps occur.

The slope of both soils and the seasonal high water table in the Peru soil limit the use of this unit as a site for dwellings with basements. Extensive land shaping and grading are needed to overcome the slope. Installing footing drains, sealing foundations, and land grading that diverts surface water away from the dwellings help to prevent wetness in basements.

Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing a plant cover in disturbed areas during or soon after construction help to control erosion. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for dwellings.

The seasonal high water table in the Peru soil, the moderately slow or slow permeability in the substratum of both soils, and the slope of both soils limit the use of this unit as a site for septic tank absorption fields. Special designs such as installing diversions and drains to intercept water from the higher areas, increasing the size of the absorption field, and installing the effluent lines on the contour are needed to overcome these limitations. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for septic tank absorption fields.

The potential for frost action and the slope limit the use of this unit as a site for local roads and streets. The seasonal high water table also is a limitation. Constructing the roads on fill material and installing ditches and culverts help to overcome the wetness. Providing coarser textured base material helps to prevent the damage caused by frost action. Adapting the design of the roads to the natural slope or land shaping and grading help to overcome the slope. Extensive land shaping and grading are necessary in some areas.

The seasonal high water table in the Peru soil limits the use of this unit as a site for camping and picknicking areas and for paths and trails. The slope is a limitation in hilly areas. Erosion is a hazard. Adding gravel to the site helps to overcome the wetness. Using log-reinforced water bars, puncheon, and turnpiking on foot trails and establishing the trails on ridgelines and across the slope help to control erosion and overcome the slope.

The capability subclass is VIs.

205D—Tunbridge-Berkshire-Marlow association, hilly, rocky. This unit consists of soils on back slopes, shoulders, and tops of mountains, knolls, hills, and ridges. Slopes range from 8 to 45 percent. This unit generally is at elevations between 1,200 and 2,400 feet. Areas are irregular in shape and range from 20 to 600 acres in size. Stones cover less than 1 percent to 3 percent of the surface and typically are 5 to 25 feet apart.

This unit is about 45 percent moderately deep, well drained Tunbridge soil; 25 percent very deep, well drained Berkshire soil; 15 percent well drained Marlow soil, which is shallow or moderately deep to dense basal till and very deep to bedrock; and 14 percent other soils. Rock outcrops make up about 1 percent of the unit. The Tunbridge soil is on shoulders and hummocks or benches and on the flanks of the outcrops, and the Berkshire and Marlow soils are between the outcrops. The areas of Tunbridge, Berkshire, and Marlow soils are together in a repeating pattern and are individually large enough to be mapped separately. Because of the objective of the survey, however, mapping them separately was not considered necessary.

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

Surface layer:
0 to 2 inches, very dark grayish brown gravelly fine sandy loam

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

Subsoil:
4 to 16 inches, strong brown very stony fine sandy loam
16 to 25 inches, brown very stony fine sandy loam
25 to 35 inches, yellowish brown stony fine sandy loam

Bedrock:
35 inches, schist

Typically, the Berkshire soil is covered by a thin layer of undecomposed and moderately decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 1 inch, black gravelly fine sandy loam

Subsurface layer:
1 to 5 inches, brown gravelly fine sandy loam

Subsoil:
5 to 7 inches, yellowish red gravelly fine sandy loam
7 to 11 inches, dark yellowish brown gravelly fine sandy loam
11 to 22 inches, olive brown gravelly fine sandy loam
22 to 32 inches, light olive brown gravelly fine sandy loam

Substratum:
32 to 60 inches, olive gravelly fine sandy loam

Typically, the Marlow soil is covered by a thin layer of slightly decomposed leaves, needles, and twigs.

Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 4 inches, dark brown fine sandy loam

Subsoil:
4 to 13 inches, dark yellowish brown fine sandy loam
13 to 23 inches, light olive brown fine sandy loam

Substratum:
23 to 60 inches, very firm, olive gravelly fine sandy loam

Included in this unit in mapping are small areas of the very the deep, somewhat poorly drained and poorly drained Brayton soils; the shallow, somewhat excessively drained Lyman soils; and the moderately well drained Peru and Sunapee soils. Also included, throughout the unit, are soils that have a substratum of loamy sand and areas where stones cover more than 3 percent of the surface. Brayton soils are in depressions and drainageways. Lyman soils are near rock outcrops. Peru and Sunapee soils are in drainageways and on toe slopes.

Important soil properties—

Permeability: Tunbridge and Berkshire—moderate or moderately rapid; Marlow—moderate in the subsoil and moderately slow or slow in the substratum
Available water capacity: Moderate
Soil reaction: Extremely acid to moderately
Depth to dense basal till: Berkshire—more than 60 inches; Marlow—14 to 35 inches
Depth to bedrock: Tunbridge—20 to 40 inches; Berkshire and Marlow—more than 60 inches
Water table: Tunbridge and Berkshire—at a depth of least 60 inches; Marlow—perched at a depth of 2.0 to 3.5 feet in spring
Root zone: Tunbridge—typically extends to bedrock; Berkshire—typically extends to a depth of more than 60 inches; Marlow—typically extends to the top of the substratum
Potential for frost action: Moderate

Most areas of this unit are logged and used for forest recreation.

Because of the stones on the surface, this unit is unsuited to hay and improved pasture. The stones must be removed before the unit is suitable for these uses. Erosion is a hazard. The slope and rock outcrops are limitations. Some areas are used as unimproved pasture. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, and weed and brush control increase the quantity and quality of forage and help to control erosion. Operating equipment in less hilly areas of the unit and up and down the slope helps to overcome the equipment limitation caused by the slope.

This unit is unsuited to cultivated crops because of the slope, stones on the surface, and the exposed bedrock. The less sloping areas are poorly suited to cultivation if cleared of surface stones. Erosion is a hazard. Using the unit for long-term hay and pasture is effective in controlling erosion.

The potential productivity of this unit is moderate for sugar maple and very high for eastern white pine. In the rolling areas few limitations affect timber production and harvesting. Erosion is a hazard. In the steeper areas the main limitation affecting timber production and harvesting is the equipment limitation. Constructing skid trails and logging roads across the slope and installing culverts and water bars as necessary help to control erosion. Harvesting during winter or during dry periods reduces the hazards of erosion and seepage between the outcrops. Operating logging equipment in the less steep areas of the unit minimizes the equipment limitation caused by the slope. In many places rock outcrops interfere with the operation of equipment. Planning logging roads to avoid rock outcrops reduces the expense of construction. Included areas where stones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones.

Sugar maple and beech are the dominant tree species in the climax community. A strongly associated component of red spruce is on the moderately deep Tunbridge soils. The subclimax community is persistent and consists primarily of red maple. Yellow birch and white ash commonly are in the early second succession but do not persist well. Forest management practices that favor sugar maple, beech, and red spruce are most successful. Striped maple, hobblebush, raspberry, red osier dogwood, and beaked hazelnut are dominant shrub species. Red elderberry, hop hornbeam, and smooth gooseberry occur occasionally. The dominant ground flora are hayscented fern, sessile bellwort, shining club moss, wood sorrel, spinulose wood fern, and Canada mayflower. Shrubs and ferns strongly compete with desired trees in openings created by logging.

The slope of all three soils and the depth to bedrock in the Tunbridge soil limit the use of this unit as a site for dwellings with basements. Extensive land shaping and grading are needed to overcome this limitation. Land grading can divert surface water away from the dwellings and thus helps to prevent wetness in basements. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant

cover as possible and establishing a plant cover in disturbed areas during or soon after construction help to control erosion. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for dwellings with basements.

This unit is generally unsuitable as a site for septic tank absorption fields because of the slope of all three soils, the depth to bedrock in the Tunbridge soil, and the moderately slow or slow permeability in the substratum of the Marlow soil. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use. If the less sloping areas are used as sites for the absorption fields, special designs are still needed to overcome the depth to bedrock and the slow permeability.

The slope limits the use of this unit as a site for local roads and streets. The depth to bedrock in the moderately deep Tunbridge soil, the seasonal high water table in the Marlow soil, and the potential for frost action in all three soils also are limitations. Careful planning of road grades and locations helps to avoid the need for removal of the bedrock. In some areas blasting is necessary to remove the bedrock. Installing drainage systems and providing coarser textured base material help to overcome the wetness and prevent the damage caused by frost action. Adapting the design of the roads to the natural slope, land shaping andgrading, and blasting help to overcome the slope.

The slope limits the use of this unit as a site for recreational development. Erosion and the seasonal high water table in the Marlow soil also are limitations. Well drained sites for camping and picknicking areas can be located by onsite investigation. Constructing log-reinforced water bars and steps on foot trails and establishing the trails on ridgelines and across the slope help to control erosion and overcome the slope.

The capability subclass is VIIs.

213E—Glebe-Stratton association, very hilly, very rocky. This unit consists of soils on the top and sides of mountains. Slopes range from 25 to 45 percent. This unit is generally at an elevations of more than 2,500 feet. The topography is slightly convex and mainly smooth, but it is slightly hummocked around shallow soils. Areas are irregular in shape and range from 70 to 800 acres in size. Stones cover less than 1 percent to 3 percent of the surface and typically are 5 to 25 feet apart.

This unit is about 70 percent moderately deep, well drained Glebe soil; 20 percent shallow, well drained Stratton soil; and 5 percent other soils. Rock outcrops make up about 5 percent of this unit. The Stratton soils are at slightly higher positions on the landscape than the Glebe soils. The areas of Glebe and Stratton soils are together in a repeating pattern and are individually large enough to be mapped separately. Because of the objective of the survey, however, mapping them separately was not considered necessary.

Typically, the Glebe soil is covered by a thin layer of slightly decomposed and moderately decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 4 inches, gray gravelly sandy loam

Subsoil:
4 to 8 inches, very dark gray fine sandy loam
8 to 18 inches, strong brown gravelly fine sandy loam

Substratum:
18 to 24 inches, light olive brown gravelly sandy loam

Bedrock:
24 inches, schist

Typically, the Stratton soil is covered by a thin layer of slightly decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 5 inches, very dark gray very cobbly loam

Subsoil:
5 to 18 inches, very dark gray very cobbly loam

Bedrock:
18 inches, schist

Included in this unit in mapping are small areas of the well drained, shallow Killington soils and the well drained to excessively drained, very shallow to moderately deep Ricker soils. Also included are areas of well drained, deep and very deep soils in troughs. Ricker and Killington soils are in landscape positions similar to those of the Stratton soil.

Important soil properties—

Permeability: Glebe—moderately rapid; Stratton—moderate or moderately rapid
Available water capacity: Glebe—high; Stratton—low
Soil reaction: Extremely acid to strongly acid
Depth to bedrock: Glebe—20 to 40 inches; Stratton—10 to 20 inches
Depth to the water table: At least 60 inches
Root zone: Typically extends to bedrock
Potential for frost action: Glebe—high; Stratton—moderate

Most areas of this unit are wooded. Some areas at ower elevations are logged. Hiking trails are along some ridgelines.

These soils are unsuited to hay and pasture. Erosion is a hazard. The slope, the depth to bedrock in the shallow soils, and stones on the surface are limitations.

This unit is unsuited to cultivated crops because of low soil temperatures, the slope, the exposed bedrock, and stones on the surface. Erosion is a hazard.

The potential productivity of this unit is moderate for red spruce. Generally producing and harvesting timber on this unit is not economically feasible. Erosion and windthrow are hazards. The main problem affecting timber production and harvesting is the equipment limitation. The low soil temperature also is a management concern.

Red spruce and balsam fir are the dominant tree species in the climax community. Paper birch and yellow birch are the important early successional tree species. The unit usually quickly succeeds to the climax community of red spruce and balsam fir. Mountain ash is the dominant shrub. Other species are pin cherry, hobblebush, and mountain maple. Ground flora are dense and dominated by spinulose wood fern, shining club moss, common wood sorrel, bunchberry, asters and clintonia. Where openings are created by logging operations, mountain ash strongly competes with desired timber species.

This unit is generally unsuitable as a site for dwellings with basements because of the slope and the depth to bedrock. Onsite investigation is needed to identify adjacent areas that may be better suited to this use.

This unit is generally unsuitable as a site for septic tank absorption fields because of the slope and the depth to bedrock. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use.

The potential for frost action and the slope limit the use of this unit as a site for local roads and streets. The depth to bedrock in the shallow Stratton soil also is a limitation. Careful planning of road grades and locations helps to avoid the need for removal of the bedrock. In some areas blasting is necessary to remove the bedrock. Providing coarser textured base material helps to prevent the damage caused by frost action. Adapting road design to the slope and blasting help to overcome the slope.

This unit is poorly suited to camping and picnic areas and paths and trails because of the slope, the fragile nature of the soils, and stones on the surface. Erosion is a hazard. Constructing log- or stone-reinforced water bars on foot trails and establishing the trails on mountaintops and ridgelines and across the slope help to control erosion and overcome the slope.

The capability subclass is VIIs.

221F—Tunbridge-Berkshire association, very steep, very stony. This unit consists of soils on toe slopes and side slopes adjacent to major mountain streams in steep valleys. Slopes range from 35 to 75 percent. This unit generally is at elevations between 1,200 and 2,000 feet. Areas are irregular in shape and range from 8 to 60 acres in size. Stones cover less than 1 percent to 3 percent of the surface and typically are 5 to 25 feet apart.

This unit is about 55 percent moderately deep, well drained Tunbridge soil; 30 percent very deep, well drained Berkshire soil; and 15 percent other soils. The Tunbridge soil is on the upper side slopes, and the Berkshire soil is on back slopes and toe slopes. The areas of Tunbridge and Berkshire soils are together in a repeating pattern and are individually large enough to be mapped separately. Because of the objective of the survey, however, mapping them separately was not considered necessary.

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

Surface layer:
0 to 2 inches, very dark grayish brown gravelly fine sandy loam

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

Subsoil:
4 to 16 inches, strong brown very stony fine sandy loam
16 to 25 inches, brown very stony fine sandy loam
25 to 35 inches, yellowish brown stony fine sandy loam

Bedrock:
35 inches, schist

Typically, the Berkshire soil is covered by a thin layer of undecomposed and moderately decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 1 inch, black gravelly fine sandy loam

Subsurface layer:
1 to 5 inches, brown gravelly fine sandy loam

Subsoil:
5 to 7 inches, yellowish red gravelly fine sandy loam
7 to 11 inches, dark yellowish brown gravelly fine sandy loam
11 to 22 inches, olive brown gravelly fine sandy loam
22 to 32 inches, light olive brown gravelly fine sandy loam

Substratum:
32 to 60 inches, olive gravelly fine sandy loam

Included in this unit in mapping are small areas of the shallow, somewhat excessively drained Lyman soils; the very deep, well drained Marlow soils; and the very deep, moderately well drained Sunapee soils. Also included, throughout the unit, are soils that have a substratum of loamy sand and areas where stones cover more than 3 percent of the surface. Lyman soils are near rock outcrops. Sunapee soils are in depressions and drainageways. Marlow soils are in landscape positions similar to those of the Berkshire soil.

Important soil properties—

Permeability: Moderate or moderately rapid
Available water capacity: Moderate
Soil reaction: Extremely acid to moderately
Depth to bedrock: Tunbridge—20 to 40 inches; Berkshire—more than 60 inches
Depth to the water table: At least 60 inches
Root zone: Tunbridge—typically extends to bedrock; Berkshire—typically extends to a depth of more than 60 inches
Potential for frost action: Moderate

Most areas of this unit are used as woodland.

This unit is unsuited to hay and improved pasture. Some areas have been used for unimproved pasture. The use of equipment is limited by rock outcrops, the slope, and stones on the surface.

This unit is unsuited to cultivated crops because of the slope and the stones on the surface.

The potential productivity of this unit is moderate for sugar maple and very high for eastern white pine. Erosion and windthrow are hazards. This unit generally is not suitable for harvesting timber. On those areas where timber is harvested, the main limitation is the equipment limitation. Constructing skid trails and logging roads across the slope and installing culverts and water bars as necessary help to control erosion. Harvesting during winter or during dry periods reduces the hazard of erosion. Operating logging equipment on adjacent less steep areas minimizes the potential for mass failure and the equipment limitation caused by the slope. In some areas rock outcrops interfere with the operation of equipment. The depth to bedrock in the moderately deep Tunbridge soil restricts the rooting depth and the depth to which precipitation percolates. As a result, mass wasting can occur during wet periods and some trees can be uprooted during windy periods. Included areas where stones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones.

This unit is generally unsuitable as a site for dwellings with basements because of the slope of both soils and the depth to bedrock in the moderately deep Tunbridge soil. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use.

This unit is generally unsuitable as a site for septic tank absorption fields because of the slope of both soils and the depth to bedrock in the moderately deep Tunbridge soil. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use.

The slope limits the use of this unit as a site for local roads and streets. The depth to bedrock in the Tunbridge soil and the potential for frost action in both soils also are limitations. Careful planning of road grades and locations helps to avoid the need for removal of the bedrock. Providing coarser textured base material helps to prevent the damage caused by frost action. Adapting road design to the slope and blasting help to overcome the slope.

This unit is poorly suited to recreational facilities because of the slope. Stones on the surface and erosion also are limitations. Constructing log-reinforced water bars and steps on foot trails and establishing the trails on ridgelines and across the slope help to control erosion and overcome the slope.

The capability subclass is VIIs.

402D—Tunbridge-Lyman association, hilly, rocky. This unit consists of soils on back slopes of mountains, hills, and ridges. Slopes range from 3 to 35 percent. This unit generally is at an elevation between 2,000 and 2,500 feet. Areas are irregular in shape and range from 7 to 130 acres in size. Stones cover less than 1 percent to 3 percent of the surface and typically are 5 to 25 feet apart.

This unit is about 60 percent moderately deep well drained Tunbridge soil; 30 percent shallow, well drained Lyman soil; and 9 percent other soils. Rock outcrops make up about 1 percent of the unit. The Tunbridge soil is in troughs between the outcrops, and the Lyman soil is near the outcrops. The areas of Tunbridge and Lyman soils are together in a repeating pattern and are individually large enough to be mapped separately.

Because of the objective of the survey, however, mapping them separately was not considered necessary.

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

Surface layer:
0 to 2 inches, very dark grayish brown gravelly fine sandy loam

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

Subsoil:
4 to 16 inches, strong brown very stony fine sandy loam
16 to 25 inches, brown very stony fine sandy loam
25 to 35 inches, yellowish brown stony fine sandy loam

Bedrock:
35 inches, schist

Typically, the Lyman soil is covered by a thin layer of undecomposed and moderately decomposed leaves, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 4 inches, very dark gray fine sandy loam

Subsoil:
4 to 6 inches, dark brown fine sandy loam
6 to 11 inches, brown fine sandy loam

Bedrock:
11 inches, schist

Included in this unit in mapping are small areas of the very deep, well drained Berkshire soils. Also included, throughout the unit, are soils that are more than 35 percent rock fragments and areas where stones cover more than 3 percent of the surface. The Berkshire soils are in troughs between rock outcrops.

Important soil properties—

Permeability: Tunbridge—moderate or moderately rapid; Lyman—moderately rapid
Available water capacity: Tunbridge—moderate; Lyman—low or very low
Soil reaction: Extremely acid to moderately acid
Depth to bedrock: Tunbridge—20 to 40 inches; Lyman—8 to 20 inches
Depth to the water table: At least 60 inches
Root zone: Typically extends to bedrock
Potential for frost action: Moderate

Most areas of this unit are forested and logged. Some areas are used for hiking trails and other low intensity recreation developments.

Because of the stones on the surface, this unit is unsuited to hay and improved pasture. The stones must be removed before the unit is suitable for these uses. Some areas are used as unimproved pasture. The use of equipment is limited by rock outcrops and stones on the surface. The slope is a limitation. In some areas the unit is droughty.

This unit is unsuited to cultivated crops because of rock outcrops, stones on the surface, and the slope. Erosion is a hazard. Using the unit for long-term hay and pasture is effective in controlling erosion.

The potential productivity of this unit is moderate for sugar maple and high for eastern white pine. Erosion, seedling mortality, and windthrow are hazards. The main problem affecting timber production and harvesting is the equipment limitation. Constructing skid trails and logging roads across the slope and installing culverts and water bars as necessary help to control erosion. Harvesting during winter or during dry periods reduces the hazard of erosion. Operating logging equipment in the less steep areas of the unit minimizes the equipment limitation caused by the slope. In some areas rock outcrops interfere with the operation of equipment. Harvesting during periods of snow cover reduces the erosion hazard and minimizes the equipment limitation caused by the slope and rock outcrops. Droughtiness, which results from the very low available water capacity of the Lyman soil, causes a high rate of seedling mortality. On south- and west-facing slopes, complete removal of the overstory increases seedling mortality and the erosion hazard. Shelterwood and selection cutting help reduce seedling mortality for regeneration of volunteer species. The rate of seedling mortality for planted species can be reduced by planting seedlings in early spring, thus allowing them to obtain moisture from spring and early summer rains. The depth to bedrock restricts the rooting depth, resulting in the uprooting of some trees during windy periods. Selection or shelterwood cutting minimizes the windthrow hazard. Included areas where stones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones and rock outcrops.

Sugar maple and American beech are dominant members of the climax community. Red spruce is strongly associated, as well. Red spruce is dominant on the Lyman soil and around outcrops. Hemlock is

associated with red spruce on shallow soils. Yellow birch, paper birch, and white ash are the major early successional species, but they do not persist well. After fields are abandoned or areas have beencleared by logging operations, forest succession is strong toward the climax community of sugar maple, beech, and red spruce. Striped maple, hobblebush, honeysuckle, red-osier dogweed, mountain ash, and pin cherry are the major shrub species. The dominant ground flora include spinulose, wood fern, hayscented fern, shining club moss, wood sorrel, lady fern, christmas fern, and mosses.

This unit is generally unsuitable as a site for dwellings with basements because of the slope and the depth to bedrock. Onsite investigation is needed to identify areas of the moderately deep Tunbridge soil or adjacent areas that may be better suited to this use.

This unit is generally unsuitable as a site for septic tank absorption fields because of the slope and the depth to bedrock. Onsite investigation is needed to identify adjacent areas that may be better suited to this use.

The depth to bedrock in the shallow Lyman soil and the slope of both soils limit the use of this unit as a site for local roads and streets. The potential for frost action also is a limitation. Careful planning of road grades and locations helps to avoid the need for removal of the bedrock. In some areas blasting is necessary to remove rock. Providing coarser textured base material helps to prevent the damage caused by frost action. Adapting road design to the slope and blasting help to overcome the slope.

The depth to bedrock in the shallow Lyman soil and the slope limit the use of this unit as a site for camping and picknicking areas and for paths and trails. Erosion is a hazard. Constructing log-reinforced water bars on foot trails and establishing the trails on ridgelines and across the slope help to control erosion and overcome the slope.

The capability subclass is VIs in areas of the Tunbridge soil and VIIs in areas of the the Lyman soil.

403C—Brayton-Cabot-Pinnebog association, rolling, very stony. This unit consists of rolling soils in depressions and drainageways, on broad flats, and on toe slopes and foot slopes of knolls, hills, and ridges. Slopes range from 0 to 15 percent. This unit generally is at elevations between 1,200 and 2,300 feet. The Pinnebog soil is ponded for long periods in late fall, in winter, in spring, and in early summer. Areas of the unit are irregular in shape and range from 7 to 350 acres in size. Stones cover less than 1 percent to 3 percent of the surface and are typically 5 to 25 feet apart. The Brayton and Cabot soils are shallow or moderately deep to dense basal till and very deep to bedrock. The Pinnebog soil is very deep to bedrock.

This unit is about 35 percent somewhat poorly drained and poorly drained Brayton soil, 30 percent somewhat poorly and poorly drained Cabot soil, 25 percent very poorly drained Pinnebog soil, and 10 percent other soils. The Brayton soil is in convex areas. It is slightly higher on the landscape than the Cabot and Pinnebog soils. The areas of Brayton, Cabot, and Pinnebog soils are in a repeating pattern and are individually large enough to be mapped separately. Because of the objective of the survey, however, mapping them separately was not considered necessary.

Typically, the Brayton soil is covered by a layer of slightly decomposed and moderately decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 7 inches, black loam

Subsoil:
7 to 15 inches, mottled, olive gray gravelly sandy loam

Substratum:
15 to 60 inches, mottled, very firm, olive gray gravelly sandy loam

Typically, the Cabot soil is covered by a layer of slightly decomposed and moderately decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 6 inches, very dark gray gravelly fine sandy loam

Subsoil:
6 to 12 inches, mottled, grayish brown fine sandy loam

Substratum:
12 to 60 inches, mottled, very firm, olive gray gravelly fine sandy loam

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

0 to 13 inches, black muck
13 to 35 inches, very dark gray, black and dark reddish brown muck
35 to 60 inches, black, reddish brown and dark reddish brown mucky peat

Included in this unit in mapping are small areas of the poorly drained Lyme soils, the very poorly drained Peacham soils, and the moderately well drained Peru soils. Also included, throughout the unit, are areas where stones cover more than 3 percent of the surface. Lyme and Peacham soils are in landscape positions similar to those of the Cabot soil. Peru soils are on knolls and in convex areas.

Important soil properties—

Permeability: Brayton—moderate in the subsoil and slow or moderately slow in the substratum; Cabot—moderate in the subsoil and slow or very slow in the substratum; Pinnebog—moderately slow to moderately rapid

Available water capacity: Brayton and Cabot—moderate; Pinnebog—high

Soil reaction: Brayton—very strongly acid to moderately acid in the surface layer, strongly acid to slightly acid in the subsoil, and moderately acid to neutral in the substratum; Cabot—strongly acid to neutral in the surface layer and subsoil and moderately acid to neutral in the substratum; Pinnebog—moderately acid to mildly alkaline

Depth to dense basal till: Brayton—10 to 25 inches; Cabot—12 to 24 inches; Pinnebog—more than 60 inches

Depth to bedrock: More than 60 inches

Water table: Brayton—perched within a depth of 1 foot in late fall, in winter, and in spring; Cabot—perched within a depth of 2 feet in late fall, in winter, and in spring; Pinnebog—an apparent above the surface or within a depth of 1 foot in fall, winter, spring, and early summer

Root zone: Brayton and Cabot—typically extends to the firm and very firm substratum; Pinnebog—typically restricted to the surface tier by the apparent water table

Potential for frost action: High

Most areas of this unit are forested. This unit is used for logging and wetland wildlife habitat.

Because of the stones on the surface, this unit is unsuited to hay and improved pasture. The stones must be removed before the unit is suitable for these uses. Some areas are used as unimproved pasture. Erosion is a hazard in rolling areas. The seasonal high water table is a limitation. In some areas excessive water can be removed by surface ditches or tile drains if a suitable outlet is available. Wetness limits the choice of pasture plants and the period of cutting or grazing and increases the risk of winterkill. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, and weed and brush control increase the quantity and quality of forage and help to control erosion.

The Brayton and Cabot soils are unsuited to cultivated crops unless the stones are cleared from the surface. If cleared of stones, these soils are poorly suited to cultivation. The Pinnebog soil is generally unsuited to cultivation because of the ponding caused by the seasonal high water table. The seasonal high water table in the Brayton and Cabot soils also is a limitation. Erosion is a hazard on rolling areas. Tillage and harvesting are often delayed because of wetness. Subsurface drainage can be used to lower the seasonal high water table if a suitable outlet is available. Growing cover crops, including grasses and legumes in the cropping system, applying a system of conservation tillage that leaves some or all of the crop residue on the surface, and tilling across the slope or on the contour help to control erosion. Diversion ditches help to control runoff and erosion.

The potential productivity of this unit is moderate for sugar maple and red 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 wetness caused by the seasonal high water table and the low strength of the organic layers. Logging activities are more efficiently carried out when the soils are frozen or snow covered. Heavy logging equipment can become mired in the soils with low strength. Heavy logging equipment used on this unit in summer will compact the wet soils and cause surface seeps and small streams to develop. The vegetation on severely compacted roads reverts to the grass/sedge community. The seasonal high water table and the firm substratum in the Brayton and Cabot soils restrict the rooting depth, resulting in the uprooting of some trees during windy periods. Selection or shelterwood cutting minimizes the windthrow hazard. Included areas where stones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones.

Sugar maple and red spruce are the dominant tree species in the climax community. Balsam fir, hemlock, and beech also are common. Early successional species such as red maple and yellow birch are the primary subclimax species in the forest community. White pine, paper birch, big-toothed and trembling aspen, and black cherry are in minor amounts as pioneer species. After fields are abandoned or areas have been cleared by logging operations, the forest tends to succeed to a mixed hardwood/softwood community. Striped maple, pin cherry, and beaked hazelnut are the dominant shrub species on the drier

areas of this unit. Alder and willow are on the very wet, swampy areas. Hobblebush, red- osier dogwood, smooth gooseberry, serviceberry, and raspberry are in some areas. More than 80 ground flora species are common in this unit. Purple or yellow avens, royal fern, ostrich fern, wood horsetail, early and tall meadow rue, stinging, slender and wood nettles, marsh marigolds, bugleweed, cut-leafed water horehound, and jewelweed (touch-me-nots) are indicators of the wetter areas of this unit.

This unit is generally unsuitable as a site for dwellings with basements because of the seasonal high water table. Ponding and subsidence of the organic layers in areas of the Pinnebog soil are hazards. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use.

This unit is generally unsuitable as a site for septic tank absorption fields because of the seasonal high water table in the Brayton and Cabot soils, the slow or very slow permeability in the substratum of the Brayton and Cabot soils, and ponding on the Pinnebog soil. Subsidence of the organic layers in the Pinnebog soil is a hazard. Onsite investigation is needed to identify included or adjacent areas that may be better suited as septic tank absorption fields.

The seasonal high water table and the potential for frost action in all three soils and ponding on the Pinnebog soil limit the use of this unit as a site for local roads and streets. Subsidence of the organic layers in the Pinnebog soil is a hazard. Constructing the roads on raised fill material and installing drainage systems help to overcome the wetness. Providing coarser textured base material helps to prevent the damage caused by frost action and subsidence.

This unit is poorly suited to trails, picnic areas, and camping areas because of the seasonal high water table and the ponding hazard of the Pinnebog soils. Footpaths and trails require many stepping stones, puncheon, and building up of the trail tread with firm material (turnpiking) to overcome the wetness caused by the seasonal high water table. Camping and picknicking areas require excavation of the surface layer and replacement with coarse textured fill material. Drainage ditches help to remove surface water.

The capability subclass is VIIs in areas of the Brayton soil, VIs in areas of the Cabot soil, and Vw in areas of the Pinnebog soil.

405D—Tunbridge-Berkshire association, hilly, very rocky. This unit consists of soils on foot slopes, back slopes, and shoulders of mountains, hills, and ridges. This unit generally at an elevation between 1,200 and 2,000 feet. Areas are irregular in shape and range from 5 to 350 acres in size. Stones cover less than 1 percent to 3 percent of the surface and typically are 5 to 25 feet apart.

This unit is about 45 percent moderately deep, well drained Tunbridge soil; 35 percent very deep, well drained Berkshire soil; and 20 percent other soils. The Tunbridge soil is on the upper part of the slopes, near hummocks, or on bench faces. The Berkshire soil is between the hummocks, on bench tops, and generally on the lower part of the slopes. The areas of Tunbridge and Berkshire soils are together in a repeating pattern and are individually large enough to be mapped separately. Because of the objective of the survey, however, mapping them separately was not considered necessary.

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

Surface layer:
0 to 2 inches, very dark grayish brown gravelly fine sandy loam

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

Subsoil:
4 to 16 inches, strong brown very stony fine sandy loam
16 to 25 inches, brown very stony fine sandy loam
25 to 35 inches, yellowish brown stony fine sandy loam

Bedrock:
35 inches, schist

Typically, the Berkshire soil is covered by a thin layer of undecomposed and moderately decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 1 inch, black gravelly fine sandy loam

Subsurface layer:
1 to 5 inches, brown gravelly fine sandy loam

Subsoil:
5 to 7 inches, yellowish red gravelly fine sandy loam
7 to 11 inches, dark yellowish brown gravelly fine sandy loam
11 to 22 inches, olive brown gravelly fine sandy loam
22 to 32 inches, light olive brown gravelly fine sandy loam

Substratum:
32 to 60 inches, olive gravelly fine sandy loam

Included in this unit in mapping are small areas of the shallow, somewhat excessively drained Lyman soils; the very deep, well drained Marlow soils; and the very deep, moderately well drained Sunapee soils. Also included, throughout the unit, are soils that have a substratum of loamy sand and areas where stones cover more than 3 percent of the surface. Lyman soils are near rock outcrops. Sunapee soils are in depressions and drainageways. Marlow soils are in landscape positions similar to those of the Berkshire soil.

Important soil properties—

Permeability: Moderate or moderately rapid
Available water capacity: Moderate
Soil reaction: Extremely acid to moderately
Depth to bedrock: Tunbridge—20 to 40 inches
Berkshire—more than 60 inches
Depth to the water table: At least 60 inches
Root zone: Tunbridge—typically extends to bedrock;
Berkshire—typically extends to a depth of more than 60 inches
Potential for frost action: Moderate

Most areas of this unit are forested. This unit is used for logging, wildlife habitat, and forest recreation.

Because of the stones on the surface, this unit is unsuited to hay and improved pasture. The stones must be removed before the unit is suitable for these uses. Rock outcrops and the slope are limitations. Erosion is a hazard. Some areas are used as unimproved pasture. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, and weed and brush control increase the quantity and quality of forage and to control erosion. Operating equipment up and down the slope helps to overcome the equipment limitation caused by the slope.

This unit is generally unsuited to cultivated crops because of the slope and the stones on the surface. If cleared of stones, the less sloping areas are poorly suited. In areas that have been cleared, the slope and the exposed bedrock are limitations. Erosion is a hazard. Growing cover crops, including grasses and legumes in the cropping system, applying a system of conservation tillage that leaves some or all of the crop residue on the surface, and tilling on the contour help to control erosion. The exposed bedrock and the included areas of shallow soils interfere with tillage.

The potential productivity of this unit is moderate for sugar maple and very high for eastern white pine. In the less sloping areas, few limitations affect timber production and harvesting. These areas are suitable for roads, trails, and landings because the soils are stable and dry. In the hilly areas, erosion is a hazard and the main limitation affecting timber production and harvesting is the equipment limitation. Ferns and shrubs can be abundant and restrict tree regeneration in areas where openings in the forest canopy have been made. Constructing skid trails and logging roads across the slope and installing culverts and water bars as necessary help to control erosion. Harvesting during winter or during dry periods reduces the hazard of erosion. Operating logging equipment in the less steep areas of the unit minimizes the equipment limitation caused by the slope. In some areas rock outcrops interfere with the operation of equipment. Planning logging roads to avoid rock outcrops reduces the expense of construction. Included areas where stones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones.

Sugar maple and beech are the dominant tree species in the climax community. Red spruce is common in the climax community. Red spruce and hemlock can dominate in a timber stand on the Tunbridge and the shallow Lyman soils. Red maple is the primary successional species, but yellow birch, white ash, white pine, black cherry, and big tooth aspen also are present. After fields are abandoned or areas have been opened by logging operations, trees succeed to a climax community of sugar maple and beech and a few areas of red spruce. Striped maple, hobblebush, and serviceberry are dominant shrub species. Choke cherry, raspberry, bristly dewberry, beaked hazelnut, red elderberry, fly honeysuckle and alternate leaf dogweed are in places. The dominant ground flora are hay scentedfern, sessile bellwort, wood sorrel, spinulose wood fern, Canada mayflower, asters, mosses, and goldthread. Ferns and shrubs can be abundant and restrict tree regeneration in areas where openings in the forest canopy have been made.

The slope of both soils and the depth to bedrock in the moderately deep Tunbridge soil limit the use of this unit as a site for dwellings with basements. Extensive land shaping and grading are needed to overcome this limitation. Land grading can divert surface water away from the dwellings and thus helps to prevent wetness in basements. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing a plant cover in disturbed areas during or soon after construction help to control erosion. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for dwellings with basements.

The steeper areas of this unit are generally

unsuitable as sites for septic tank absorption fields because of the slope of both soils and the depth to bedrock in the moderately deep Tunbridge soil. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use. The less sloping areas require special designs to overcome the slope and the depth to bedrock. Installing the effluent lines on the contour helps to overcome the slope.

The slope limits the use of this unit as a site for local roads and streets. The potential for frost action in both soils and the depth to bedrock in the moderately deep Tunbridge soil also are limitations. Careful planning of road grades and locations helps to avoid the need for removal of the bedrock. In some areas blasting is necessary to remove the bedrock. Providing coarser textured base material helps to prevent the damage caused by frost action. Adapting the design of the roads to the natural slope, land shaping and grading, and blasting help to overcome the slope.

The less sloping areas of this unit are well suited to recreational facilities because the soils are well drained and stable. Rock outcrops and surface stones limit the use of this unit as a site for camping and picknicking areas. The slope is a limitation in the steep areas. Erosion is a hazard. Constructing log-reinforced water bars and steps on foot trails and establishing the trails on ridgelines and across the slope help to control erosion and overcome the slope.

The capability subclass is VIs.

505D—Berkshire-Colton association, hilly, stony. This unit consists of very deep soils. It is on terraces, knolls, hills, and ridges. Slopes range from 3 to 35 percent. This unit generally at an elevation of less than 2,400 feet. Areas are irregular in shape and range from 15 to 350 acres in size.

This unit is about 55 percent well drained Berkshire soil, 20 percent excessively drained Colton soil, and 25 percent other soils. The Colton soil generally is on the lower terraces, knolls, and hills, and the Berkshire soil is at the slightly higher elevations. Stones cover less than 1 percent of the surface and typically are 25 to 100 feet apart. The areas of Berkshire and Colton soils are together in a repeating pattern and are individually large enough to be mapped separately. Because of the objective of the survey, however, mapping them separately was not considered necessary.

Typically, the Berkshire soil is covered by a thin layer of undecomposed and moderately decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 1 inch, black gravelly fine sandy loam

Subsurface layer:
1 to 5 inches, brown gravelly fine sandy loam

Subsoil:
5 to 7 inches, yellowish red gravelly fine sandy loam
7 to 11 inches, dark yellowish brown gravelly fine sandy loam
11 to 22 inches, olive brown gravelly fine sandy loam
22 to 32 inches, light olive brown gravelly fine sandy loam

Substratum:
32 to 60 inches, olive gravelly fine sandy loam

Some areas of this unit include soils that have a substratum of sand or gravelly sand. Other areas include soils that have a less red subsoil.

Typically, the Colton soil is covered by a thin layer of undecomposed and moderately decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 2 inches, black very gravelly fine sandy loam

Subsurface layer:
2 to 6 inches, light brownish gray very gravelly sandy loam

Subsoil:
6 to 22 inches, reddish brown extremely gravelly sand
22 to 32 inches, brown extremely gravelly loamy sand

Substratum:
32 to 60 inches, yellowish brown extremely gravelly sand

Included in this unit in mapping are small areas of the well drained and excessively drained Adams soils, the well drained Duxbury soils, and the moderately well drained Sheepscot and Sunapee soils. Also included, throughout the unit, are areas where less than 1 percent to 3 percent of the surface is covered with stones. Adams and Duxbury soils are in landscape positions similar to those of the Colton soil. Sheepscot and Sunapee soils are in depressions and drainageways.

Important soil properties—

Permeability: Berkshire—moderate or moderately rapid; Colton—rapid in the subsoil and very rapid in the substratum

Available water capacity: Berkshire—moderate; Colton—very low
Soil reaction: Berkshire—extremely acid to moderately acid; Colton—extremely acid to very strongly acid in the surface layer and subsurface layer, very strongly acid or strongly acid in the subsoil, and very strongly acid to moderately acid in the substratum
Depth to bedrock: More than 60 inches
Depth to the water table: At least 60 inches
Root zone: Typically extends to the substratum
Potential for frost action: Berkshire—moderate; Colton—low

Most areas of this unit are forested. Areas of Colton soils are used as sources of gravel. Gravel pits are common in this unit.

The less sloping areas of this unit are suited to hay and pasture. The steeper areas, however, are poorly suited because of the slope. Erosion is a hazard. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, harvesting at the proper stage of plant growth, and weed and brush control increase the quantity and quality of feed and forage. Operating equipment up and down the slope helps to overcome the equipment limitation caused by the slope. The very low available water capacity and low natural fertility of the Colton soil are limitations. Planting drought-tolerant species in areas of the Colton soil helps to overcome the very low available water capacity.

The less sloping areas of this unit are suited to cultivated crops, especially drought-tolerant crops. The steep areas, however, are generally unsuited and are susceptible to erosion. Growing cover crops, including grasses and legumes in the cropping system, applying a system of conservation tillage that leaves some or all of the crop residue on the surface, and tilling on the contour help to control erosion. In areas of the Colton soil, the very low available water capacity, low natural fertility, and a low organic matter content are limitations. Supplemental applications of organic material increase the available water capacity and maintain fertility and the organic matter content.

The potential productivity of this unit is moderate for sugar maple and very high for eastern white pine. In the less sloping areas, few limitations affect timber production and harvesting. Erosion is a hazard in the steep areas. Seedling mortality is a hazard in areas of the Colton soil. The main problem affecting timber production and harvesting in hilly areas is the equipment limitation. Constructing skid trails and logging roads across the slope and installing culverts and water bars as necessary help to control erosion. Operating logging equipment in the less steep areas of the unit minimizes the equipment limitation caused by the slope. This unit is a possible source of borrow and gravel. Droughtiness, which results from the very low available water capacity of the Colton soil, causes a high rate of seedling mortality. Selection or shelter cutting is used to reduce seedling mortality in regeneration of volunteer species. The rate of seedling mortality for planted species can be reduced by planting seedlings in early spring, thus allowing them to obtain moisture from spring and early summer rains.

Red spruce, sugar maple and beech are the most persistent members of the climax community. Balsam fir and hemlock are present but are not strongly competitive. Red maple and yellow birch dominate the subclimax community. Paper birch, black cherry, and white ash are present but are not strongly competitive in the early successional community. There is a clear, strong tendency for the vegetation community to succeed towards a climax dominated by beech, but persistent mangement can encourage the subclimax and pioneer species. Throughout this unit, generally at the base of slopes receiving runoff from the higher areas, are highly productive "coves" dominated by white ash and sugar maple. Striped maple, hobblebush, and mountain maple are strong persistent members of the community. They tend to strongly compete with tree species, especially after logging. Smooth juneberry (serviceberry) and blueberry are dominant shrubs on the Colton soils. Spinulose wood fern, hayscented fern, wood sorrel, tree club moss, and indian cucumber root are common and abundant members of this community. Species indicative of sandy, gravelly sites (potential gravel sources) are bracken fern, ground pine, running pine, blueberry, stag horn (wolf's claw club moss), and stiff club moss. These species are associated with the Colton soils.

The less sloping areas of this unit have few limitations as sites for dwellings with basements. The slope is a limitation in the steeper areas. Extensive land shaping and grading are needed in hilly areas to overcome this limitation. Designing the buildings so that they conform to the natural slope or land shaping and grading help to overcome this limitation. Land grading can divert surface water away from the dwellings and thus helps to prevent wetness in basements. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing a plant cover in disturbed areas during or soon after construction help to control erosion. There is a hazard of cutbanks caving in areas of Colton soils.

The less sloping areas of the Berkshire soil have few limitations as sites for septic tank absorption fields. A poor filtering capacity limits the use of the Colton soil soil as a site for septic tank absorption fields. The slope

is a limitation in the steeper areas. Installing the effluent lines on the contour helps to overcome the slope. Land grading are needed in some places to prepare less sloping areas for absorption fields or special designs are needed to overcome the slope. Effluent moves through the Colton soil readily but often is not adequately treated and can contaminate ground water. Contamination can be detected by periodic testing of the ground water.

The less sloping areas of this unit have few limitations as sites for local roads and streets. The slope is a limitation in the steeper areas. Constructing the roads across the slope or on the contour helps to overcome the slope. Extensive land shaping and grading are necessary in some areas. Included areas that have large stones and boulders on and below the surface interfere with the excavation and grading of roads.

The less sloping areas of this unit are well suited to paths, trails, camping areas, and picknicking areas. The slope is a limitation in the steeper areas. Establishing the trails on ridgelines and across the slope helps to overcome the slope.

The capability subclass is IVe in areas of the Berkshire soil and VIe in areas of the Colton soil.

702F—Killington-Ricker-Rock outcrop association, very steep, very stony. This unit consists of soils on shoulders and tops of hills and mountains. Slopes range from 45 to 75 percent. This unit generally is at elevations between 2,000 and 3,000 feet. Areas are irregular in shape and range from 5 to 500 acres in size. Stones cover less than 1 percent to 3 percent of the surface and typically are 5 to 25 feet apart.

This unit is about 45 percent shallow, well drained Killington soil; 20 percent very shallow to moderately deep, well drained to excessively drained Ricker soil; 15 percent other soil; and 20 percent rock outcrops. The Killington soil is in troughs between the rock outcrops, and the Ricker soil is on the flanks of the outcrops. The areas of Killington and Ricker soils are together in a repeating pattern and are individually large enough to be mapped separately. Because of the objective of the survey, however, mapping them separately was not considered necessary.

Typically, the Killington soil is covered by a thin layer of slightly decomposed and moderately decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 1 inch, black very cobbly loam

Subsoil:
1 to 6 inches, dark reddish brown very cobbly loam
6 to 17 inches, reddish brown very stony loam

Bedrock:
17 inches, schist

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

Surface layer:
0 to 13 inches, black undecomposed and moderately decomposed organic matter
Subsurface layer:
13 to 15 inches, reddish gray loamy fine sand

Subsoil:
15 to 16 inches, dark reddish brown very cobbly fine sandy loam

Bedrock:
16 inches, schist

Included in this unit in mapping are small areas of the moderately deep, well drained Glebe soils; the very shallow, well drained Londonderry soils; and the shallow, well drained Stratton soils. Glebe soils are in troughs, Londonderry soils are in landscape positions similar to those of the Ricker soil, and Stratton soils are in landscape positions similar to those of the Killington soil.

Important soil properties—

Permeability: Killington—moderately rapid Ricker—moderate or moderately rapid
Available water capacity: Killington—very low Ricker—moderate
Soil reaction: Killington—very strongly acid or strongly acid in the surface layer and very strongly acid to moderately acid in the subsoil; Ricker—extremely acid in the surface and subsurface layers and extremely acid to very strongly acid in the subsoil
Depth to bedrock: Killington—10 to 20 inches; Ricker—2 to 26 inches
Depth to the water table: At least 60 inches
Root zone: Typically extends to bedrock
Potential for frost action: Killington—moderate; Ricker—low

Most areas of this unit are wooded. Because of the slope, very few uses are possible. Hiking trails are along some ridgelines.

These soils are generally unsuited to hay and pasture. Erosion is a hazard. The slope, the depth to bedrock in the very shallow soils, rock outcrops, and stones on the surface are limitations.

This unit is unsuited to cultivated crops because of

the slope, the depth to bedrock, rock outcrops, and stones on the surface.

The potential productivity of this unit is moderate for sugar maple. Generally, the unit is not suitable for timber production and harvesting. Erosion, seedling mortality, and windthrow are hazards. If timber is harvested, there is an equipment limitation because of the slope and the depth to bedrock. The low soil temperature also is a management concern. Because of the slower growth and longer time required for trees to reach harvest size, large investments early in the rotation are not cost effective. Logging costs tend to be higher because of the distance to the units. The slope and the depth to bedrock limit the establishment of trails and roads across this unit. Placing the trails and roads across the slope and installing culverts and water bars as necessary help to control erosion. Harvesting during winter or during dry periods reduces the hazard of erosion. In most places rock outcrops interfere with the operation of equipment. The low soil temperature and the depth to bedrock cause very slow tree growth and regeneration. Droughtiness, which results from the very low available water capacity of the Killington soil, causes a high rate of seedling mortality. Seedling mortality of volunteer species can be reduced by selection or shelterwood cutting. This unit generally is not suited to planting seedlings. The depth to bedrock restricts the rooting depth, resulting in the uprooting of some trees during windy periods. Selection and shelterwood cutting minimizes the windthrow hazard. Included areas where stones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones but does not minimize the limitation caused by rock outcrops. Because of the slope, most logging and construction activity reduces the esthetic value of the unit.

Red spruce and balsam fir are the dominant tree species in the climax community. At elevations of less than 2,500 feet, American beech and sugar maple are present. Hemlock is a minor component of the climax community. Yellow birch and paper birch are early successional species that persist in the climax community. Depending upon the type of management, the community tends toward either the climax or the pioneer and subclimax successional stages. Striped maple and mountain maple are the dominant shrub species. Mountain ash also is present. Ground flora are dense, and the dominant species are spinulose wood fern, wood sorrel, Canada mayflower, clintonia, aster, and violet.

This unit is generally unsuitable as a site for dwellings with basements because of the slope, the depth to bedrock, and large stones on the surface of the Killington soil. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use.

This unit is generally unsuitable as a site for septic tank absorption fields because of the slope, the depth to bedrock, and large stones on the surface of the Killington soil. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use.

This unit is unsuitable as a site for local roads and streets because of the depth to bedrock and the slope. The potential for frost action also is a limitation in the Killington soil. If this unit is used for roads, blasting is necessary to remove the bedrock. A coarser base material is needed to prevent the damage caused by frost action.

This unit is unsuitable as a site for camping and picknicking areas because of the slope and the depth to bedrock. Stones on the surface of the Killington soil and the high organic content of the Ricker soils also are limitations. Erosion is a hazard. Constructing log-reinforced water bars on foot trails and establishing the trails on hilltops and ridgelines help to control erosion and overcome the slope.

The capability subclass is VIIs.

703D—Mundal-Cabot association, hilly, very stony. This unit consists of soils on smooth convex sides of hills and mountains. Slopes range from 3 to 30 percent. This unit generally is at elevations above 2,000 feet. Areas are irregular in shape and range from 10 to 500 acres in size. Stones cover less than 1 percent to 3 percent of the surface and typically are 5 to 25 feet apart.

This unit is about 70 percent well drained and moderately well drained Mundal soil, 10 percent somewhat poorly drained and poorly drained Cabot soil, and 20 percent other soils. The Mundal and Cabot soils are shallow or moderately deep to dense basal till and very deep to bedrock. The Cabot soil is on toe slopes and foot slopes and in depressional areas on side slopes. The Mundal soil is on side slopes above the Cabot soil. The areas of Mundal and Cabot soils are together in a repeating pattern and are individually large enough to be mapped separately. Because of the objective of the survey, however, mapping them separately was not considered necessary.

Typically, the Mundal soil is covered by a layer of slightly decomposed and undecomposed leaves and needles underlain by a 5 inch thick layer of dark reddish brown highly decomposed of leaf litter. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 6 inches, black loam

Subsurface layer:
6 to 9 inches, light reddish brown fine sandy loam

Subsoil:
9 to 13 inches, dusky red loam
13 to 16 inches, dark reddish brown loam
16 to 19 inches, dark brown loam
19 to 24 inches, mottled, dark brown gravelly loam

Substratum:
24 to 60 inches, mottled, firm, light olive brown gravelly fine sandy loam

Typically, the Cabot soil is covered by a layer of slightly decomposed and moderately decomposed leaves, needles, and twigs. Under than layer, the typical sequence, depth, and composition of the3 layers of this soil are as follows—

Surface layer:
0 to 6 inches, very dark gray gravelly fine sandy loam

Subsoil:
6 to 12 inches, mottled, grayish brown fine sandy loam

Substratum:
12 to 60 inches, mottled, very firm, olive gray gravelly fine sandy loam

Included in this unit in mapping are small areas of the somewhat poorly drained and poorly drained Brayton soils, the well drained Houghtonville and Marlow soils, and the moderately well drained Peru soils. Also included, throughout the unit, are areas where stones cover more than 3 percent of the surface. Brayton soils are in depressions and drainageways. Houghtonville soils are on knolls and generally are on the upper parts of the unit. Marlow and Peru soils are generally in areas below 2,000 feet in elevation and are in landscape positions similar to those of the Mundal soil.

Important soil properties—

Permeability: Mundal—moderate in the subsoil and moderately slow or slow in the substratum; Cabot—moderate in the subsoil and slow or very slow in the substratum
Available water capacity: Moderate
Soil reaction: Mundal—extremely acid to moderately acid in the surface layer and subsoil and strongly acid to slightly acid in the substratum; Cabot—strongly acid to neutral in the surface layer and subsoil and moderately acid to neutral in the substratum
Depth to dense basal till: Mundal—20 to 30 inches; Cabot—12 to 24 inches
Depth to bedrock: More than 60 inches
Water table: Mundal—perched at a depth of 1.5 to 2.5 feet in fall, winter, and spring; Cabot—perched within a depth of 2.0 feet in fall, winter, and spring
Root zone: Typically extends to the top of the firm substratum
Potential for frost action: Mundal—moderate; Cabot—high

Most areas of this unit are woodland. This unit is used for timber harvesting, hiking, hunting, camping, picknicking, snowmobiling, and cross country skiing.

Because of the stones on the surface, this unit is unsuited to hay and improved pasture. The stones must be removed before the unit is suitable for these uses. In the hilly areas, erosion is a hazard and the slope is a limitation. Timely deferment of grazing, rotational grazing, applications of lime and fertilizer, and weed and brush control increase the quantity and quality of forage and help to control erosion. Operating equipment up and down the slope helps to overcome the equipment limitation caused by the slope.

This unit is unsuited to cultivated crops unless the stones are cleared from the surface. If cleared of stones, the less sloping areas are suited and the steeper areas are poorly suited. In areas that have been cleared, the slope is a limitation. Erosion is a hazard. The short growing season is a concern. Growing cover crops, including grasses and legumes in the cropping system, applying a system of conservation tillage that leaves some or all of the crop residue on the surface, and tilling on the contour help to control erosion. Diversion ditches help to control runoff and erosion. Using the unit for long-term hay or pasture is effective in controlling erosion.

The potential productivity of this unit is moderate for sugar maple and high for eastern white pine. Erosion is a hazard. In the steeper areas the main limitation affecting timber production and harvesting is the equipment limitation. Skid roads, truck roads, and landings are saturated in spring and after heavy rainstorms because of the moderately slow or slow permeability in the substratum. Logging during winter or during dry periods, constructing skid trails and logging roads across the slope, and installing culverts and water bars as necessary help to control erosion. Bridges with tight decks and culverts help to control erosion and reduce stream siltation. Ditches built around landings to keep roads and landing dry and gravel placed in seepy spots also help prevent erosion

and reduce stream siltation. Operating logging equipment in the less steep areas of the unit minimizes the equipment limitation caused by the slope. Included areas where stones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones.

Sugar maple, beech, and red spruce are the dominant trees in the climax community; balsam fir is a minor component. Early successional species, such as red maple, yellow birch, white ash, and black cherry, are common and persist well into the development of the climax community. The vegetative community is diverse and productive. Striped maple and hobblebush are dominant shrub species. Blackberry and raspberry dominate clearings reverting to woodland. The common ground flora are spinulose wood fern, wood sorrel, lady fern, shining club moss, hayscented fern, aster, sessile bellwort, Canada mayflower, and clintonia. Wet site indicators include sensitive fern, false hellebore, purple avens, wood horsetail, tall meadow rue, wood nettle, and cinnamon fern. They are in the moderately well drained and poorly drained areas where surface seeps are common.

The slope and the seasonal high water table limit the use of this unit as a site for dwellings with basements. In the steeper areas extensive land shaping and grading are needed to overcome the slope. Installing footing drains, sealing foundations, and land grading that diverts surface water away from the dwellings help to prevent wetness in basements. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing a plant cover in disturbed areas during or soon after construction help to control erosion. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for dwellings with basements.

This unit is generally unsuitable as a site for septic tank absorption fields because of the seasonal high water table and the slow or very slow permeability in the substratum. The slope also is a limitation in the steeper areas. Special designs can help to overcome the wetness of the Mundal soil. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for septic tank absorption fields.

The seasonal high water table in the Cabot soil and the for potential for frost action in both soils limit the use of this unit as a site for local roads and streets. The slope is a limitation in the steeper areas. Installing drainage systems and providing coarser textured base material help to overcome the wetness and prevent the damage caused by frost action. Constructing the roads on the contour helps to overcome the slope. Extensive land shaping and grading are necessary in some areas.

The seasonal high water table in the Cabot soil and the stones on the surface of the Mundal soil limit the use of this unit as a site for camping and picknicking areas. The slope is a limitation in the steeper areas. Erosion is a hazard. Establishing camp and picnic areas on a slight grade helps to overcome the wetness caused by the seasonal high water table. Site hardening (graveling) also helps to overcome the wetness. Establishing trails in areas where slopes are 5 percent or more improves drainage. Using log-reinforced water bars, puncheon, and turnpiking on foot trails and establishing the trails on ridgelines and across the slope help to control erosion and overcome the slope. Puncheon and turnpiking are used where areas that are seasonally seepy are crossed.

The capability subclass is VIs.

705D—Rawsonville-Houghtonville association, hilly, rocky. This unit consists of undulating to hilly soils on slightly benched back slopes and shoulders of hills, ridges, and mountains. Slopes range from 5 to 35 percent. This unit generally is at an elevation between 2,000 and 3,000 feet. Areas are irregular in shape and range from 200 to 1,000 acres in size. Stones cover less than 1 percent to 3 percent of the surface and typically are 5 to 25 feet apart.

This unit is about 55 percent moderately deep, well drained Rawsonville soil; 30 percent very deep, well drained Houghtonville soil; and 14 percent other soils. Rock outcrops make up about 1 percent of the unit. The Rawsonville soil is on the flanks of the outcrops, and the Houghtonville soil is between the outcrops. The areas of Rawsonville and Houghtonville soils are together in a repeating pattern and are individually large enough to be mapped separately. Because of the objective of the survey, however, mapping them separately was not considered necessary.

Typically, the Rawsonville soil is covered by a thin layer of slightly decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:

0 to 3 inches, very dark gray gravelly fine sandy loam

Subsoil:

3 to 10 inches, dark brown gravelly fine sandy loam

10 to 23 inches, dark yellowish brown gravelly fine sandy loam

23 to 30 inches, yellowish brown gravelly sandy loam

Bedrock:
30 inches, schist

Typically, the Houghtonville soil is covered by a thin layer of slightly decomposed and moderately decomposed leaves, needles, and twigs. Under that layer, the typical sequence, depth, and composition of the layers in this soil are as follows—

Surface layer:
0 to 1 inch, black gravelly fine sandy loam

Subsurface layer:
1 to 2 inches, light brownish gray gravelly fine sandy loam

Subsoil:
2 to 3 inches, dark reddish brown gravelly fine sandy loam
3 to 6 inches, reddish brown gravelly fine sandy loam
6 to 29 inches, dark yellowish brown gravelly fine sandy loam

Substratum:
29 to 60 inches, light yellowish brown gravelly fine sandy loam

Included in this unit in mapping are small areas of the very deep, well drained Berkshire soils; the moderately deep, well drained Tunbridge soils; and the shallow, well drained Killington soils. Also included, throughout the unit, are areas where stones cover more than 3 percent of the surface. Berkshire and Tunbridge soils are generally at elevations below 2,000 feet. Tunbridge soils are on the flanks of the outcrops, and Berkshire soils are in troughs between the outcrops. Killington soils are near the rock outcrops.

Important soil properties—

Permeability: Moderate or moderately rapid
Available water capacity: High
Soil reaction: Rawsonville—extremely acid to strongly acid; Houghtonville—extremely acid to moderately acid
Depth to bedrock: Rawsonville—20 to 40 inches; Houghtonville—more than 60 inches Depth to water table: At least 60 inches
Root zone: Rawsonville—typically extends to bedrock; Houghtonville—typically extends to a depth of more than 60 inches
Potential for frost action: Moderate

Most areas of this unit are forested. This unit is used for timber harvesting, hiking, hunting, camping, snowmobiling, and cross country skiing.

Because of the stones on the surface, this unit is unsuited to hay and improved pasture. The stones must be removed before the unit is suitable for these uses. Erosion is a hazard, and rock outcrops are a limitation. The slope is a limitation in the steeper areas. Some areas are used as unimproved pasture. Timely deferment of grazing, rotational graazing, applications of lime and fertilizer, and weed and brush control increase the quantity and quality of forage and help to control erosion. Operating equipment up and down the slope helps to overcome the equipment limitation caused by the slope.

These soils are unsuited to cultivated crops unless the stones are cleared from the surface. If cleared of stones, the unit is poorly suited to cultivation. In areas that have been cleared, the exposed bedrock and a short growing season are limitations. The slope is a limitation in the steeper areas. Erosion is a hazard. Short-season crops should be selected for planting. Growing cover crops, including grasses and legumes in the cropping system, applying a system of conservation tillage that leaves some or all of the crop residue on the surface, and tilling across the slope or on the contour help to control erosion. The exposed bedrock and the included areas of shallow soils interfere with tillage.

The potential productivity of this unit is moderate for sugar maple. In the less sloping areas, few limitations affect timber production and harvesting. In the steeper areas, erosion is a hazard and the main limitation affecting timber production and harvesting is the equipment limitation. Constructing skid trails and logging roads across the slope and installing culverts and water bars as necessary help to control erosion. Harvesting during winter or during dry periods reduces the hazard of erosion. Operating logging equipment in the less steep areas of the unit minimizes the equipment limitation caused by the slope. In some areas rock outcrops interfere with the operation of equipment. Included areas where stones cover more than 3 percent of the surface interfere with the operation of equipment. Logging during periods of snow cover minimizes the equipment limitation caused by surface stones.

Beech and sugar maple are the dominant trees in the climax community; red spruce is a strongly associated component. Red spruce is throughout the unit and can be dominant in areas of shallow soil near rock outcrops. Red maple, yellow birch, white ash, and black cherry dominate the subclimax community. After fields are abandoned or areas have been cleared by logging, the forest community usually succeeds to the climax of beech and sugar maple. Striped maple, hobblebush, and mountain maple are the dominant shrub species. Pin cherry, blackberry, and raspberry are common in openings. The dominant ground flora are wood sorrel, hayscented fern, sessile bellwort, woodland sedge,

christmas fern, and false solomon's seal.

The depth to bedrock in the moderately deep Rawsonville soil limits the use of this unit as a site for dwellings with basements. The slope is a limitation in the steeper areas. Extensive land shaping and grading are needed to overcome this limitation. Land grading can divert surface water away from the dwellings and thus helps to prevent wetness in basements. Erosion is a hazard in areas cleared for construction. Preserving as much of the existing plant cover as possible and establishing a plant cover in disturbed areas during or soon after construction help to control erosion. Onsite investigation is needed to identify included or adjacent areas that may be better suited as sites for dwellings with basements.

The depth to bedrock in the moderately deep Rawsonville soil limits the use of this unit as a site for septic tank absorption fields. The slope is a limitation in the steeper areas. Onsite investigation is needed to identify included or adjacent areas that may be better suited to this use. Special designs, such as installing the effluent lines on the contour, help to overcome the slope in the less sloping areas.

The potential for frost action limits the use of this unit as a site for local roads and streets. The slope is a limitation in the steeper areas. Providing coarser textured base material helps to prevent the damage caused by frost action. Adapting the design of the roads to the natural slope, land shaping and grading, and blasting help to overcome the slope.

The less sloping areas of this unit are well suited to recreational facilities. The slope is a limitation in the steeper areas. Stones on the surface also are a limitation. Erosion is a hazard. Constructing log-reinforced water bars on foot trails and establishing the trails on ridgelines and across the slope help to control erosion and overcome the slope.

The capability subclass is VIs.

Prime Farmland

Prime farmland is one of several kinds of important farmlands defined by the U.S. Department of Agriculture. Prime farmland is of major importance in providing the Nation's short- and long-range needs for food and fiber. The supply of high quality farmland is limited, and the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, must encourage and facilitate the use of prime farmland with wisdom and foresight.

Prime farmland, as defined by the U.S. Department of Agriculture, is the land that is best suited to producing food, feed, forage, fiber, and oilseed crops. It has the soil quality, growing season, and moisture supply needed to economically produce a sustained high yield of crops when it is treated and managed using acceptable farming methods. Prime farmland produces the highest yields with minimal inputs of energy and economic resources, and farming it results in the least damage to the environment.

Prime farmland may now be in crops, pasture, woodland, or other land, but not urban and built-up land or water areas. It must either be used for producing food or fiber or be available for these uses.

Prime farmland usually has an adequate and dependable supply of moisture from precipitation or irrigation. It also has favorable temperature and growing season and acceptable levels of acidity or alkalinity, It has few or no stones and is permeable to water and air. Prime farmland is not excessively eroded or saturated with water for long periods and is not flooded during the growing season. The slope ranges mainly from 0 to 6 percent. For more detailed information on the criteria for prime farmland consult the local staff of the Natural Resources Conservation Service.

About 36,000 acres in Rutland County, or 6 percent of the county, meets the soil requirements for prime farmland. Areas are scattered throughout the county, but most are adjacent to the major rivers. Most of this prime farmland is used for silage corn.

A recent trend in land use in some parts of the county has been toward the loss of some prime farmlands 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 difficult to cultivate and usually sre less productive.

Soil map units that make up prime farmland in Rutland County are listed in table 5. This list does not constitute a recommendation for a particular land use. The extent of each listed map unit is shown in table 5. The location is shown on the detailed soil maps in the back of this publication. The soil qualities that affect use and management are described in the section "Detailed Soil Map Units."

Prime farmland is not synonymous with primary agricultural soils as defined in Vermont's Land Use and Development Law (Act 250). For more detailed information on the criteria and definitions and the list of primary agricultural soils, consult the local staff 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 avoid 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 behavior 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 recreation 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

David P. Newton, extension agent for Rutland County, helped to prepare this section.

General management needed for crops and pasture is suggested in this section. The crops or pasture plants best suited to the soils, including some not commonly grown in the survey area, are identified; the system of land capability classification used by the Natural Resources Conservation Service is explained; and the estimated yields of the main crops and hay and pasture plants are listed for each soil.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under "Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

The 1982 National Agricultural Census for Rutland County lists 38,711 acres of close-grown crops, mainly grass and legume hay. Other crops listed in 1982 included 9,858 acres of grain and silage corn, 275 acres of truck crops, and 22,501 acres of native grasses used for pasture (*10*).

About 20 percent of the soils in Rutland County are suited to increased production of crops. Food production could be increased by extending the latest crop production technology to all cropland in the county. This soil survey can help facilitate the application of such technology.

The soils and climate in the survey area are suited to most of the crops that are commonly grown in the area and to some that are not, for example, potatoes, rye, barley, oats, and some truck crops.

Deep, well drained soils that warm early in the spring are well suited to many vegetables and small fruits. These soils include the Paxton, Stockbridge, and Dutchess soils on uplands and the Warwick and Tioga soils on terraces and flood plains.

Most of the well drained soils in the survey area are also suited to orchards and nursery plants. The soils at high elevations, where average temperatures are lowerer and the growing season is shorter, generally are poorly suited to truck crops and orchards.

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 nitrate, phosphate, and potash fertilizers. The soils are

strongly acid to neutral. Acid soils, such as Warwick and Hinckley soils, need an application of ground limestone 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 to determine the kind and amount of fertilizer and lime to apply.

Organic matter is an important source of nitrogen for crops. It also helps to increase the water intake rate, increases the available water capacity, reduces soil losses from erosion, and promotes good tilth. Additions of organic matter are particularly important on the coarse textured terrace soils, such as the Warwick, Windsor, and Quonset soils. The addition of organic matter helps to increase the water intake rate by improving soil structure and reducing surface crusting. Organic matter also increases the available water capacity of these soils. Organic matter content of soils can be increased by the regular addition of manure or by plowing under a cover crop such as winter rye.

Soil erosion is the major hazard on most of the cropland in Rutland County and reduces the productivity of the soil. If the surface layer is lost through erosion, most of the available plant nutrients and most of the organic matter are lost. Soils that have a firm substratum, such as the Bomoseen soils, or that are shallow to bedrock, such as the Farmington soils, especially need protection against erosion. In many areas, soil erosion on farmland results in the pollution of streams by sediment, nutrients, and pesticides. Controlling erosion minimizes such pollution and improves the quality of water for municipal use and for fish and wildlife.

Erosion control practices provide protective surface cover, reduce runoff, and increase infiltration. A cropping system that keeps plant cover on the soil for extended periods reduces soil erosion and preserves the productive capacity of the soil. Use of legume and grass or forage crops in the cropping system reduces erosion on sloping land, provides nitrogen to plants, and improves soil tilth for the crop that follows. Terraces, diversions, contour tillage, cover cropping, and cropping systems that rotate grass or close-growing crops with row crops also help to control erosion on cropland and pasture. Terraces and diversions reduce the length of slopes and thereby reduce runoff and erosion. They are most practical on very deep, well drained soils that have uniform, regular slopes. Contour tillage is also best suited to soils that have smooth, regular slopes, for example, Bomoseen and Dutchess soils. Strip cropping and conservation tillage, which includes such practices as no-till farming, stubble mulching, and chiseling, are increasing in Rutland County. Those practices are effective in reducing erosion on sloping soils and can be used on many soils in the survey area.

Some of the soils in the county need improved drainage for optimum crop growth. Wet soils are slower to warm up in the spring than better drained soils. On wet soils, tillage operations are delayed and farm machinery often bogs down. Drainage can be improved by constructing open ditches, smoothing the land, and installing tile. Land smoothing eliminates small elevated areas and fills small depressions. Tile may be used to remove excess water in drainageways, seeps, and depressions. Shallow waterways may also be used to remove surface water from depressions in the field. Adequate outlets for drainage systems may not be available in some areas. Birdsall and Scarboro soils, for instance, are naturally so wet that their use for crop production is generally not practical.

Since there are usually short dry spells during the growing season, irrigation is desirable for high value truck and fruit crops, especially on sandy soils such as the Quonset and Deerfield soils and clayey soils such as the Kingsbury and Vergennes soils.

Hay crops and improved pasture occupy a large acreage in Rutland County. A grass-legume mixture commonly used consists of alfalfa, timothy, and red clover. Also grown in the county are alsike clover, red top, reed canarygrass, orchardgrass, and birdsfoot trefoil. Alfalfa grows better on soils that are moderately well drained or well drained than on wet soils. In some years it is killed on soils that are flooded. Trefoil is more tolerant of wet soils. On some wet soils and in areas not adequately drained, red top and alsike clover are grown.

Fertilizer is generally needed for establishing a stand of perennial pasture plants. Soil deficiencies can be determined by soil tests. A fertilizer program can then be used that is suited to the pasture plants and that gives the plant growth desired. Proper grazing and necessary brush and weed control ensure good growth for a long period.

Information on erosion control, drainage practices, and irrigation for each kind of soil 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 (*7*). Only class and subclass are used in this survey. These levels are defined in the following paragraphs.

Capability classes, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use.

Class VI soils have severe limitations that make them generally unsuitable for cultivation.

Class VII soils have very severe limitations that make them unsuitable for cultivation.

Class VIII soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, IIe. The letter *e* shows that the main limitation is 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 I there are no subclasses because the soils of this class have few limitations. Class V contains only the subclasses indicated by *w, s,* or *c* because the soils in class V are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, woodland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, IIe-4 or IIIe-6.

The acreage of soils in each capability class and subclass is shown in table 7. The capability classification of each map unit is given in the section "Detailed Soil Map Units" and in the yields table.

Woodland Management and Productivity

Jim Philbrook, county forester, Vermont Agency of Natural Resources, Department of Forests and Parks, assisted with the preparation of this section.

During the mid-to-late 1800's, farming pressure, especially from sheep ranchers, resulted in the clearing of about 70 percent of the county's woodland. In the early 1900's, dairy herds replaced the sheep. Since World War I, the acreage used for farming has decreased and the abandoned hill pastures and fields have reverted to forest.

Almost 75 percent of the survey area is forested. The area of commercial-grade forest in Rutland County totals about 450,000 acres. About 11 percent of this acreage is in the Green Mountain National Forest. Another 6 percent is owned by the state, county, or municipalities. The remaining 83 percent, or 373,500 acres, is in private ownerships.

The woodland acreage is divided into two cover types, softwoods and hardwoods. The 1973 Forest Survey classified about 105,000 acres as softwood cover and about 345,000 acres as hardwood cover. The softwood species in the county, which exist in mixed and pure stands, are white pine, hemlock, red spruce, balsam fir, tamarack, and northern white cedar. Most of the commercial forests classified as hardwoods consist of sugar maple, beech, yellow birch, black birch, paper birch, and red maple. Other less extensive tree species in the survey area are red oak, aspen, red pine, white ash, hickory, basswood, elm, and hophornbeam.

Utilization data compiled by the Vermont Department of Forests and Parks indicates that 14.5 million board-feet of hardwood and softwood were milled in Rutland county in 1982.

Favoring species of higher economic value or greater potential for volume growth increases the productivity of woodland. Actually, the only variable that an owner or a forester can manipulate to improve growing conditions in a woodlot is the competition among trees for space. Thinning is used in developing stands to manage competition. Much of the existing commercial woodland can be improved by selectively cutting mature trees and culling undesirable species. A tree with adequate space will grow to a diameter of 10 to 12 inches in 40 years, whereas the same tree under more crowded conditions could still be less than 4 inches in diameter after the same period. Protection from fire and control of disease and insects also improves the productivity of stands. The Natural Resources Conservation Service, the Vermont State Department of Forest, the Parks and Recreation Service, or the Cooperative Extension Service can help determine specific woodland management needs.

Table 8 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 table lists the ordination symbol for each soil. Soils assigned the same ordination symbol require the same general management and have about the same potential productivity.

The first part of the *ordination symbol*, a number, indicates the potential productivity of the soils for an indicator tree species. The number indicates the volume, in cubic meters per hectare per year, which the indicator species can produce. The number 1 indicates low potential productivity; 2 and 3, moderate; 4 and 5, moderately high; 6 to 8, high; 9 to 11, very high; and 12 to 39, extremely high. The second part of the symbol, a letter, indicates the major kind of soil limitation. The letter *R* indicates steep slopes; *X*, stoniness or rockiness; *W*, excess water in or on the soil; *T*, toxic substances in the soil; *D*, restricted rooting depth; *C*, clay in the upper part of the soil; *S*, sandy texture; and *F*, a high content of rock fragments in the soil. The letter *A* indicates that limitations or restrictions are insignificant. If a soil has more than one limitation, the priority is as follows: R, X, W, T, D, C, S, and F.

In table 8, *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, fire lanes, and 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 or season of use is 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 *productivity class*, 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 on a fully stocked, even-aged, unmanaged stand. One cubic meter per hectare equals 14.3 cubic feet per acre.

Trees to plant are those that are suited to the soil and are planted for commercial wood production or for Christmas-tree production.

Recreation

Rutland county has many areas available for skiing, hiking, camping, hunting, and water-related activities. The major downhill ski areas are in Sherburne, and several cross-country ski areas are in the northern part of the county (fig. 15). The Long Trail and the Appalachian Trail cross most of the county in a north-south direction, and there are numerous other hiking trails on public property. Public lands available for recreation include the Green Mountain National Forest, Bomoseen State Park, Gifford Woods State Park, Half Moon State Park, Lake St. Catherine State Park, and town forests and parks. Lake Bomoseen, Lake St. Catherine, Lake Hortonia, lower Lake Champlain, and numerous other lakes and streams provide areas for water-related activities.

The soils of the survey area are rated in table 9 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 sewerlines. 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 recreation use by the duration and intensity of flooding and the season when flooding occurs. In planning recreation facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

In table 9, the degree of soil limitation is expressed as slight, moderate, or severe. *Slight* means that soil properties are generally favorable and that limitations are minor and easily overcome. *Moderate* means that limitations can be overcome or alleviated by planning, design, or special maintenance. *Severe* means that soil properties are unfavorable and that limitations can be offset only by costly soil reclamation, special design, intensive maintenance, limited use, or by a combination of these measures.

The information in table 9 can be supplemented by other information in this survey, for example, interpretations for septic tank absorption fields in table L and interpretations for dwellings without basements and for local roads and streets in table 11.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to

Figure 15.—Skiing in the Green Mountains.

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

Scott Darling, biologist, Vermont Agency of Natural Resources, assisted with this section.

Large areas of hardwood trees in the Green Mountains, in the Taconic Mountains, and on rocky areas in the Champlain Valley provide habitat for wildlife in Rutland County. Stands of coniferous trees are mostly in areas of shallow, rocky soils on sides and tops of hills and mountains, on poorly drained soils in depressions and drainageways, and in plantations. The wildlife inhabiting the large wooded areas are deer, bear, porcupine, snowshoe hare, coyote, small mammals, and songbirds.

Much of the valleys and uplands is in dairy farms interspersed with wooded areas. Abandoned farmland is invaded by herbaceous plants and shrubs and eventually trees. Wildlife in these areas are deer, raccoon, red fox, woodchuck, squirrel, snowshoe hare, ruffed grouse, small mammals and song birds. A population of wild turkey has been reestablished in the county.

The streams, potholes, ponds, and lakes in the county furnish habitat for furbearers including mink, beaver, and muskrat. The main species of waterfowl are mallards, black ducks, wood ducks, and Canada geese. A variety of shore birds migrate through the area and nest in suitable habitats.

The welfare of any wildlife species depends on the amount, quality, and distribution of food, shelter, and water. Where any one of these is missing, inadequate, or inaccessible, the species is absent or scarce. The kinds and numbers of wildlife that live in a given area are closely related to land use, to the resulting kind, amount, and pattern of vegetation, and to the supply and distribution of water. These, in turn, are generally related to the kinds of soil.

Most habitats managed for wildlife are created or improved by planting suitable vegetation, by properly managing the existing vegetation, by inducing desirable plants to reseed, or by combining some of these measures.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 10, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The 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 flood hazard. 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, flood hazard, 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 flood hazard. Soil temperature and soil moisture are also considerations. Examples of wild herbaceous plants are strawberry, goldenrod, and dandelion.

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, aspen, cherry, sweetgum, apple, 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.

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and soil moisture. Examples of shrubs are mountainmahogany, bitterbrush, snowberry, and big sagebrush.

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, cattails, 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. The 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

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. The ratings are given in the following tables: 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 need to 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 to 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 kind of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to (1) evaluate the potential of areas for residential, commercial, industrial, and recreation uses; (2) make preliminary estimates of construction conditions; (3) evaluate alternative routes for roads, streets, highways, pipelines, and underground

cables; (4) evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; (5) plan detailed onsite investigations of soils and geology; (6) locate potential sources of gravel, sand, earthfill, and topsoil; (7) plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and (8) predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Table 11 shows the degree and kind of soil limitations that affect shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are severe.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for basements, graves, utility lines, open ditches, and other purposes. The ratings are based on soil properties, site features, and observed performance of the soils. The ease of digging, filling, and compacting is affected by the depth to bedrock, a dense, compact layer, 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 the 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, shrink-swell potential, and organic layers can cause the movement of footings. A high water table, depth to bedrock or to a dense, compact layer, large stones, slope, and flooding affect the ease of excavation and construction. Landscaping and grading that require cuts and ills of more than 5 to 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 dense, compact layer, 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 dense, compact layer, 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 12 shows 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.

Table 12 also shows the suitability of the soils for use as daily cover for landfills. 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 dense, compact layer, and flooding affect absorption of the effluent. Large stones and bedrock or a dense, compact layer 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.

Table 12 gives ratings for the natural soil that makes up the lagoon floor. The surface layer and, generally, 1 or 2 feet of soil material below the surface layer are excavated to provide material for the embankments. The ratings are based on soil properties, site features, and observed performance of the soils. Considered in the ratings are slope, permeability, a high water table, depth to bedrock or to a dense, compact layer, flooding, large stones, and content of organic matter.

Excessive seepage due to rapid permeability of 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 dense, compact layers 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 needs to be considered.

The ratings in table 12 are based on soil properties, site features, and observed performance of the soils. Permeability, depth to bedrock or to a dense, compact layer, 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 type 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 type sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste.

Soil texture, wetness, coarse fragments, and slope affect the ease of removing and spreading the material during wet and dry periods. Loamy or silty soils that are free of large stones or excess gravel are the best cover for a landfill. Clayey soils are sticky or cloddy and are difficult to spread; sandy soils are subject to soil blowing.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a dense, compact layer, or the water table to permit revegetation. The soil material used as final cover for a landfill should be suitable for plants. The surface layer generally has the best workability, more organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

Construction Materials

Table 13 gives information about the soils as a source of roadfill, sand, gravel, and topsoil. The soils are rated *good, fair,* or *poor* as a source of roadfill and topsoil. They are rated as a *probable* or *improbable* source of sand and gravel. The ratings are based on

soil properties and site features that affect the removal of the soil and its use as construction material. Normal compaction, minor processing, and other standard construction practices are assumed. Each soil is evaluated to a depth of 5 or 6 feet.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be mixed during excavating and spreading. Many soils have layers of contrasting suitability within their profile. The table showing engineering index properties provides detailed information about each soil layer. This information can help 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, 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 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 the depth to the water table is 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. Sand and gravel are used in many kinds of construction. Specifications for each use vary widely. In table 13, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material.

The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the engineering classification of the soil), the thickness of suitable material, and the content of rock fragments. Kinds of rock, acidity, and stratification are given in the soil series descriptions. Gradation of grain sizes is given in the table on engineering index properties.

A soil rated as a probable source has a layer of clean sand or gravel or a layer of sand or gravel that is up to 12 percent silty fines. This material must be at least 3 feet thick and less than 50 percent, by weight, large stones. All other soils are rated as an improbable source. Coarse fragments of soft bedrock, such as shale 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 water table at or near the surface.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Table 14 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; 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, 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 dense, compact layer, 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 potential frost action. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock or to a dense, compact layer, 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, or sulfur. Availability of drainage outlets is not considered in the ratings.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to reduce erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or to a dense, compact layer affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of wind 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 dense, compact layer affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts or sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features, listed in tables, are explained on the following pages.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine grain-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help characterize key soils.

The estimates of soil properties shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classifications, and the physical and chemical properties of the major layers of each soil. Pertinent soil and water features also are given.

Engineering Index Properties

Table 15 gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each soil series under "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 (*2*) and the system adopted by the American Association of State Highway and Transportation Officials (*1*).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, 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 3 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 16 shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each major soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay greatly affect the fertility and physical condition of the soil. They determine the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, and 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 ⅓ bar moisture tension. Weight is determined after drying the soil at 105 degrees C. In this table, the estimated moist bulk density of each major soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. A bulk density of more than 1.6 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability refers to the ability of a soil to transmit water or air. The estimates indicate the rate of downward movement of water 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, septic tank absorption fields, and construction where the rate of water movement under saturated conditions affects behavior.

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 major soil layer. The capacity varies, depending on soil properties that affect the retention of water and the depth of the root zone. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Shrink-swell potential is the potential for volume change in a soil with a loss or gain in moisture. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on measurements of similar soils.

If the shrink-swell potential is rated moderate to very high, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is often needed.

Shrink-swell potential classes are based on the change in length of an unconfined clod as moisture content is increased from air-dry to field capacity. The change is based on the soil fraction less than 2 millimeters in diameter. The classes are *low*, a change of less than 3 percent; *moderate*, 3 to 6 percent; and *high*, more than 6 percent. *Very high*, greater than 9 percent, is sometimes used.

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six

factors used in the Universal Soil Loss Equation (USLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter (up to 4 percent) and on soil structure and permeability. Values of K range from 0.05 to 0.69. The higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 16, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained or increased by returning crop residue to the soil. Organic matter affects the available water capacity, infiltration rate, and tilth. It is a source of nitrogen and other nutrients for crops.

Soil and Water Features

Table 17 gives estimates of various soil and water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are used to estimate runoff from precipitation. Soils not protected by vegetation are assigned to one of four groups. They are grouped according to the intake of water when the soils are thoroughly wet and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, 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 permanent high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to two hydrologic groups in table 17, the first letter is for drained areas and the second is for undrained areas.

Flooding, the temporary inundation of an area, is 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, nor is water in swamps and marshes.

Table 17 gives the frequency and duration of flooding and the time of year when flooding is most likely.

Frequency, duration, and probable dates of occurrence are estimated. Frequency is expressed as none, rare, occasional, and frequent. *None* means that flooding is not probable; *rare* that it is unlikely but possible under unusual weather conditions; *occasional* that it occurs, on the average, once or less in 2 years; and *frequent* that it occurs, on the average, more than once in 2 years. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, and *long* if more than 7 days. Probable dates are expressed in months; November-May, for example, means that flooding can occur during the period November through May.

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 distinctive horizons that form in soils that are not subject to flooding.

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.

High water table (seasonal) is the highest level of a saturated zone in the soil in most years. The depth to a seasonal high water table applies to undrained soils. The estimates are based mainly on the evidence of a saturated zone, namely grayish colors or mottles in the soil. Indicated in table K are the depth to the seasonal high water table; the kind of water table—that is, perched or apparent; and the months of the year that the water table commonly is high. A water table that is seasonally high for less than 1 month is not indicated in table 17.

An *apparent* water table is a thick zone of free water in the soil. It is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil. A

perched water table is water standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone.

Only saturated zones within a depth of about 6 feet are indicated. A plus sign preceding the range in depth indicates that the water table is above the surface of the soil. The first numeral in the range indicates how high the water rises above the surface. The second numeral indicates the depth below the surface.

Depth to bedrock is given if bedrock is within a depth of 5 feet. The depth is based on many soil borings and on observations during soil mapping. The rock is either soft or hard. If the rock is soft or fractured, excavations can be made with trenching machines, backhoes, or small rippers. If the rock is hard or massive, blasting or special equipment generally is needed for excavation.

Potential 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 mainly to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that dissolves or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors creates a severe corrosion environment. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than steel in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion is also expressed as *low*, *moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (*8*). 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. Ten 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 Inceptisol.

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 Aquept (*Aqu*, meaning water, plus *ept*, from Inceptisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Humaquept (*Hum*, meaning minimal horizonation, plus *aquept*, the suborder of the Inceptisols that has an aquic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other known kind of soil. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Humaquepts.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Mostly the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineral content, temperature regime, depth of the root zone, consistence, moisture equivalent, slope, and permanent cracks. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is coarse-loamy, mixed, nonacid, frigid Typic Humaquepts.

SERIES. The series consists of soils that have similar horizons in their profile. The horizons are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. The texture of the surface layer or of the substratum can differ within a series.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. The descriptions are arranged in alphabetic order.

Characteristics of the soil and the material in which it formed are identified for each unit. A pedon, a small three-dimensional area of soil, that is typical of the unit in the survey area is described. The detailed description of each soil horizon follows standards in the Soil Survey Manual (*6*). Many of the technical terms used in the descriptions are defined in Soil Taxonomy (*8*). Unless otherwise stated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the unit.

The map units of each soil series are described in the section "Detailed Soil Map Units."

Adams Series

The Adams series consists of very deep, well drained to excessively drained soils. These soils formed in sandy glaciofluvial deposits on kames, stream terraces, deltas, eskers, and valley trains. Permeability is rapid in the upper part of the pedon and very rapid in the lower

part. Slopes range from 8 to 15 percent.

Adams soils formed in material similar to that of the excessively drained Colton and Windsor soils, the well drained Duxbury soils, and Udipsamments. Unlike Colton and Duxbury soils, Adams soils do not have a gravelly substratum. Unlike Windsor soils and Udipsamments, they have a spodic horizon.

Typical pedon of Adams loamy fine sand, 8 to 15 percent slopes, in a white pine forest, in the town of Clarendon, 0.5 mile west of the Clarendonn-Shrewsbury town line on Route 103, about 650 yards west of Route 103:

Oi—2 inches to 1 inch; undecomposed pine litter and moss.
Oe—1 inch to 0; very dusky red (2.5YR 2/2), moderately decomposed pine litter.
A—0 to 5 inches; black (5YR 2/1) loamy fine sand; weak medium granular structure; friable; many roots; 5 percent rock fragments; moderately acid; abrupt smooth boundary.
Bhs—5 to 8 inches; dark reddish gray (5YR 4/2) sand; weak fine granular structure; very friable; many roots; 5 percent rock fragments; moderately smeary; moderately acid; abrupt smooth boundary.
Bs—8 to 22 inches; yellowish red (5YR 4/6) sand; single grain; loose; common roots; less than 5 percent rock fragments; moderately acid; clear smooth boundary.
BC—22 to 31 inches; strong brown (7.5YR 5/6) sand; single grain; loose; few roots; less than 5 percent rock fragments; moderately acid; abrupt smooth boundary.
C—31 to 60 inches; yellowish brown (10YR 5/6) sand; single grain; loose; few roots; less than 5 percent rock fragments; moderately acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 16 to 31 inches. The content of rock fragments ranges from 0 to 10 percent throughout the soils. Reaction ranges from very strongly acid to moderately acid in the solum and is moderately acid or slightly 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 loamy fine sand or sand. Some pedons have an Ap horizon. This horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. It is loamy fine sand or sand.

Some pedons have an E horizon. This horizon has hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 1 or 2. It is loamy fine sand or sand.

The Bhs, Bs, and BC horizons are loamy fine sand or sand. The Bhs horizon has hue of 5YR or 7.5YR, value of 4, and chroma of 2. The Bs horizon has hue of 2.5YR to 10YR, value of 4 or 5, and chroma of 4 to 8. The BC horizon has hue of 10YR or 7.5YR, value of 5 or 6, and chroma of 4 to 6.

The C horizon has hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 2 to 6.

Adrian Series

The Adrian series consists of very deep, very poorly drained soils. These soils formed in organic deposits underlain by sandy glaciofluvial deposits. They are in bogs and swamps on valley trains, terraces, and flood plains. Permeability is moderately slow to moderately rapid in the organic layers and rapid in the sandy substratum. Slopes range from 0 to 2 percent.

Adrian soils are geographically associated with the very poorly drained Linwood, Peacham, Pinnebog, and Scarboro soils and the poorly drained Rippowam and Walpole soils. Adrian soils have a sandy substratum, whereas Linwood soils have a loamy substratum. Pinnebog soils are organic to a depth of more than 51 inches. Peacham and Scarboro soils are organic to a depth of less than 16 inches. Rippowam and Walpole soils do not have organic layers.

Typical pedon of Adrian muck, in a swamp, in the town of Rutland, 0.9 mile due west of the intersection of Post Road and U.S. Route 4:

Oa1—0 to 9 inches; muck (sapric material), black (5YR 2/1) broken face and rubbed; about 15 percent fibers unrubbed, 13 percent rubbed; massive; nonsticky; primarily woody fibers; neutral; clear smooth boundary.
Oa2—9 to 19 inches; muck (sapric material), black (5YR 2/1) broken face and rubbed; about 42 percent fibers unrubbed, 20 percent rubbed; moderate medium subangular blocky structure; nonsticky; primarily woody fibers; neutral; abrupt smooth boundary.
2C—19 to 60 inches; light brownish gray (2.5Y 6/2) loamy sand; massive; friable; neutral.

The depth to bedrock is more than 60 inches. The organic material is 16 to 51 inches thick. Reaction ranges from moderately acid to neutral throughout the soils.

The surface tier is neutral in hue or has hue of 5YR to 10YR. It has value of 2 and chroma of 0 or 1. The material is mostly muck (sapric material), but layers of mucky peat (hemic material) and peat (fibric material) are in some pedons.

The subsurface tier has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. The material is mostly muck (sapric material), but layers of mucky peat (hemic

material) and peat (fibric material) are in some pedons. The content of mineral material ranges from 0 to 45 percent.

The 2C horizon has hue of 2.5Y or 5Y, value of 3 to 6, and chroma of 1 to 3. It is loamy sand, sand, or the gravelly analogs of those textures. The content of rock fragments ranges from 0 to 30 percent.

Amenia Series

The Amenia series consists of very deep, moderately well drained soils. These soils formed in calcareous, loamy glacial till on till plains, knolls, and hills. Permeability is moderate in upper part of the pedon and slow in the lower part. Slopes range from 3 to 25 percent.

Amenia soils in this survey area are only in undifferentiated groups with Georgia. Amenia soils are associated with the well drained and somewhat excessively drained Farmington soils, the somewhat excessively drained Galoo soils, the well drained and moderately well drained Galway soils, the moderately well drained Georgia soils, the very poorly drained and poorly drained Lyons soils, the poorly drained and somewhat poorly drained Massena soils, and the well drained Paxton and Stockbridge soils. Amenia soils are very deep to bedrock, whereas Galoo soils are very shallow, Farmington soils are shallow, and Galway soils are moderately deep. Unlike Georgia soils, Amenia soils have carbonates within a depth of 40 inches. They are less gray in the B horizon than Massena and Lyons soils. Unlike Paxton and Stockbridge soils, Amenia soils have gray mottles within a depth of 24 inches.

Typical pedon of Amenia loam, in an area of Georgia and Amenia soils, 3 to 8 percent slopes, used as hayland, in the town of Tinmouth, 0.7 mile south of the Tinmouth-Clarendon town line and 0.5 mile west of the Clarendon River:

Ap—0 to 8 inches; dark brown (10YR 3/3) loam; moderate fine and medium granular structure; friable; many roots; 13 percent rock fragments; moderately acid; abrupt smooth boundary.

Bw1—8 to 17 inches; olive brown (2.5Y 4/4) gravelly loam; weak fine subangular blocky structure; friable; common roots; 20 percent rock fragments; slightly acid; clear smooth boundary.

Bw2—17 to 24 inches; olive brown (2.5Y 4/4) gravelly fine sandy loam; common medium distinct grayish brown (2.5Y 5/2), dark brown (7.5YR 4/4), and yellowish brown (10YR 5/6) fine sandy loam; weak fine subangular blocky structure; friable; few roots; 20 percent rock fragments; neutral; abrupt smooth boundary.

C1—24 to 46 inches; dark grayish brown (2.5Y 4/2) gravelly fine sandy loam; moderate medium platy structure; firm; 15 percent rock fragments; violent effervescence; moderately alkaline; gradual smooth boundary.

C2—46 to 60 inches; dark grayish brown (2.5Y 4/2) fine sandy loam; moderate medium platy structure; firm; 10 percent rock fragments; violent effervescence; moderately alkaline.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 18 to 34 inches. The content of rock fragments ranges from 5 to 25 percent. The soils are loam, silt loam, fine sandy loam, or the gravelly analogs of those textures. Reaction ranges from moderately acid to neutral in the solum and is mildly alkaline or moderately alkaline in the substratum.

The Ap horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. Some pedons have an A horizon. This horizon has hue of 10YR, value of 2 or 3, and chroma of 2.

The Bw horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 2 to 6. Chroma of 2 is at a depth of more than 20 inches.

The C horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 2 to 4.

Aquents

Aquents consist of very deep, very poorly drained soils. These soils formed in loamy lacustrine deposits. They are covered with shallow water most of the year and support water-tolerant marsh grasses and rushes. The soils border Lake Champlain and other areas of open water. Slopes are 0 to 1 percent.

Aquents in this survey area are only in an undifferentiated group with Histosols. Aquents are geographically associated with the very poorly drained Histosols, the somewhat poorly drained Kingsbury soils, the excessively drained Hinckley soils, and the moderately well drained Vergennes soils. Unlike Histosols, Aquents do not have an organic surface layer. They are more gray in the subsoil than the Kingsbury, Hinckley, and Vergennes soils.

Because of the variability of the Aquents, a typical pedon is not described. These soils have a mineral surface layer that is 4 to 10 inches thick. Some pedons have a mucky layer above the mineral surface layer. The mucky layer is 3 to 10 inches thick. The surface layer is underlain by loamy, stratified material. Some pedons have layers of muck or mucky peat. The depth to bedrock is more than 60 inches. Reaction is slightly acid or neutral.

Belgrade Series

The Belgrade series consists of very deep, moderately well drained soils. These soils formed in loamy glaciolacustrine and glaciofluvial deposits on lake plains and terraces. Permeability is moderate in the upper part of the pedon and slow to moderately rapid in the lower part. Slopes range from 0 to 15 percent.

Belgrade soils formed in material similar to that of the very poorly drained Birdsall soils, the poorly drained Canandaigua and Raynham soils, the moderately well drained Eldridge and Tisbury soils, and the well drained Hartland soils. Belgrade soils are less gray in the B horizon than Birdsall, Canandaigua, and Raynham soils. Unlike Hartland soils, Belgrade soils have gray mottles within a depth of 24 inches. They are finer textured in the solum than Eldridge and Tisbury soils.

Typical pedon of Belgrade silt loam, 3 to 8 percent slopes, in a cornfield, in the town of Rutland, 330 yards south of the Rutland city corporate boundary and 250 yards east of Otter Creek:

Ap—0 to 8 inches; dark brown (10YR 4/3) silt loam; moderate, medium and coarse granular structure; friable; common roots; slightly acid; abrupt smooth boundary.

Bw1—8 to 18 inches; yellowish brown (10YR 5/4) silt loam; moderate medium subangular blocky structure; friable; few roots; slightly acid; abrupt smooth boundary.

Bw2—18 to 32 inches; yellowish brown (10YR 5/6) silt loam; many medium prominent strong brown (7.5YR 5/8) and light brownish gray (10YR 6/2) and medium faint strong brown (7.5YR 5/6) mottles; moderate fine and medium subangular blocky structure; friable; slightly acid; abrupt smooth boundary.

C—32 to 60 inches; stratified brown (10YR 5/3), yellowish brown (10YR 5/8), grayish brown (2.5Y 5/2), and reddish brown (5YR 4/4) silt loam; weak thick platy structure; firm, slightly sticky and slightly plastic; slightly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 20 to 35 inches. Reaction ranges from very strongly acid to neutral in the solum and is slightly acid or neutral in the substratum.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 2 to 4. It is silt loam or very fine sandy loam.

The B horizon has hue of 10YR to 5Y and value of 4 or 5. It has chroma of 4 to 6 in the upper part and chroma of 2 to 6 in the lower part. It is silt loam or very fine sandy loam.

The C horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 1 to 4. It mainly is silt loam or very fine sandy loam. Some pedons have strata of sand, fine sand, loamy fine sand, silty clay loam, or silt below a depth of 40 inches.

Benson Series

The Benson series consists of shallow, somewhat excessively drained or excessively drained soils. These soils formed in calcareous, loamy glacial till on knolls and hills. Permeability is moderate. Slopes range from 3 to 50 percent.

Benson soils are geographically associated with the well drained and somewhat excessively drained Farmington soils, the well drained and moderately well drained Galway soils, the somewhat poorly drained Kingsbury soils, and the moderately well drained Vergennes soils. Benson soils have more rock fragments in the solum than Farmington soils. Benson soils are shallow to bedrock, whereas Galway soils are moderately deep and Kingsbury and Vergennes soils are very deep and clayey.

Typical pedon of Benson very channery loam, 15 to 25 percent slopes, in a pasture, in the town of Benson, 1 mile north of the West Haven town line on Temple Road and 0.5 mile east of Temple Road:

A—0 to 4 inches; dark brown (10YR 4/3) very channery loam; weak very fine granular structure; very friable; many roots; 50 percent rock fragments; slightly acid; clear wavy boundary.

Bw—4 to 8 inches; yellowish brown (10YR 5/4) very channery loam; weak fine granular structure; very friable; many roots; 60 percent rock fragments; slightly acid; clear wavy boundary.

Cr—8 to 19 inches; yellowish brown (10YR 5/4) extremely channery loam; massive; very friable; common roots; 70 percent rock fragments; slightly acid.

R—19 inches; rippable calcareous shale bedrock.

The depth to bedrock ranges from 10 to 20 inches. The content of rock fragments ranges from 5 to 50 percent in the A horizon and from 20 to 70 percent in individual subhorizons of the B and C horizons. The soils are channery, very channery, or extremely channery loam or silt loam. Some subhorizons are silt loam, but the control section averages more than 35 percent rock fragments. Reaction ranges from slightly acid to mildly alkaline.

The A horizon has hue of 7.5YR or 10YR, value of 3 or 4, and chroma of 2 to 4. The Bw horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 6. The Cr horizon has hue of 10YR to 2.5Y, value of 3 to

5, and chroma of 3 to 6. The R horizon is calcareous shale or calcareous slate.

Berkshire Series

The Berkshire series consists of very deep, well drained soils. These soils formed in loamy glacial till on knolls, hills, and mountains. Permeability is moderate or moderately rapid. Slopes range from 3 to 75 percent.

Berkshire soils are geographically associated with the excessively drained Colton soils; the somewhat excessively drained Lyman soils; the poorly drained Lyme soils; the well drained Duxbury, Houghtonville, Marlow, and Tunbridge soils; the moderately well drained Sunapee soils; and Udorthents. Berkshire soils are very deep to bedrock, whereas Lyman soils are shallow and Tunbridge soils are moderately deep. Unlike Lyme and Sunapee soils, Berkshire soils do not have mottles in the B horizon. They have a lower content of rock fragments in the substratum than Colton and Duxbury soils and have a spodic horizon that is thinner than that of Houghtonville soils. Berkshire soils are moderately permeable or moderately rapidly permeable throughout, whereas Marlow soils are moderately slowly permeable or slowly permeable in the substratum. Udorthents lack any soil development.

Typical pedon of Berkshire gravelly fine sandy loam, in a forested area of Tunbridge-Berkshire complex, 35 to 60 percent slopes, rocky, in the town of Sherburne, 2,000 feet northeast of the southern intersection of U.S. Route 4, Vermont Route 100, and Mission Chapel Road:

Oi—1 inch to 0; undecomposed leaves, needles, and twigs.

A—0 to 1 inch; black (10YR 2/1) gravelly fine sandy loam; weak medium granular structure; friable; many fine and very fine roots; 18 percent rock fragments; very strongly acid; abrupt smooth boundary.

E—1 to 5 inches; brown (10YR 5/3) gravelly fine sandy loam; weak medium granular structure; friable; many fine and very fine roots; 18 percent rock fragments; strongly acid; abrupt wavy boundary.

Bs1—5 to 7 inches; yellowish red (5YR 4/6) gravelly fine sandy loam; weak very fine subangular blocky structure; friable; many fine and very fine roots; 15 percent rock fragments; weakly smeary; strongly acid; abrupt irregular boundary.

Bs2—7 to 11 inches; dark yellowish brown (10YR 4/6) gravelly fine sandy loam; weak very fine and fine subangular blocky structure; friable; common fine and few medium roots; 15 percent rock fragments; weakly smeary; strongly acid; clear wavy boundary.

BC1—11 to 22 inches; olive brown (2.5Y 4/4) gravelly fine sandy loam; weak very fine and fine subangular blocky structure; friable; common fine and few medium roots; 15 percent rock fragments; strongly acid; clear smooth boundary.

BC2—22 to 32 inches; light olive brown (2.5Y 5/4) gravelly fine sandy loam; weak fine subangular blocky structure; friable; common fine and few medium roots; 20 percent rock fragments; strongly acid; clear wavy boundary.

C—32 to 60 inches; olive (5Y 5/3) gravelly fine sandy loam; massive; friable; few fine roots; 20 percent rock fragments; medium acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 20 to 36 inches. The content of rock fragments ranges from 5 to 50 percent in the solum and from 10 to 35 percent in the substratum. Reaction ranges from extremely acid to moderately acid.

The A horizon has hue of 5YR to 10YR or is neutral in hue. It has value of 2 or 3 and chroma of 0 to 2. It is fine sandy loam, silt loam, or the gravelly analogs of those textures. Some pedons have an Ap horizon. This horizon has hue of 5YR to 10YR and value and chroma of 2 to 4.

The E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 to 3. It is fine sandy loam, silt loam, or the gravelly analogs of those textures.

Some pedons have a Bh horizon. This horizon has hue of 2.5YR to 10YR, value of 2 or 3, and chroma of 2. Some pedons have a Bhs horizon. This horizon has hue of 5YR to 10YR, value of 4, and chroma of 3. The Bs horizon has hue of 5YR to 10YR, value of 4, and chroma of 4 to 6. The Bh, Bhs, and Bs horizons are sandy loam, fine sandy loam, loam, silt loam, or the gravelly analogs of those textures.

The BC horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 or 4. It is sandy loam, fine sandy loam, loam, or the gravelly analogs of those textures.

The C horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 4. It is sandy loam, fine sandy loam, loam, or the gravelly analogs of those textures.

Birdsall Series

The Birdsall series consists of very deep, very poorly drained soils. These soils formed in organic deposits and in the underlying glaciolacustrine and glaciofluvial deposits. The soils are in depressions, swamps, and marshes on lake plains, till plains, and valley trains. Permeability is moderate or moderately slow in the upper part of the pedon and slow in the lower part. Slopes range from 0 to 2 percent.

Birdsall soils are geographically associated with the moderately well drained Belgrade soils, the poorly

drained Canandaigua and Raynham soils, and the very poorly drained Linwood soils. Birdsall soils are more gray in the B horizon than Belgrade and Raynham soils, have less clay in the particle-size control section than Canandaigua soils, and have an organic surface layer that is thinner than that of Linwood soils.

Typical pedon of Birdsall muck in a swamp, in the town of Rutland, 0.4 mile east of Otter Creek and 0.25 mile north of the Clarendon town line:

Oi—1 inch to 0; slightly decomposed reed debris and leaves.
Oa—0 to 6 inches; muck (sapric material), very dark grayish brown (10YR 3/2) broken face and rubbed; many roots; moderately acid; abrupt smooth boundary.
Ag—6 to 13 inches; very dark grayish brown (2.5Y 3/2) silt loam; few fine prominent yellowish brown (10YR 5/6) mottles; weak fine granular structure; friable; many roots; moderately acid; clear smooth boundary.
Bg—13 to 28 inches; olive gray (5Y 5/2) silt loam; common fine prominent yellowish brown (10YR 5/6) mottles; massive; friable; few roots; slightly acid; abrupt smooth boundary.
Cg—28 to 60 inches; olive gray (5Y 4/2) silt loam; massive; firm; slightly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 14 to 20 inches. The content of rock fragments is less than 3 percent. Reaction ranges from very strongly acid to moderately acid in the A horizon and from strongly acid to neutral in the Bg and Cg horizons.

The A horizon has hue of 10YR or 2.5Y, value of 1 to 3, and chroma of 1 or 2. It is silt loam or very fine sandy loam.

The Bg horizon has hue of 10YR to 5Y or is neutral in hue. It has value of 3 to 6 and chroma of 0 to 2. It is silt loam or very fine sandy loam.

The Cg horizon has hue of 2.5Y or 5Y, value of 4 to 6, and chroma of 1 or 2. Varves of silt loam or very fine sandy loam are 0 to 3 inches thick. The texture when mixed is silt, silt loam, or very fine sandy loam. Lenses of sand, coarse sand, and their gravelly or very gravelly analogs range from 1 to 3 inches thick.

Bomoseen Series

The Bomoseen series consists of moderately well drained soils that are shallow or moderately deep to dense basal till and very deep to bedrock. These soils formed in compact, loamy glacial till on drumlins, knolls, hills, and mountains. Permeability is moderate in the upper part of the pedon and very slow in the lower part. Slopes range from 2 to 40 percent.

Bomoseen soils in this survey area are only in undifferentiated groups with Pittstown soils. Bomoseen soils are geographically associated with the well drained Dutchess and Macomber soils, the somewhat poorly drained and poorly drained Massena soils, the excessively drained Hubbardton and Quonset soils, the very poorly drained and poorly drained Lyons soils, the moderately well drained Pittstown soils, and the somewhat excessively drained Taconic and Warwick soils. Unlike Dutchess, Macomber, Quonset, Taconic, and Warwick soils, Bomoseen soils have gray mottles within a depth of 24 inches. Hubbardton soils are very shallow to bedrock. Bomoseen soils are less gray in the B horizon than Massena and Lyons soils. They are less acid than Pittstown soils.

Typical pedon of Bomoseen channery loam, in an area of Bomoseen and Pittstown soils, 8 to 15 percent slopes, used as hayland, in the town of Middletown Springs, 6,500 feet northeast of the village of Middletown Springs and 4,800 feet north of the intersection of Town Road 9 and Vermont Route 140, on the east side of Town Road 9:

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) channery loam; grayish brown (10YR 5/2) dry; moderate very fine to fine granular structure; friable; many roots; 15 percent rock fragments; neutral; abrupt wavy boundary.
Bw1—8 to 11 inches; light olive brown (2.5Y 5/4) channery fine sandy loam; moderate very fine to fine granular structure; friable; many roots; 15 percent rock fragments; neutral; clear wavy boundary.
Bw2—11 to 17 inches; olive brown (2.5Y 4/4) channery fine sandy loam; common fine faint light olive brown (2.5Y 5/4) and distinct light olive brown (2.5Y 5/6) mottles; moderate fine granular structure; friable; many roots; 15 percent rock fragments; neutral; clear wavy boundary.
Bw3—17 to 21 inches; light olive brown (2.5Y 5/4) channery fine sandy loam; few fine prominent brown (7.5YR 4/2) and light brownish gray (5Y 6/2) mottles; weak very fine to fine granular structure; friable; common roots; 15 percent rock fragments; neutral; clear wavy boundary.
BC—21 to 27 inches; olive (5Y 5/4) channery silt loam; few fine prominent dark yellowish brown (10YR 4/4), light olive brown (2.5Y 5/6) and distinct light olive gray (5Y 6/2) mottles; weak thick platy structure; friable; few roots; 15 percent rock fragments; neutral; clear wavy boundary.
Cd1—27 to 35 inches; olive gray (5Y 4/2) and olive (5Y

4/3) channery silt loam; common fine distinct brown (7.5YR 4/2) and few fine faint olive (5Y 5/4) mottles; weak thick platy structure; firm; few roots; 15 percent rock fragments; neutral; diffuse wavy boundary.

Cd2—35 to 60 inches; olive (5Y 5/3) channery silt loam; common fine distinct brown (7.5YR 4/2), common fine distinct light olive brown (2.5Y 5/4), and few fine faint olive gray (5Y 5/2) and distinct gray (5Y 5/1) mottles; massive; firm; 15 percent rock fragments; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 15 to 35 inches. The content of rock fragments ranges from 5 to 40 percent in individual subhorizons of the solum and from 10 to 50 percent in individual subhorizons in the substratum. The texture is silt loam, loam, very fine sandy loam, fine sandy loam, or the channery, very channery, gravelly, or very gravelly analogs of those textures. Reaction ranges from moderately acid to neutral in the A and B horizons and from slightly acid to moderately alkaline in the Cd horizon.

The A horizon has hue of 10YR, value of 3 to 5, and chroma of 2 to 4.

The upper part of the Bw horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 2 to 6. The lower part of the Bw horizon has hue of 10YR, 2.5Y, or 5Y, value of 4 or 5, and chroma of 1 to 4.

The Cd horizon has hue of 10YR, 2.5Y, or 5Y, value of 4 or 5, and chroma of 1 to 4.

Brayton Series

The Brayton series consists of somewhat poorly drained and poorly drained soils that are shallow or moderately deep to dense basal till and very deep to bedrock. These soils formed in compact, loamy glacial till on knolls. Permeability is moderately rapid or moderate in the upper part of the pedon and slow or very slow in the lower part. Slopes range from 8 to 15 percent.

Brayton soils are geographically associated with the poorly drained and somewhat poorly drained Cabot soils, the well drained Marlow soils, the very poorly drained Peacham soils, and the moderately well drained Peru and Sunapee soils. Brayton soils are less gray in the B horizon than Cabot and Peacham soils and are more gray in the B horizon than Marlow, Peru, and Sunapee soils.

Typical pedon of Brayton loam, 8 to 15 percent slopes, very stony, in a forested area, in the town of Mount Holly, 0.9 mile south of Route 103 and 1,500 feet west of the road from Mount Holly to Belmont:

A—0 to 7 inches; black (10YR 2/1) loam; weak medium granular structure; friable; common roots; 10 percent rock fragments; moderately acid; clear smooth boundary.

Bg—7 to 15 inches; olive gray (5Y 5/2) gravelly sandy loam; many medium prominent strong brown (7.5YR 4/6) and many medium faint olive (5Y 5/3) mottles; weak medium subangular blocky structure; firm; few roots; 15 percent rock fragments; strongly acid; clear smooth boundary.

Cd—15 to 60 inches; olive gray (5Y 5/3) gravelly sandy loam; many medium prominent dark yellowish brown (10YR 4/6) mottles; massive; very firm; 20 percent rock fragments; slightly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 10 to 25 inches. The content of rock fragments ranges from 5 to 35 percent. The soils are loam, fine sandy loam, sandy loam, or the gravelly or cobbly analogs of those textures. Reaction ranges from very strongly acid to moderately acid in the A horizon, strongly acid to slightly acid in the B horizon and, moderately acid to slightly acid in the Cd horizon.

The A horizon has hue of 10YR or 2.5Y, value of 2 or 3, and chroma of 1 or 2.

The Bw horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 to 4.

Some pedons have a BC horizon. This horizon has hue of 2.5Y, value of 5, and chroma of 2.

The Cd horizon has hue of 2.5Y or 5Y, value of 4 to 6, and chroma of 1 to 3.

Cabot Series

The Cabot series consists of very deep, poorly drained and somewhat poorly drained soils that are shallow or moderately deep to dense basal till and very deep to bedrock. These soils formed in compact, loamy glacial till on till plains, swells, and knolls. Permeability is moderate in the upper part of the pedon and slow or very slow in the lower part. Slopes range from 0 to 8 percent.

Cabot soils are geographically associated with the poorly drained and somewhat poorly drained Brayton soils, the well drained Marlow soils, the very poorly drained Peacham soils, and the moderately well drained Peru and Sunapee soils. Cabot soils are more gray in the B horizon than Brayton, Marlow, Peru, and Sunapee soils. Unlike Peacham soils, Cabot soils do not have a thick organic surface layer.

Typical pedon of Cabot gravelly fine sandy loam, 0 to 8 percent slopes, very stony, in a forested area, in the town of Sherburne, 2,300 feet north of U.S. Route 4 and 200 feet east of the Mendon town line:

Oi—6 to 4 inches; slightly decomposed leaves, twigs, and roots.
Oe—4 inches to 0; moderately decomposed organic matter; many roots.
A—0 to 6 inches; very dark gray (10YR 3/1) gravelly fine sandy loam; weak medium granular structure; friable; many roots; 20 percent rock fragments; slightly acid; clear smooth boundary.
Bg—6 to 12 inches; grayish brown (10YR 5/2) fine sandy loam; few fine prominent yellowish brown (10YR 5/8) and few fine faint light gray (10YR 7/1) mottles; weak medium subangular blocky structure; friable; common roots; 10 percent rock fragments; slightly acid; clear smooth boundary.
Cdg—12 to 60 inches; olive gray (5Y 5/2) gravelly fine sandy loam; many coarse prominent strong brown (7.5YR 5/8) mottles; massive; very firm; 20 percent rock fragments; slightly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 12 to 24 inches. The content of rock fragments ranges from 5 to 30 percent. Reaction ranges from strongly acid to neutral in the solum and from moderately acid to neutral in the substratum.

The A horizon has hue of 10YR, value of 2 or 3, and chroma of 1. It is silt loam, loam, fine sandy loam, or the gravelly analogs of those textures.

The Bg horizon is neutral or has hue of 10YR to 5Y, value of 2 to 5, and chroma of 1 or 2. It is fine sandy loam, sandy loam, or the gravelly analogs of those textures.

The Cdg horizon has hue of 2.5Y or 5Y, value of 5, and chroma of 2 to 4. It is fine sandy loam, sandy loam, or the gravelly analogs of those textures.

Canandaigua Series

The Canandaigua series consists of very deep, very poorly drained soils. These soils formed in loamy glaciolacustrine and glaciofluvial deposits on lake plains and terraces. Permeability is moderate in the upper part of the pedon and moderately slow in the lower part. Slopes range from 0 to 3 percent.

Canandaigua soils formed in material similar to that of the moderately well drained Belgrade soils, the very poorly drained Birdsall soils, the well drained Hartland soils, and the poorly drained Enosburg and Raynham soils. Canandaigua soils are more gray in the B horizon than Belgrade, Hartland, and Raynham soils. They have more clay in the particle-size control section than Birdsall soils. They are finer textured in the upper part of the substratum than Enosburg soils.

Typical pedon of Canandaigua silt loam, in an area of hayland, in the town of Poultney, 650 yards southeast of the Poultney River on Vermont Route 30, about 270 yards south of the road:

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; many medium prominent dark reddish brown (5YR 3/4) stains; moderate fine angular blocky structure; friable moist, nonsticky, slightly plastic wet; many roots; slightly acid; abrupt wavy boundary.
Bg1—8 to 12 inches; grayish brown (2.5Y 5/2) silt loam; many weak distinct light olive brown (2.5Y 5/4) mottles; moderate very coarse prismatic structure breaking to weak fine angular blocky structure; friable, sticky and plastic; few roots; many manganese nodules; neutral; abrupt broken boundary.
Bg2—12 to 25 inches; greenish gray (5GY 5/1) silty clay loam; common medium prominent yellowish brown (10YR 5/6) and dark grayish brown (2.5Y 4/2) mottles; moderate very coarse prismatic structure breaking to moderate thick platy; firm, sticky and plastic; slight effervescence; neutral; abrupt broken boundary.
Cg1—25 to 56 inches; dark greenish gray (5GY 4/1) and olive brown (2.5Y 4/4) varves of silty clay loam; dark reddish brown (5YR 3/2) manganese stains; moderate very coarse prismatic structure; firm, sticky and plastic; violent effervescence; silt films; moderately alkaline; diffuse wavy boundary.
Cg2—56 to 60 inches; dark greenish gray (5GY 4/1) and greenish gray (5GY 5/1) varves of silty clay loam; dark reddish brown (5YR 3/2) manganese stains; moderate very coarse prismatic structure; firm, sticky and plastic; violent effervescence; strongly alkaline; diffuse wavy boundary.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 20 to 40 inches. The content of rock fragments is less than 10 percent. Reaction ranges from moderately acid to mildly alkaline in the A horizon, slightly acid to mildly alkaline in the B horizon, and neutral to moderately alkaline in the C horizon.

The A horizon has hue of 10YR or 2.5Y or is neutral in hue. It has value of 2 or 3 and chroma of 0 to 2. It is silt loam, loam, or very fine sandy loam.

The Bg horizon has hue of 5GY, 2.5Y, or 5Y or is neutral in hue. It has value of 5 and chroma of 0 to 2. It is very fine sandy loam, silt loam, or silty clay loam.

The Cg horizon has hue of 5GY, 2.5Y, or 5Y or is neutral in hue. It has value of 3 to 6 and chroma of 0 to 2. Varves have hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 1 to 4. This horizon is silt loam or silty clay loam.

Castile Series

The Castile series consists of very deep, moderately well drained soils. These soils formed in loamy glaciofluvial deposits underlain by sandy glaciofluvial deposits on kames, stream terraces, deltas, and valley trains. Permeability is moderate or moderately rapid in the upper part of the pedon and rapid or very rapid in the lower part. Slopes range from 0 to 3 percent.

Castile soils are geographically associated with the well drained Dutchess soils, the poorly drained and somewhat poorly drained Fredon soils, the excessively drained Quonset soils, the moderately well drained Tisbury soils, and the somewhat excessively drained Warwick soils. Unlike Dutchess, Quonset, and Warwick soils, Castile soils have gray mottles within a depth of 24 inches. Castile soils are less gray in the B horizon than Fredon soils and have more rock fragments in the solum than Tisbury soils.

Typical pedon of Castile gravelly fine sandy loam, 0 to 3 percent slopes, in an area of hayland, in the town of Ira, 5.5 miles south of West Rutland on Vermont Route 133, about 95 yards east of the highway:

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) gravelly fine sandy loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; very friable; many roots; 30 percent rock fragments; moderately acid; abrupt smooth boundary.

Bw1—8 to 12 inches; dark yellowish brown (10YR 4/4) very gravelly fine sandy loam; weak medium granular structure; very friable; many roots; 55 percent rock fragments; moderately acid; clear smooth boundary.

Bw2—12 to 26 inches; dark brown (7.5YR 4/4) very gravelly fine sandy loam; few medium prominent grayish brown (2.5Y 5/2) and brownish yellow (10YR 6/8) mottles; weak medium granular structure; very friable; many roots; 55 percent rock fragments; moderately acid; abrupt smooth boundary.

2C—26 to 60 inches; dark grayish brown (2.5Y 4/2) extremely gravelly loamy sand; many medium prominent black (N/0) manganese stains; single grain; loose; few roots; 70 percent rock fragments; moderately acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 24 to 30 inches. The content of rock fragments ranges from 20 to 60 percent in the solum and from 35 to 70 percent in the substratum. Reaction is moderately acid in the solum and ranges from moderately acid to neutral in the substratum.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. It is gravelly sandy loam, gravelly fine sandy loam, or gravelly silt loam.

The Bw horizon has hue of 7.5YR to 5Y, value of 4 or 5, and chroma of 3 or 4. It is gravelly or very gravelly sandy loam, gravelly or very gravelly fine sandy loam, or gravelly or very gravelly silt loam.

Some pedons have a BC horizon. This horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4.

The C horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 4. It is very gravelly loamy sand or very gravelly sand.

Colton Series

The Colton series consists of very deep, excessively drained soils. These soils formed in loamy and sandy glaciofluvial deposits on kames, stream terraces, deltas, eskers, and valley trains. Permeability is rapid in the upper part of the pedon and very rapid in the lower part. Slopes range from 2 to 50 percent.

Colton soils in this survey area are only in complexes with Duxbury soils or in an association with Berkshire soils. Colton soils are geographically associated with the well drained and excessively drained Adams soils, the well drained Berkshire and Duxbury soils, the moderately well drained Sheepscot soils, and Udipsamments. Colton soils have more rock fragments in the substratum than Adams and Berkshire soils and are coarser textured in the solum than Duxbury soils. Unlike Sheepscot soils, Colton soils do not have mottles within a depth of 40 inches. Udipsamments lack any soil development.

Typical pedon of Colton very gravelly fine sandy loam, in a forested area of Colton-Duxbury complex, 2 to 8 percent slopes, very stony, in the town of Shrewsbury, 375 yards north of the intersection of U.S. Route 7 and Vermont Route 103, on U.S. Route 7, and 1.25 miles east of the road:

Oi—2 inches to 1 inch; slightly decomposed oak and maple leaves, twigs, and branches.

Oe—1 inch to 0; moderately decomposed organic matter and roots.

A—0 to 2 inches; black (5YR 2/1) very gravelly fine sandy loam; weak very fine granular structure; friable; many roots; 35 percent rock fragments; very strongly acid; abrupt smooth boundary.

E—2 to 6 inches; light brownish gray (10YR 6/2) very gravelly sandy loam; weak fine granular structure; friable; many roots; 45 percent rock fragments; extremely acid; abrupt wavy boundary.

Bs—6 to 22 inches; reddish brown (5YR 4/4) extremely gravelly sand; weak fine granular structure; friable; many to common roots; 70 percent rock fragments;

moderately smeary; very strongly acid; clear wavy boundary.
BC—22 to 32 inches; brown (7.5YR 4/4) extremely gravelly loamy sand; single grain; loose; common roots; 70 percent rock fragments; very strongly acid; gradual wavy boundary.
C—32 to 60 inches; yellowish brown (10YR 5/6) extremely gravelly sand; single grain; loose; 70 percent rock fragments; strongly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 18 to 36 inches. The content of rock fragments ranges from 15 to 70 percent in the solum and 50 to 70 percent in the substratum. Reaction is extremely acid or very strongly acid in the A and E horizons, is very strongly acid or strongly acid in the B horizon, and ranges from very strongly acid to moderately acid in the C horizon.

The A horizon has hue of 5YR to 10YR, value of 2 to 4, and chroma of 2 or 3. It is gravelly or very gravelly loamy sand, sandy loam, or fine sandy loam.

The E horizon has hue of 5YR to 10YR, value of 5 or 6, and chroma of 1 or 2. It is gravelly or very gravelly loamy sand, sandy loam, or fine sandy loam.

Some pedons have a Bh horizon. This horizon has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 2. Some pedons have a Bhs horizon. This horizon has hue of 5YR to 10YR and value and chroma of 3/3, 3/4, 3/6, or 4/3.

The Bs horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 8. It is gravelly or very gravelly loamy sand or sand.

The BC horizon has hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 3 to 6. It is very gravelly or extremely gravelly sand.

The C horizon has hue of 10YR or 2.5Y, value of 4, and chroma of 3 or 4. It is very gravelly or extremely gravelly sand or coarse sand.

Copake Series

The Copake series consists of very deep, well drained and somewhat excessively drained soils. These soils formed in loamy glaciofluvial deposits underlain by sandy glaciofluvial deposits on kames, stream terraces, deltas, eskers, and valley trains. Permeability is moderate or moderately rapid in the upper part of the pedon and very rapid in the lower part. Slopes range from 2 to 8 percent.

Copake soils are geographically associated with the moderately well drained Georgia soils, the excessively drained Groton and Hinckley soils, and the well drained Stockbridge soils. Copake soils are coarser textured in the substratum than Georgia and Stockbridge soils and have less sand in the particle-size control section than Groton and Hinckley soils.

Typical pedon of Copake gravelly fine sandy loam, 2 to 8 percent slopes, in an area of hayland, in the town of Middletown Springs, 0.6 mile southeast of the intersection of Town Road 4 and Vermont Route 133 and 110 yards west of Vermont Route 133:

Ap—0 to 8 inches; brown (10YR 4/3) gravelly fine sandy loam; moderate medium granular structure; friable; many roots; 30 percent rock fragments; moderately acid; abrupt smooth boundary.
Bw1—8 to 15 inches; yellowish brown (10YR 5/6) gravelly fine sandy loam; weak fine granular structure; very friable; many roots; 30 percent rock fragments; slightly acid; abrupt smooth boundary.
Bw2—15 to 27 inches; light olive brown (2.5Y 5/4) gravelly fine sandy loam; weak fine granular structure; very friable; none to few roots; 30 percent rock fragments; slightly acid; abrupt smooth boundary.
2C—27 to 60 inches; olive (5Y 5/3) very gravelly loamy coarse sand; single grain; loose; 50 percent rock fragments; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 20 to 40 inches. The content of rock fragments ranges from 10 to 35 percent in the solum and from 30 to 65 percent in the substratum. Reaction ranges from very strongly acid to slightly acid in the A horizon, from strongly acid to neutral in the B horizon, and is slightly acid or neutral in the 2C horizon.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. It is loam, silt loam, fine sandy loam, or the gravelly analogs of those textures.

The Bw horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 3 to 6. It is silt loam, loam, fine sandy loam, or the gravelly analogs of those textures.

The 2C horizon has hue of 2.5Y or 5Y, value of 3 to 5, and chroma of 2 to 4. It is gravelly or very gravelly loamy sand, loamy coarse sand, or sand.

Deerfield Series

The Deerfield series consists of very deep, moderately well drained soils. These soils formed in sandy glaciofluvial deposits on kames, stream terraces, deltas, and valley trains. Permeability is rapid in the upper part of the pedon and rapid or very rapid in the lower part. Slopes range from 0 to 4 percent.

Deerfield soils formed in material similar to that of the moderately well drained Eldridge, Elmridge, and Ninigret soils; the very poorly drained Scarboro soils;

the well drained Hartland soils; the moderately well drained and somewhat poorly drained Sudbury soils; the poorly drained Walpole soils; the excessively drained Windsor soils; and Fluvaquents, Udifluvents, and Udipsamments. Deerfield soils are coarser textured in the B horizon than Eldridge, Elmridge, and Ninigret soils and have a lower content of rock fragments in the substratum than Sudbury soils. Unlike Scarboro soils, Deerfield soils do not have a thick organic surface layer. They are less gray in the B horizon than Walpole soils. Unlike Hartland and Windsor soils, Deerfield soils have gray mottles within a depth of 40 inches. Fluvaquents, Udifluvents, and Udipsamments lack any soil development.

Typical pedon of Deerfield loamy sand, 0 to 4 percent slopes, in pasture, in the town of Fair Haven, 430 yards south of Route 4-A on Swamp Road, 95 yards west of Swamp Road, in a pasture:

Ap—0 to 11 inches; dark brown (10YR 3/3) loamy sand, pale brown (10YR 6/3) dry; weak fine granular structure; friable; many roots; slightly acid; abrupt wavy boundary.

Bw1—11 to 19 inches; yellowish brown (10YR 5/6) sand; single grain; loose; common roots; neutral; abrupt smooth boundary.

Bw2—19 to 24 inches; light olive brown (2.5Y 5/4) sand; few fine prominent yellowish brown (10YR 5/6) and distinct light olive brown (2.5Y 5/6) mottles; weak medium subangular blocky structure; very friable; few roots; neutral; clear smooth boundary.

Bw3—24 to 32 inches; yellowish brown (10YR 5/4) sand; few medium distinct yellowish brown (10YR 5/6) and faint light olive brown (2.5Y 5/4) mottles; single grain; loose; few roots; neutral; clear smooth boundary.

C1—32 to 44 inches; olive brown (2.5Y 4/4) sand; few coarse prominent yellowish brown (10YR 5/6) and few fine prominent olive gray (5Y 5/2) mottles; single grain; loose; slightly acid; abrupt smooth boundary.

C2—44 to 50 inches; olive gray (5Y 5/2) sand; common medium prominent yellowish brown (10YR 5/6), light olive brown (2.5Y 5/6), and yellowish red (5YR 4/6) mottles; single grain; loose; slightly acid; abrupt smooth boundary.

C3—50 to 60 inches; olive gray (5Y 5/2) sand; common medium prominent strong brown (7.5YR 5/6) and few coarse prominent reddish gray (5YR 5/2) mottles; single grain; loose; moderately acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 20 to 35 inches. The content of rock fragments ranges from 0 to 15 percent in the solum and from 0 to 20 percent in the substratum. Reaction ranges from very strongly acid to neutral in the solum and from moderately acid to neutral in the substratum.

The A horizon has hue of 10YR, value of 2 to 4, and chroma of 1 to 3. It is fine sandy loam, sandy loam, loamy sand, or sand.

Some pedons have a thin E horizon. Some have a thin Bhs or Bs horizon.

The Bw horizon has hue of 7.5YR to 2.5Y and value and chroma of 3 to 6. It is loamy fine sand, loamy sand, sand, or coarse sand.

The C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 to 4.

Dutchess Series

The Dutchess series consists of very deep, well drained soils. These soils formed in loamy glacial till on till plains, hills, and knolls. Permeability is moderate. Slopes range from 3 to 60 percent.

Dutchess soils are geographically associated with the moderately well drained Bomoseen, Castile, and Pittstown soils; the well drained Macomber soils; the excessively drained Hubbardton and Quonset soils; the somewhat excessively drained Taconic and Warwick soils; and Udorthents. Unlike Bomoseen, Castile, and Pittstown soils. Dutchess soils do not have gray mottles within a depth of 24 inches. They are very deep to bedrock, whereas Macomber soils are moderately deep, Hubbardton soils are very shallow, and Taconic soils are shallow. Dutchess soils have a lower content of rock fragments in the substratum than Warwick soils and are finer textured in the substratum than Quonset soils. Udorthents lack any soil development.

Typical pedon of Dutchess silt loam, 15 to 25 percent slopes, very stony, in a forested area, in the town of Castleton, 1 mile west of East Hubbardton Road and 200 feet south of the Hubbardton town line:

Oi—1 inch to 0; slightly decomposed leaves and twigs.

Oa—0 to 1 inch; highly decomposed organic matter.

A—1 to 2 inches; very dark grayish brown (10YR 3/2) silt loam; weak very fine granular structure; very friable; many roots; 5 percent rock fragments; strongly acid; abrupt smooth boundary.

E—2 to 4 inches; dark grayish brown (10YR 4/2) silt loam; weak medium granular structure; friable; many roots; 5 percent rock fragments; strongly acid; abrupt wavy boundary.

Bw1—4 to 10 inches; yellowish brown (10YR 5/4) silt loam; weak medium granular structure; friable; many roots; 5 percent rock fragments; strongly acid; abrupt wavy boundary.

Bw2—10 to 20 inches; brown (10YR 5/3) channery silt loam; weak moderate subangular blocky structure;

friable; common roots; 20 percent rock fragments; moderately acid; clear wavy boundary.
Bw3—20 to 26 inches; brown (10YR 4/3) channery silt loam; weak medium subangular blocky structure; friable; few roots; 20 percent rock fragments; moderately acid; abrupt wavy boundary.
C—26 to 60 inches; olive (5Y 4/3) very channery fine sandy loam; weak medium subangular blocky structure; friable; few roots; 35 percent rock fragments; slightly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 20 to 40 inches. The content of rock fragments ranges from 5 to 35 percent in the solum and from 20 to 45 percent in the substratum. Reaction ranges from very strongly acid to moderately acid in the solum and from strongly acid to slightly acid in the substratum.

The A horizon has hue of 10YR or 2.5Y, value of 2 to 4, and chroma of 2 or 3. It is loam, silt loam, or the gravelly or channery analogs of those textures. Some pedons have an Ap horizon.

The upper part of the Bw horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 6. The lower part has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 6. This horizon is loam, silt loam, or the channery or gravelly analogs of those textures.

The C horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 to 4. It is channery, very channery, gravelly, or very gravelly silt loam, loam, fine sandy loam, or sandy loam.

Duxbury Series

The Duxbury series consists of very deep, well drained soils. These soils formed in loamy glaciofluvial deposits underlain by sandy glaciofluvial deposits on kames, stream terraces, deltas, eskers, and valley trains. Permeability is moderately rapid in the upper part of the pedon and rapid or very rapid in the lower part. Slopes range from 2 to 50 percent.

Duxbury soils in this survey area are only in complexes with Colton soils. Duxbury soils are geographically associated with the well drained and excessively drained Adams soils, the well drained Berkshire soils, the excessively drained Colton soils, the poorly drained Lyme soils, the moderately well drained Sheepscot soils, and Udorthents and Udipsamments. Duxbury soils have more rock fragments in the substratum than Adams, Berkshire, and Lyme soils and are finer textured in the solum than Colton soils. Unlike Sheepscot soils, Duxbury soils do not have mottles within a depth of 40 inches. Udorthents and Udipsamments lack any soil development.

Typical pedon of Duxbury fine sandy loam, in a forested area of Colton-Duxbury complex, 2 to 8 percent slopes, very stony, in the town of Rutland, 0.7 mile north of the intersection of Chittenden Road and Blueberry Lane, 650 yards west of Blueberry Lane:

Oi—2 inches to 1 inch; slightly decomposed leaves.
Oe—1 inch to 0; moderately decomposed leaves.
E—0 to 1 inch; pinkish gray (7.5YR 6/2) fine sandy loam, pinkish gray (7.5YR 7/2) dry; weak fine granular structure; very friable; common roots; 2 percent rock fragments; strongly acid; broken irregular boundary.
Bh—1 to 2 inches; dark brown (7.5YR 3/2) fine sandy loam; weak fine granular structure; very friable; many roots; 2 percent rock fragments; weakly smeary; strongly acid; abrupt wavy boundary.
Bs—2 to 10 inches; yellowish red (5YR 5/6) gravelly fine sandy loam; weak fine subangular blocky structure; very friable; many roots; 15 percent rock fragments; moderately smeary; strongly acid; abrupt smooth boundary.
BC—10 to 18 inches; yellowish brown (10YR 5/6) gravelly fine sandy loam; weak fine subangular blocky structure; very friable; common roots; 20 percent rock fragments; weakly smeary; strongly acid; clear smooth boundary.
2C—18 to 60 inches; light olive brown (2.5Y 5/4) very gravelly loamy sand; weak thick platy structure; friable; 35 percent rock fragments; strongly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 18 to 30 inches. The content of rock fragments ranges from 0 to 20 percent in the solum and from 35 to 60 percent in the substratum. Reaction ranges from extremely acid to slightly acid in the upper part of the solum and from very strongly acid to slightly acid in the lower part of the substratum.

Some pedons have an A horizon, which has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 to 4. Some pedons have an Ap horizon, which has hue of 7.5YR or 10YR and value and chroma of 2 to 4. The A and Ap horizons are fine sandy loam or gravelly fine sandy loam.

The E horizon has hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 1 or 2. It is fine sandy loam or gravelly fine sandy loam.

The Bh horizon has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 2. It is fine sandy loam or gravelly fine sandy loam.

Some pedons have a Bhs horizon. This horizon has hue of 5YR to 10YR and value and chroma of 3/3, 3/4, 3/6, or 4/3. The Bs horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 6. The Bhs and Bs

horizons are fine sandy loam, sandy loam, or the gravelly analogs of those textures.

The BC horizon has hue of 10YR or 2.5Y, value of 5, and chroma of 4 to 6. It is loamy sand, gravelly fine sandy loam, or very gravelly fine sandy loam.

The 2C horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 or 4. It is very gravelly loamy sand, sand, or coarse sand

Eldridge Series

The Eldridge series consists of very deep, moderately well drained soils. These soils formed in sandy glaciofluvial deposits underlain by loamy glaciofluvial or glaciolacustrine deposits on stream terraces and lake plains. Permeability is rapid in the upper part of the pedon and moderately slow in the lower part. Slopes range from 0 to 8 percent.

Eldridge soils are geographically associated with the moderately well drained Belgrade and Deerfield soils, the poorly drained Enosburg soils, and the excessively drained Windsor soils. Eldridge soils are coarser textured in rhe solum than Belgrade soils and are finer textured in the substratum than Deerfield and Windsor soils. Unlke Enosburg soils, Eldridge soils have a B horizon.

Typical pedon of Eldridge fine sandy loam, 0 to 3 percent slopes, in a cornfield, in the town of Rutland, 1.5 miles south on Creek Road from its intersection River Street, 110 yards east of Creek Road:

Ap—0 to 10 inches; very dark grayish brown (10YR 3/2) fine sandy loam, brown (10YR 5/3) dry; moderate medium granular structure; friable; many roots; 3 percent rock fragments; neutral; abrupt wavy boundary.

Bw1—10 to 13 inches; yellowish brown (10YR 5/6) loamy coarse sand; single grain; loose; few roots; 3 percent rock fragments; slightly acid; clear wavy boundary.

Bw2—13 to 24 inches; light olive brown (2.5Y 5/4) sand; few fine prominent yellowish brown (10YR 5/6) mottles; single grain; loose; few roots; 3 percent rock fragments; slightly acid; gradual wavy boundary.

BC—24 to 30 inches; olive brown (2.5Y 4/4) sand; common medium prominent yellowish brown (10YR 5/6) mottles; single grain; loose; 2 percent rock fragments; neutral; abrupt smooth boundary.

2C1—30 to 33 inches; olive gray (5Y 5/2) silt loam; many coarse prominent yellowish red (5YR 5/8) mottles; massive; friable; moderately acid; clear smooth boundary.

2C2—33 to 35 inches; dark brown (10YR 3/3) silt loam; common medium prominent olive (5Y 5/4) and distinct olive brown (2.5Y 4/4) mottles; massive; friable, slightly acid; clear smooth boundary.

2C3—35 to 60 inches; light olive brown (2.5Y 5/4) silt loam; common medium prominent olive gray (5Y 5/2) mottles and common medium faint olive brown (2.5Y 4/4) mottles; massive; friable; moderately acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 16 to 30 inches. The content of rock fragments in the solum ranges from 0 to 5 percent. Reaction ranges from strongly acid to neutral.

The A horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 or 3. It is fine sandy loam, sandy loam, loamy fine sand, or loamy sand.

The Bw horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 3 to 6. It is loamy fine sand, loamy sand, fine sand or sand.

The 2C horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 to 6. It is stratified very fine sandy loam, silt loam, silty clay, or clay.

Elmridge Series

The Elmridge series consists of very deep, moderately well drained soils. These soils formed in loamy eolian or glaciofluvial deposits underlain by clayey glaciolacustrine and marine deposits on terraces and lake plains. Permeability is moderately rapid in the upper part of the pedon and slow or very slow in the lower part. Slopes range from 0 to 8 percent.

Elmridge soils are geographically associated with the moderately well drained Deerfield and Vergennes soils, the somewhat poorly drained Kingsbury soils, and the very poorly drained Livingston soils. Elmridge soils are finer textured in the substratum than Deerfield soils and are coarser textured in the solum than Kingsbury, Vergennes, and Livingston soils.

Typical pedon of Elmridge sandy loam, 0 to 3 percent slopes, in an area of hayland, in the town of Brandon, 1.5 miles south of the Leicester town line and 1.0 mile west of U.S. Route 7:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) sandy loam; weak fine granular structure; very friable; many roots; slightly acid; abrupt smooth boundary.

Bw1—9 to 14 inches; light olive brown (2.5Y 5/4) sandy loam; common medium prominent strong brown (7.5YR 4/6) and common large distinct grayish brown (2.5Y 5/2) mottles; weak fine subangular blocky structure; very friable; common roots; slightly acid; clear wavy boundary.

Bw2—14 to 25 inches; yellowish brown (10YR 5/4)

sandy loam; many medium prominent grayish brown (2.5Y 5/2) mottles; weak fine subangular blocky structure; very friable; few roots; slightly acid; clear wavy boundary.

Bw3—25 to 30 inches; yellowish brown (10YR 5/4 and 10YR 5/6) sandy loam; many coarse prominent grayish brown (2.5Y 5/2) mottles; weak fine subangular blocky structure; very friable; slightly acid; abrupt wavy boundary.

2C—30 to 60 inches; varves of grayish brown (2.5Y 5/2) silt and very fine sand and dark yellowish brown (10YR 4/4) silty clay loam; moderate thin and medium platy structure; firm, slightly sticky and slightly plastic wet; violent effervescence; mildly alkaline.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 18 to 40 inches. The content of rock fragments ranges from 0 to 5 percent in the solum and from 0 to 2 percent in the substratum. Reaction ranges from very strongly acid to slightly acid in the solum and from moderately acid to mildly alkaline in the substratum.

The A horizon has hue of 10YR, value of 2 to 4, and chroma of 1 to 3. It is loam, very fine sandy loam, fine sandy loam, or sandy loam.

The Bw horizon has hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 2 to 4; the chroma of 2 is restricted to the lower part of the horizon. The upper part of the horizon mainly is fine sandy loam, sandy loam, or loam. The lower part mainly is fine sandy loam, sandy loam, loam, silty clay loam, or silty clay. Some pedons have thin layers of loamy sand or loamy fine sand.

The 2C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 4. It mainly is silty clay loam, silty clay, or clay. Some pedons have thin films of silt or very fine sand on ped faces.

Elvers Series

The Elvers series consists of very deep, poorly drained and very poorly drained soils. These soils formed in loamy alluvial deposits underlain by organic deposits in depressions, marshes, and swamps on flood plains. Permeability is moderate in the upper part of the pedon and moderately rapid in the lower part. Slopes range from 0 to 2 percent.

Elvers soils are geographically associated with the moderately well drained and somewhat poorly drained Middlebury and Teel soils, the very poorly drained Pinnebog soils, and the poorly drained Limerick soils. Unlike Middlebury, Teel, and Limerick soils, Elvers soils have an organic substratum. Unlike Pinnebog soils, they have a mineral solum.

Typical pedon of Elvers silt loam, in a cornfield, in the town of Brandon, 540 yards north of Sanderson Bridge on the west side of Otter Creek:

Ap—0 to 6 inches; very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; many roots; slightly acid; abrupt smooth boundary.

Cg—6 to 17 inches; dark grayish brown (2.5Y 4/2) silt loam; few fine prominent olive (5Y 5/6) mottles; massive; friable moist, slightly sticky and nonplastic wet; common roots; slightly acid; clear smooth boundary.

2Oa—17 to 60 inches; muck (sapric material), very dark grayish brown (10YR 3/2) broken face, dark brown (10YR 3/3) rubbed; massive; 5 percent woody coarse fragments; slightly acid.

The depth to bedrock is more than 60 inches. The depth to organic material ranges from 16 to 40 inches. The content of woody fragments ranges from 5 to 10 percent in the A horizon. Reaction ranges from moderately acid to mildly alkaline throughout the soils.

The A horizon has hue of 10YR or 2.5Y or is neutral in hue. It has value of 2 to 4 and chroma of 0 to 2.

The Cg horizon has hue of 10YR to 5Y, value of 3 to 6, and chroma of 1 or 2.

The 2Oa horizon has hue of 10YR, value of 2 or 3, and chroma of 1 to 3. It is primarily muck (sapric material), but in some pedons it is mucky peat (hemic material).

Enosburg Series

The Enosburg series consists of very deep, poorly drained soils. These soils formed in sandy glaciofluvial deposits underlain by sandy and loamy glaciofluvial or glaciolacustrine deposits on lake plains and terraces. Permeability is rapid in the sandy horizons and moderately slow in the loamy underlying material. Slopes range from 0 to 3 percent.

Enosburg soils are geographically associated with the poorly drained Canandaigua, Raynham, and Walpole soils and the moderately well drained Eldridge soils. Enosburg soils are coarser textured in the upper part of the substratum than Canandaigua and Raynham soils. Unlike Eldridge and Walpole soils, Enosburg soils do not have a B horizon.

Typical pedon of Enosburg loamy fine sand, in a forested area, in the town of Pawlet, 1,100 feet east of Vermont Route 30 and 50 feet south of the Wells town line:

Oe—2 inches to 0; moderately decomposed organic matter.

A—0 to 6 inches; very dark grayish brown (10YR 3/2)

loamy fine sand; common medium prominent strong brown (7.5YR 5/6) mottles; moderate coarse granular structure; friable; many roots; 5 percent rock fragments; very strongly acid; abrupt smooth boundary.

C1—6 to 16 inches; olive gray (5Y 5/2) sand; common medium prominent light olive brown (2.5Y 5/6) mottles; massive; friable; few roots; 10 percent rock fragments; moderately acid; abrupt wavy boundary.

C2—16 to 27 inches; greenish gray (5G 5/1) gravelly coarse sand; massive; very friable; 17 percent rock fragments; moderately acid; abrupt smooth boundary.

2C1—27 to 34 inches; olive (5Y 5/4) silt; common large prominent gray (N 5/0) and common large prominent brown (7.5YR 4/4) mottles; massive; firm; neutral; clear smooth boundary.

2C2—34 to 43 inches; gray (N 5/0) silt; many large prominent olive (5Y 5/4) and common medium prominent light olive brown (2.5Y 5/6) mottles; massive; firm; neutral; abrupt smooth boundary.

2C3—43 to 60 inches; gray (N 5/0) silt; massive; firm; violent effervescence; neutral.

The depth to bedrock is more than 60 inches. The depth to stratified silt, silt loam, and silty clay loam ranges from 16 to 34 inches. The content of rock fragments ranges from 0 to 5 percent. Some subhorizons have up to 20 percent rock fragments. Reaction ranges from very strongly acid to slightly acid in the upper 18 inches of the pedon and from moderately acid to neutral in the lower part.

The A horizon has hue of 10YR, value of 2 or 3, and chroma of 1 or 2. It is sand, loamy sand, or loamy fine sand.

The C horizon has hue of 10YR to 5Y or is neutral in hue. It has value of 4 to 6 and chroma of 0 to 2. It is coarse sand, sand, loamy coarse sand, loamy sand, or the gravelly analogs of those textures.

The 2C horizon has hue of 10YR to 5Y or is neutral in hue. It has value of 4 to 6 and chroma of 0 to 2. It mainly is very fine sandy loam, silt, or silt loam. Lenses of fine sandy loam and silty clay loam are common.

Farmington Series

The Farmington series consists of shallow, well drained and somewhat excessively drained soils. These soils formed in loamy calcareous glacial till on knolls and hills. Permeability is moderate. Slopes range from 3 to 50 percent.

Farmington soils in this survey area are only in complexes with Galoo, Galway, and Nellis soils. Farmington soils are geographically associated with the moderately well drained Amenia, Georgia, and Vergennes soils; the excessively drained and somewhat excessively drained Galoo and Benson soils; the well drained Galway soils; the somewhat poorly drained Kingsbury soils; and the well drained Nellis soils. Farmington soils are shallow to bedrock, whereas Amenia, Georgia, Kingsbury, Nellis, and Vergennes soils are very deep, Galoo soils are very shallow, and Galway soils are moderately deep. Farmington soils have a lower content of rock fragments in the solum than Benson soils.

Typical pedon of Farmington silt loam, in a forested area of Farmington-Galway-Galoo complex, 5 to 25 percent slopes, very rocky, in the town of West Haven, 0.1 mile south of the Benson town line on Temple Road, 100 yards east of the road:

Oi—1 inch to 0; slightly decomposed maple leaf litter.

A—0 to 3 inches; very dark grayish brown (10YR 3/2) silt loam; moderate medium and weak fine granular structure; very friable; many roots; 5 percent rock fragments; strongly acid; clear smooth boundary.

Bw—3 to 12 inches; dark yellowish brown (10YR 4/4) silt loam; moderate medium and weak fine subangular blocky structure; very friable; many roots; 5 percent rock fragments; moderately acid; abrupt wavy boundary.

R—12 inches; dolostone bedrock.

The depth to bedrock ranges from 10 to 20 inches. The content of rock fragments ranges from 5 to 35 percent. Reaction ranges from strongly acid to slightly acid in the A horizon and from moderately acid to mildly alkaline in the B horizon.

The A horizon has hue of 10YR, value of 3 to 5, and chroma of 1 to 3. It is loam, silt loam, fine sandy loam, or the gravelly analogs of those textures.

The Bw horizon has hue of 7.5YR to 2.5Y, value of 4 or 5, and chroma of 2 to 6. It is loam, silt loam, fine sandy loam, or the gravelly analogs of those textures.

Fluvaquents

Fluvaquents consist of very deep, somewhat poorly drained and poorly drained soils. These soils formed in sandy and loamy alluvium on flood plains. Slopes range from 0 to 3 percent.

Fluvaquents in this survey area aare only in an undifferentiated group with Udifluvents. Fluvaquents are geographically associated with the moderately well drained Deerfield soils, the excessively drained Hinckley soils, the poorly drained Limerick soils, the very poorly drained Saco soils, the moderately well drained and somewhat poorly drained Sudbury soils, and Udifluvents. Unlike Deerfield, Hinckley, and Sudbury soils, Fluvaquents are frequently flooded. They are

more than 15 percent rock fragments, whereas Limerick soils have less than 15 percent rock fragments. Unlike Saco soils, Fluvaquents do not have a surface layer of muck. Unlike Udifluvents, they have mottles within a depth of 20 inches.

Because of the variability of the Fluvaquents, a typical pedon is not described. These soils have a surface layer that is 4 to 10 inches thick. This is underlain by loamy and sandy stratified material that is distinctly or prominently mottled. The depth to bedrock is more than 60 inches. The content of rock fragments ranges from 15 to 60 percent. Reaction ranges from strongly acid to neutral.

Fredon Series

The Fredon series consists of very deep, poorly drained and somewhat poorly drained soils. These soils formed in loamy glaciofluvial deposits underlain by sandy glaciofluvial deposits on stream terraces, deltas, and valley trains. Permeability is moderate or moderately slow in the upper part of the pedon and rapid in the lower part. Slopes range from 0 to 3 percent.

Fredon soils are geographically associated with the moderately well drained Castile and Tisbury soils, the excessively drained Quonset soils, and the somewhat excessively drained Warwick soils. Fredon soils are more gray in the B horizon than Castile, Quonset, Tisbury, and Warwick soils.

Typical pedon of Fredon gravelly loam, 0 to 3 percent slopes, in an area of hayland, 0.6 mile north of the town of Wells on Vermont Route 30 and 110 yards west of Route 30:

Ap—0 to 8 inches; dark grayish brown (2.5Y 4/2) gravelly loam, light brownish gray (2.5Y 6/2) dry; moderate fine granular structure; friable; many roots; 25 percent rock fragments; slightly acid; abrupt smooth boundary.

Bw—8 to 12 inches; grayish brown (2.5Y 5/2) and olive (5Y 5/3) gravelly loam; common fine prominent dark reddish brown (5YR 3/4) mottles and many coarse distinct grayish brown (2.5YR 5/2) mottles; weak fine subangular blocky structure; friable; common roots; 25 percent rock fragments; neutral; clear smooth boundary.

Bg1—12 to 18 inches; olive gray (5Y 5/2) gravelly loam; common medium prominent olive brown (2.5Y 4/4) mottles; weak medium subangular blocky structure; slightly sticky wet; few roots; 30 percent rock fragments; neutral; clear smooth boundary.

Bg2—18 to 24 inches; olive gray (5Y 5/2) gravelly fine sandy loam; many medium prominent dark grayish brown (10YR 4/4) and light olive brown (2.5Y 5/6) mottles; weak coarse subangular blocky structure; nonsticky wet; 20 percent rock fragments; neutral; clear smooth boundary.

2C1—24 to 28 inches; olive gray (5Y 5/2) gravelly loamy sand; many medium distinct brown (10YR 4/3) and dark brown (7.5YR 4/4) mottles; massive; nonsticky; 30 percent rock fragments; neutral; abrupt smooth boundary.

2C2—28 to 60 inches; olive gray (5Y 4/2) very gravelly sand; single grain; nonsticky; 50 percent rock fragments; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 22 to 40 inches. The content of rock fragments ranges from 2 to 35 percent in the solum and 10 to 60 percent in the substratum. Reaction ranges from moderately acid to neutral in the solum and from slightly acid to moderately alkaline in the substratum.

The A horizon has hue of 10YR or 2.5Y, value of 2 to 4, and chroma of 1 or 2. It is fine sandy loam, very fine sandy loam, loam, silt loam, or the gravelly analogs of those textures.

The Bw horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 3 or 4.

The Bg horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 1 or 2.

The Bw and Bg horizons are loam, silt loam, very fine sandy loam, fine sandy loam, or the gravelly analogs of those textures.

The 2C horizon has hue of 2.5Y or 5Y or is neutral in hue. It has value of 4 to 6 and chroma of 0 to 4. It is sand, loamy sand, loamy fine sand, or the gravelly or very gravelly analogs of those textures.

Galoo Series

The Galoo series consists of very shallow, excessively drained and somewhat excessively drained soils. These soils formed in loamy glacial till on knolls and hills. Permeability is moderate. Slopes range from 5 to 50 percent.

Galoo soils in this survey area are only in complexes with Farmington and Galway soils. Galoo soils are geographically associated with the moderately well drained Amenia, Georgia, and Vergennes soils; the excessively drained and somewhat excessively drained Farmington soils; the well drained and moderately well drained Galway soils; the somewhat poorly drained Kingsbury soils; and the well drained Nellis soils. Galoo soils are shallow to bedrock, whereas Amenia, Georgia, Kingsbury, Nellis, and Vergennes soils are very deep, Farmington soils are shallow, and Galway soils are moderately deep.

Typical pedon of Galoo silt loam, in a forested area

of Farmington-Galway-Galoo complex, 5 to 25 percent slopes, very rocky, in the town of West Haven, 0.75 mile west of Vermont Route 22A and 1.0 mile north of the Poultney River, 150 feet east of Macadam Road:

Oi—1 inch to 0; slightly decomposed maple leaf litter.
A—0 to 3 inches; very dark gray (5YR 3/1) silt loam; weak fine granular structure; very friable; many fine roots; 5 percent rock fragments; slightly acid; abrupt wavy boundary.
R—3 inches; dolostone bedrock.

The depth to bedrock ranges from 3 to 9 inches. The content of rock fragments ranges from 5 to 20 percent. Reaction ranges from moderately acid to neutral throughout the soils.

The A horizon has hue of 5YR to 10YR, value of 3 or 4, and chroma of 1 to 3. It is loam, silt loam, fine sandy loam, or the gravelly analogs of those textures.

Some pedons have a Bw horizon. This horizon has hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 6. It is loam, silt loam, fine sandy loam, or the gravelly analogs of those textures.

Galway Series

The Galway series consists of moderately deep, well drained soils. These soils formed in calcareous, loamy glacial till on knolls and hills. Permeability is moderate. Slopes range from 3 to 50 percent.

Galway soils in this survey area are only in complexes with Farmington, Galoo, and Nellis soils. Galway soils are geographically associated with the moderately well drained Amenia, Georgia, and Vergennes soils; the well drained and somewhat excessively drained Farmington soils; the excessively drained and somewhat excessively drained Benson and Galoo soils; the somewhat poorly drained Kingsbury soils; and the well drained Nellis soils. Galway soils are moderately deep to bedrock, whereas Amenia, Georgia, Kingsbury, Nellis, and Vergennes soils are very deep, Benson and Farmington soils are shallow, and Galoo soils are very shallow.

Typical pedon of Galway silt loam, in a forested area of Farmington-Galway-Galoo complex, 5 to 25 percent slopes, very rocky, in the town of Sudbury, 1,800 feet west of Vermont Route 30 and 600 feet north of Vermont Route 44:

Oi—1 inch to 0; slightly decomposed leaves, needles, and twigs.
A—0 to 3 inches; very dark grayish brown (10YR 3/2) silt loam; moderate medium granular structure; friable; many roots; 12 percent rock fragments; slightly acid; abrupt smooth boundary.
Bw1—3 to 7 inches; dark yellowish brown (10YR 4/6) fine sandy loam; weak very fine subangular blocky structure; friable; many roots; 12 percent rock fragments; neutral; clear smooth boundary.
Bw2—7 to 20 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak very fine subangular blocky structure; friable; common roots; 12 percent rock fragments; neutral; clear smooth boundary.
BC—20 to 24 inches; dark yellowish brown (10YR 4/4) gravelly fine sandy loam; weak very fine subangular blocky structure; friable; few roots; 22 percent rock fragments; slight effervescence; mildly alkaline; abrupt wavy boundary.
R—24 inches; dolostone bedrock.

The depth to bedrock is 20 to 40 inches. The thickness of the solum ranges from 18 to 30 inches. The content of rock fragments ranges from 0 to 35 percent in the solum and 10 to 70 percent in the substratum. Reaction ranges from moderately acid to neutral in the surface layer and from moderately acid to mildly alkaline in the subsoil.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 1 to 3. It is loam, silt loam, fine sandy loam, or the gravelly analogs of those textures.

The Bw horizon has hue of 5YR to 5Y, value of 3 to 5, and chroma of 3 to 6. It is silt loam, loam, fine sandy loam, or the gravelly analogs of those textures.

The BC horizon has hue of 10YR to 5Y and value and chroma of 3 to 6. It is silt loam, fine sandy loam, loam, or the gravelly analogs of those textures.

Some pedons have a C horizon. This horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 3 or 4. It is silt loam, sandy loam, fine sandy loam, or the gravelly, very gravelly, or extremely gravelly analogs of those textures.

Georgia Series

The Georgia series consists of very deep, moderately well drained soils. These soils formed in loamy glacial till on knolls and hills. Permeability is moderate in the upper part of the pedon and slow in the lower part. Slopes range from 3 to 25 percent.

Georgia soils in this survey area are only in undifferentiated groups with Amenia soils. Georgia soils are geographically associated with the moderately well drained Amenia soils; the well drained and somewhat excessively drained Copake and Farmington soils; the excessively drained and somewhat excessively drained Galoo soils; the excessively drained Groton soils; the well drained Galway, Nellis, and Paxton soils; the poorly drained and very poorly drained Lyons soils; the poorly drained and somewhat poorly drained Massena soils; and the well drained Stockbridge soils. Unlike Amenia

soils, Georgia soils do not have carbonates within a depth of 40 inches. They are very deep to bedrock, whereas Farmington soils are shallow, Galoo soils are very shallow, and Galway soils are moderately deep. Georgia soils are finer textured in the substratum than Copake soils, are less gray in the B horizon than Lyons and Massena soils, and have less sand in the particle-size control section than Groton soils. Unlike Nellis, Paxton, and Stockbridge soils, Georgia soils have gray mottles within a depth of 24 inches.

Typical pedon of Georgia loam in an area of Georgia and Amenia soils, 3 to 8 percent slopes, used as hayland, in the town of West Rutland, 500 yards west of the Rutland town line and 1.0 mile north of the Clarendon town line:

Ap—0 to 10 inches; dark brown (10YR 3/3) loam, pale brown (10YR 6/3) dry; moderate medium granular structure; very friable; many roots; 14 percent rock fragments; slightly acid; abrupt wavy boundary.

Bw1—10 to 16 inches; olive brown (2.5Y 4/4) gravelly loam; common medium distinct olive (5Y 5/3) mottles and few fine faint dark yellowish brown (10YR 4/4) mottles; strong fine subangular blocky structure; friable; common roots; 15 percent rock fragments; neutral; clear wavy boundary.

Bw2—16 to 22 inches; olive brown (2.5Y 4/4) gravelly loam; common fine prominent olive gray (5Y 5/2), few fine prominent yellowish brown (10YR 5/6), and few fine distinct dark yellowish brown (10YR 3/4) mottles; strong fine subangular blocky structure; friable; few roots; 15 percent rock fragments; neutral; clear wavy boundary.

BC—22 to 30 inches; olive (5Y 4/3) gravelly loam; few fine prominent yellowish brown (10YR 5/6) mottles and few fine distinct olive gray (5Y 5/2) mottles; weak thin platy structure; firm; 15 percent rock fragments; neutral; gradual smooth boundary.

C—30 to 60 inches; olive (5Y 4/3) gravelly loam; common medium distinct olive brown (2.5Y 4/4), few fine prominent yellowish brown (10YR 5/6), and few fine faint olive (5Y 5/3) mottles; massive; firm; 20 percent rock fragments; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 16 to 32 inches. The content of rock fragments ranges from 10 to 20 percent in the solum and 10 to 30 percent in the substratum. Reaction ranges from strongly acid to neutral, becoming less acid with depth.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. It is loam, silt loam, or the gravelly analogs of those textures.

The Bw horizon has hue of 10YR to 2.5Y, value of 4 or 5, and chroma of 3 to 6. It is fine sandy loam, loam, silt loam, or the gravelly analogs of those textures.

The BC horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 3 or 4. It is fine sandy loam, loam, silt loam, or the gravelly analogs of those textures.

The C horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 to 4. It is loam, silt loam, fine sandy loam, or the gravelly analogs of those textures.

Glebe Series

The Glebe series consists of moderately deep, well drained soils. These soils formed in loamy glacial till on mountains at high elevations. Permeability is moderately rapid. Slopes range from 8 to 60 percent.

Glebe soils in this survey area are only in complexes with Stratton soils. Glebe soils are geographically associated with the well drained Killington, Londonderry, Rawsonville, and Stratton soils; the well drained and moderately well drained Mundal soils; and the well drained to excessively drained Ricker soils. Glebe soils are moderately deep to bedrock, whereas Killington and Stratton soils are shallow, Londonderry soils are very shallow, and Mundal soils are very deep. Glebe soils have a higher organic matter content in the upper part of the B horizon than Rawsonville soils. Glebe soils are mineral, whereas Ricker soils are mainly organic.

Typical pedon of Glebe gravelly sandy loam, in a forested area of Glebe-Stratton complex, 25 to 60 percent slopes, very stony, in the town of Sherburne, 200 feet east of the top of Pico Peak:

Oi—8 to 6 inches; slightly decomposed fir needles.

Oe—6 inches to 0; moderately decomposed needle litter; many roots.

E—0 to 4 inches; gray (5YR 5/1) gravelly sandy loam; weak medium subangular blocky structure; friable; common roots; 25 percent rock fragments; very strongly acid; clear wavy boundary.

Bh—4 to 8 inches; very dark gray (5YR 3/1) fine sandy loam; weak medium subangular blocky structure; friable; common roots; 5 percent rock fragments; moderately smeary; very strongly acid; clear wavy boundary.

Bhs—8 to 18 inches; strong brown (7.5YR 3/6) gravelly fine sandy loam; weak and moderate medium subangular blocky structure; friable; few roots; 15 percent rock fragments; moderately smeary; very strongly acid; clear wavy boundary.

C—18 to 24 inches; light olive brown (2.5Y 5/4) gravelly sandy loam; weak medium subangular blocky structure; friable; few roots; 25 percent rock fragments; strongly acid; abrupt irregular boundary.

R—24 inches; schist bedrock.

The depth to bedrock ranges from 20 to 40 inches. The content of rock fragments ranges from 5 to 25 percent in the solum and from 5 to 60 percent in the substratum. Reaction ranges from extremely acid to strongly acid throughout the soils.

Some pedons have an A horizon. This horizon has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 1 or 2. It is fine sandy loam, silt loam, or the gravelly analogs of those textures.

The E horizon has hue of 5YR to 10YR, value of 5 or 6, and chroma of 1 or 2. It is fine sandy loam, sandy loam, loamy fine sand, or the gravelly analogs of those textures.

The Bh horizon has hue of 2.5YR to 7.5YR or is neutral in hue. It has value of 2 or 3 and chroma of 0 to 2.

The Bhs horizon has hue of 5YR or 7.5YR and value and chroma of 3/3, 3/4, or 3/6.

Some pedons have a Bs horizon. This horizon has hue of 5YR to 10YR, value of 4, and chroma of 4 to 6.

The Bh, Bhs, and Bs horizons are silt loam, fine sandy loam, sandy loam, or the gravelly analogs of those textures. They are moderately or weakly smeary.

The C horizon has hue of 2.5Y or 10YR, value of 4 or 5, and chroma of 2 to 4. It is fine sandy loam, sandy loam, or the gravelly or very gravelly analogs of those textures.

Groton Series

The Groton series consists of very deep, excessively drained soils. These soils formed in glaciofluvial deposits on kames, stream terraces, deltas, eskers, and valley trains. Permeability is moderately rapid or rapid in the upper part of the pedon and very rapid in the lower part. Slopes range from 2 to 8 percent.

Groton soils are geographically associated with the well drained and somewhat excessively drained Copake soils, the moderately well drained Georgia soils, and the well drained Nellis, Paxton, and Stockbridge soils. Groton soils have more sand in the particle-size control section than Copake, Georgia, Nellis, Paxton, and Stockbridge soils.

Typical pedon of Groton gravelly loam, 2 to 8 percent slopes, in an area of hayland, in the town of Clarendon, 650 yards south of the Rutland town line and 110 yards east of Vermont Route 133:

Ap—0 to 9 inches; very dark brown (10YR 2/2) gravelly loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many roots; 20 percent rock fragments; strong effervescence; mildly alkaline; clear smooth boundary.

Bw—9 to 13 inches; dark brown (10YR 3/3) very gravelly sandy loam; single grain; loose; few roots; 60 percent rock fragments; strong effervescence; mildly alkaline; abrupt smooth boundary.

2C—13 to 60 inches; very dark grayish brown (2.5Y 3/2) extremely gravelly loamy coarse sand; single grain; loose; none to few roots; 70 percent rock fragments; strong effervescence; mildly alkaline.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 12 to 26 inches. The content of rock fragments ranges from 20 to 50 percent in the solum and from 35 to 70 percent in the substratum. Reaction ranges from moderately acid to neutral in the upper part of the solum, from moderately acid to mildly alkaline in the lower part of the solum, and is neutral or mildly alkaline in the substratum.

The A horizon has hue of 10YR, value of 2 to 4, and chroma of 2 or 3. It is gravelly or very gravelly sandy loam, fine sandy loam, or loam.

The B horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 3 or 4. It mainly is gravelly or very gravelly sandy loam in the upper part and gravelly or very gravelly sandy loam or loamy sand in the lower part. Some pedons have a thin layer of gravelly loam in the upper part.

The C horizon has hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 2 to 6. It is gravelly, very gravelly, or extremely gravelly loamy sand, sand, or coarse sand.

Hamlin Series

The Hamlin series consists of very deep, well drained soils. These soils formed in loamy alluvial deposits on flood plains. Permeability is moderate. Slopes range from 0 to 3 percent.

Hamlin soils are geographically associated with the poorly drained Limerick soils, the moderately well drained Pawling soils, the moderately well drained and somewhat poorly drained Middlebury and Teel soils, and the well drained Tioga and Wappinger soils. Hamlin soils are less gray than Limerick soils. Unlike Middlebury and Teel soils, Hamlin soils do not have gray mottles within a depth of 24 inches. They have more silt in the particle-size control section than Tioga soils and are finer textured in the substratum than Pawling and Wappinger soils.

Typical pedon of Hamlin silt loam, in a cornfield, in the town of Chippenhook, 540 yards west of Middle Road on Chippenhook Road. 110 yards north of Chippenhook Road:

Ap—0 to 12 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many roots; neutral; abrupt wavy boundary.

Bw1—12 to 24 inches; dark yellowish brown (10YR 4/4)

silt loam; moderate medium granular structure; friable; common roots; neutral; clear smooth boundary.

Bw2—24 to 40 inches; yellowish brown (10YR 5/4) silt loam; weak medium granular structure; friable; few roots; neutral; gradual smooth boundary.

2C—40 to 60 inches; light olive brown (2.5Y 5/4) fine sandy loam; 1-inch-thick lenses of pale brown (10YR 6/3) sand; massive; friable; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 24 to 40 inches. The depth to carbonates and to strongly contrasting material is more than 40 inches. The content of rock fragments ranges from 0 to 5 percent to a depth of 40 inches and from 0 to 10 percent below that depth. Reaction ranges from strongly acid to neutral in the upper 20 inches and from moderately acid to mildly alkaline below a depth of 20 inches.

The Ap horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. It is silt loam or very fine sandy loam.

The Bw horizon has hue of 10YR, value of 3 to 5, and chroma of 2 to 4. It is silt loam or very fine sandy loam.

The C horizon has hue of 10YR or 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.

Hartland Series

The Hartland series consists of very deep, well drained soils. These soils formed in loamy glaciolacustrine and glaciofluvial deposits on lake plains and terraces. Permeability is moderate in the upper part of the pedon and moderate to moderately slow in the lower part. Slopes range from 3 to 25 percent.

Hartland soils are geographically associated with the moderately well drained Belgrade and Deerfield soils, the poorly drained Canandaigua and Raynham soils, the excessively drained Windsor soils, and Udorthents. Unlike Belgrade, Deerfield, and Raynham soils, Hartland soils do not have mottles within a depth of 24 inches. They are less gray in the B horizon than Canandaigua soils and are finer textured than Windsor soils. Udorthents lack any soil development.

Typical pedon of Hartland silt loam, 15 to 25 percent slopes, in an area of hayland, in the town of Wallingford, 1.4 miles south of the intersection of U.S. Route 7 and Vermont Route 140, and 200 feet west of Route 7:

Ap—0 to 6 inches; dark brown (10YR 4/3) silt loam; moderate medium granular structure; friable; many roots; slightly acid; abrupt smooth boundary.

Bw—6 to 11 inches; brown (10YR 5/3) silt loam; weak medium platy parting to moderate very fine subangular blocky structure; friable; common roots; slightly acid; clear smooth boundary.

BC—11 to 17 inches; brown (10YR 5/3) silt loam; moderate fine and medium platy structure; friable; few roots; slightly acid; clear smooth boundary.

C1—17 to 40 inches; stratified pale olive (5Y 6/3) very fine sandy loam and brown (10YR 5/3) silt loam; moderate fine and medium platy structure; friable; slightly acid; gradual smooth boundary.

C2—40 to 60 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; slightly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 16 to 33 inches. The content of rock fragments ranges from 0 to 5 percent. Reaction ranges from strongly acid to neutral.

The A horizon has hue of 10YR, value of 3 to 5, and chroma of 2 or 3. It is very fine sandy loam or silt loam.

The Bw and BC horizons have hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 3 to 6. They are very fine sandy loam or silt loam.

The C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 6. It is very fine sandy loam or silt loam.

Hinckley Series

The Hinckley series consists of very deep, excessively drained soils. These soils formed in sandy glaciofluvial deposits on kames, stream terraces, deltas, eskers, and valley trains. Permeability is rapid in the upper part of the pedon and very rapid in the lower part. Slopes range from 0 to 40 percent.

Hinckley soils are geographically associated with the well drained and somewhat excessively drained Copake soils; the well drained Paxton soils; the moderately well drained and somewhat poorly drained Sudbury soils; the moderately well drained Ninigret soils; the excessively drained Windsor soils; and Aquents, Fluvaquents, Histosols, Udifluvents, and Udipsamments. Hinckley soils have more sand in the particle-size control section than Copake and Ninigret soils and have more rock fragments in the substratum than Paxton and Windsor soils. Unlike Sudbury soils, Hinckley soils do not have gray mottles within a depth of 24 inches. Histosols formed in organic material. Aquents, Fluvaquents, Udifluvents, and Udipsamments lack any soil development.

Typical pedon of Hinckley gravelly loamy fine sand, 0 to 8 percent slopes, in an area of hayland, in the town of Middletown Springs, 0.6 mile southeast of Town Road 27, about 35 yards of the road, next to the Poultney River:

Ap—0 to 6 inches; dark brown (10YR 3/3) gravelly loamy fine sand; weak fine granular structure; very friable; many roots; 15 percent rock fragments; strongly acid; abrupt smooth boundary.
Bw1—6 to 15 inches; dark yellowish brown (10YR 4/6) gravelly loamy fine sand; weak fine granular structure; very friable; common roots; 25 percent rock fragments; strongly acid; clear smooth boundary.
Bw2—15 to 23 inches; dark yellowish brown (10YR 3/6) gravelly loamy fine sand; weak fine granular structure; very friable; few roots; 25 percent rock fragments; strongly acid; abrupt smooth boundary.
2C—23 to 60 inches; dark grayish brown (2.5Y 4/4) very gravelly coarse sand; single grain; loose; 60 percent rock fragments; strongly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 12 to 30 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 throughout the soils.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. It is gravelly or very gravelly fine sandy loam, sandy loam, loamy fine sand, or loamy sand.

Some pedons have an E horizon. This horizon has hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 2 or 3.

The Bw horizon has hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 4 to 8 in the upper part and hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 4 to 8 in the lower part. The Bw horizon is gravelly or very gravelly fine sandy loam, sandy loam, loamy fine sand, or loamy sand.

The 2C horizon has hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 to 8. It is very gravelly or extremely gravelly sand or coarse sand.

Histosols

Histosols consists of very deep, very poorly drained soils. These soils formed in highly decomposed organic deposits underlain by loamy lacustrine deposits. These soils are covered with shallow water most of the year and support water-tolerant marsh grasses and rushes. The soils border Lake Champlain and other areas of open water. Slopes are 0 to 1 percent.

Histosols in this survey area are only in an undifferentiated group with Aquents. Histosols are geographically associated with the very poorly drained Aquents, the somewhat poorly drained Kingsbury soils, the excessively drained Hinckley soils, and the moderately well drained Vergennes soils. Unlike Aquents, Histosols do not have a mineral layer 16 inches thick or more. They are more gray in the subsoil than Kingsbury, Hinckley, and Vergennes soils.

Because of the variability of the Histosols, a typical pedon is not described. The organic material is more than 16 inches thick. The depth to bedrock is more than 60 inches. Reaction is slightly acid or neutral.

The organic layers have hue of 5Y or 5GY or are neutral in hue. They have value of 2 to 4 and chroma of 0 or 1. They consist primarily of sapric material, but thin layers of hemic or fibric material are in some pedons.

The mineral layers have hue of 5Y or 5GY or are neutral in hue. They have value of 2 to 5 and chroma of 0 to 2. They are silt loam, loam, silty clay loam, or the mucky analogs of those textures.

Houghtonville Series

The Houghtonville series consists of very deep, well drained soils. These soils formed in loamy glacial till on knolls and hills and mountains. Permeability is moderate or moderately rapid. Slopes range from 5 to 60 percent.

Houghtonville soils formed in material similar to that of the well drained Berkshire, Killington, Rawsonville, and Tunbridge soils and the moderately well drained and well drained Mundal soils. Houghtonville soils have a spodic horizon that is thicker than that of Berkshire soils. Houghtonville soils are very deep to bedrock, whereas Killington soils are shallow and Rawsonville soils are moderately deep. Unlike Mundal soils, Houghtonville soils do not have a firm or very firm substratum.

Typical pedon of Houghtonville gravelly fine sandy loam, 8 to 15 percent slopes, very stony, in a forested area, in the town of Mendon, 1.25 miles east of the intersection of Wheelerville Road and Notch Road:

Oi—2 inches to 1 inch; slightly decomposed leaves and twigs.
Oe—1 inch to 0; moderately decomposed organic matter.
A—0 to 1 inch; black (5YR 2/1) gravelly fine sandy loam; weak very fine granular structure; friable; many roots; 15 percent rock fragments; extremely acid; abrupt wavy boundary.
E—1 to 2 inches; light brownish gray (10YR 6/2) gravelly fine sandy loam; weak medium granular structure; friable; many roots; 15 percent rock fragments; extremely acid; abrupt wavy boundary.
Bh—2 to 3 inches; dark reddish brown (5YR 2/2) gravelly fine sandy loam; weak medium subangular blocky structure; friable; many roots; 20 percent rock fragments; moderately smeary; extremely acid; clear wavy boundary.

Bs1—3 to 6 inches; reddish brown (5YR 4/4) gravelly fine sandy loam; weak fine granular structure; friable; many roots; 20 percent rock fragments; moderately smeary; extremely acid; clear wavy boundary.
Bs2—6 to 29 inches; dark yellowish brown (10YR 4/4) gravelly fine sandy loam; weak medium subangular blocky structure; friable; common roots; 20 percent rock fragments; moderately smeary; extremely acid; abrupt wavy boundary.
C—29 to 60 inches; light yellowish brown (2.5Y 6/4) gravelly fine sandy loam; massive; friable; few roots; 30 percent rock fragments; very strongly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 18 to 40 inches. The content of rock fragments ranges from 5 to 20 percent in the solum and 10 to 35 percent in the substratum. Reaction ranges from extremely acid to moderately acid throughout the soils.

The A horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. It is loam, silt loam, fine sandy loam, or the gravelly analogs of those textures.

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 the gravelly analogs of those textures.

The Bh horizon has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 2.

Some pedons have a Bhs horizon. This horizon has hue of 5YR to 10YR and value and chroma of 3/3, 3/4, or 4/3.

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 silt loam, fine sandy loam, or the gravelly analogs of those textures. The combined thickness of the Bh, Bhs, and Bs horizons is more than 16 inches.

Some pedons have a BC horizon. This horizon has hue of 7.5YR to 5Y, value of 3 to 5, and chroma of 3 to 6. It is silt loam, fine sandy loam, or the gravelly analogs of those textures.

The C horizon has hue of 10YR to 5Y, value of 3 to 6, and chroma of 2 to 4. It is silt loam, fine sandy loam, sandy loam, or the gravelly or very gravelly analogs of those textures.

Hubbardton Series

The Hubbardton series consists of very shallow, excessively drained soils. These soils formed in loamy glacial till on hills and mountains. Permeability is moderate or moderately rapid. Slopes range from 8 to 80 percent.

Hubbardton soils in this survey area are only in complexes with Macomber and Taconic soils. Hubbardton soils are geographically associated with the moderately well drained Bomoseen soils, the well drained Dutchess and Macomber soils, and the somewhat excessively drained Taconic soils. Hubbardton soils are very shallow to bedrock, whereas Bomoseen and Dutchess soils are very deep, Macomber soils are moderately deep, and Taconic soils are shallow.

Typical pedon of Hubbardton very flaggy silt loam, in a forested area of Taconic-Hubbardton complex, 8 to 25 percent slopes, very rocky, in the town of Middletown Springs, 2.25 miles north of Vermont Route 140 and 150 feet east of the Poultney town line:

Oi—1 inch to 0; undecomposed leaves and twigs and slightly decomposed leaves.
A—0 to 3 inches; dark grayish brown (10YR 4/2) very flaggy silt loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; very friable; many roots; 40 percent flagstones; strongly acid; abrupt smooth boundary.
Bw—3 to 5 inches; dark yellowish brown (10YR 4/4) very flaggy silt loam; weak medium subangular blocky structure; friable; many roots; 50 percent flagstones; strongly acid; abrupt wavy boundary.
R—5 inches; slightly weathered slate bedrock.

The depth to bedrock ranges from 2 to 10 inches. The content of rock fragments ranges from 35 to 60 percent. These rock fragments are slate, schist, or phyllite. Reaction ranges from extremely acid to strongly acid throughout the soils.

The A horizon has hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 1 or 2. It is flaggy, channery, very flaggy, or very channery loam or silt loam.

The Bw horizon has hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 3 to 6. It is flaggy, channery, very flaggy, or very channery loam or silt loam.

Killington Series

The Killington series consists of shallow, well drained soils. These soils formed in glacial till on hills and mountains. Permeability is moderately rapid. Slopes range from 15 to 70 percent.

Killington soils in this survey area are only in complexes with Rawsonville and Riker soils or in an association with Ricker soils. Killington soils are geographically associated with the well drained to excessively drained Ricker soils; the well drained Glebe, Houghtonville, Londonderry, Rawsonville, and Stratton soils; the somewhat excessively drained Lyman soils; and the well drained and moderately well drained Mundal soils. Killington soils are shallow to bedrock, whereas Londonderry soils are very shallow, Glebe and

Rawsonville soils are moderately deep, and Houghtonville and Mundal soils are very deep. Killington soils have more rock fragments in the solum than Lyman soils and have less organic material in the upper part of the B horizon than Stratton soils. Killington soils are mineral, whereas Ricker soils are mainly organic.

Typical pedon of Killington very cobbly loam in an area of Killington-Rawsonville complex, 35 to 70 percent slopes, very rocky forested, in the town of Mendon 1.5 miles north of Shrewsbury town line and 1 mile west of Mendon Peak:

Oi—2 inches to 1 inch; slightly decomposed leaves and twigs.
Oe—1 inch to 0; moderately decomposed organic matter.
A—0 to 1 inch; black (5YR 2/1) very cobbly loam; weak fine granular structure; friable; many roots; 20 percent gravel, 20 percent cobbles, and 15 percent stones; extremely acid; abrupt wavy boundary.
Bhs1—1 to 6 inches; dark reddish brown (5YR 3/3) very cobbly loam; weak medium granular structure; friable; many roots; 15 percent gravel, 20 percent cobbles, and 15 percent stones; moderately smeary; extremely acid; clear wavy boundary.
Bhs2—6 to 17 inches; reddish brown (5YR 4/3) very stony loam; weak medium subangular blocky structure; friable; many roots; 15 percent gravel, 15 percent cobbles, and 20 percent stones; moderately smeary; extremely acid; abrupt irregular boundary.
R—17 inches; schist bedrock.

The depth to bedrock ranges from 10 to 20 inches. The content of rock fragments ranges from 20 to 80 percent within individual horizons. The average percentage of rock fragments within the soil ranges from 35 to 70 percent. Texture is fine sandy loam or loam in the fine earth fraction. Reaction ranges mainly from extremely acid to strongly acid throughout. Some pedons are moderately acid near the bedrock.

The A horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2.

Some pedons have an E horizon. This horizon has hue of 5YR to 10YR, value of 4 to 7, and chroma of 1 or 2.

Some pedons have a Bh horizon. This horizon has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 1 or 2.

The Bhs horizon has hue of 5YR to 10YR and value and chroma of 3/3, 3/4, 3/6, or 4/3.

Some pedons have a Bs horizon. This horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 6.

The combined thickness of the Bh, Bhs, and Bs horizons is more than 8 inches thick.

Kingsbury Series

The Kingsbury series consists of very deep, somewhat poorly drained soils. These soils formed in clayey glaciolacustrine and marine deposits on lake plains. Permeability is slow in the surface layer and very slow in the subsoil and substratum. Slopes range from 0 to 8 percent.

Kingsbury soils are geographically associated with the moderately well drained Elmridge and Vergennes soils, the well drained and somewhat excessively drained Farmington soils, the excessively drained and somewhat excessively drained Benson and Galoo soils, the well drained Galway soils, and the very poorly drained Livingston soils, Aquents, and Histosols. Kingsbury soils are finer textured in the solum than Elmridge soils and are more gray in the B horizon than Vergennes soils. Kingsbury soils are very deep to bedrock, whereas Benson and Farmington soils are shallow, Galoo soils are very shallow, and Galway soils are moderately deep. Kingsbury soils are less gray in the B horizon than Livingston soils. Aquents lack any soil development. Histosols formed in organic material.

Typical pedon of Kingsbury silty clay loam, 0 to 3 percent slopes, in an area of hayland, in the town of Fair Haven, 1.5 miles north of the intersection of Vermont Route 4A and Scotch Hill Road and 0.4 mile west of Scotch Hill Road:

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) silty clay loam, light gray (10YR 7/2) dry; many yellowish brown (10YR 5/6) root stains; moderate medium and coarse granular structure; friable, sticky and slightly plastic; many roots; neutral; abrupt smooth boundary.
Bt1—9 to 13 inches; dark grayish brown (10YR 4/2) clay; common fine prominent yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; firm, very sticky and plastic; common roots; neutral; abrupt smooth boundary.
Bt2—13 to 20 inches; brown (10YR 4/3) clay; gray (2.5Y 5/1) silt varves with few fine prominent dark yellowish brown (10YR 4/4) mottles; moderate medium angular blocky structure; firm, very sticky and very plastic; few roots; common very coarse primary slickensides; neutral; clear smooth boundary.
C—20 to 60 inches; brown (10YR 4/3) clay and gray (2.5Y 5/1) silt varves; massive; firm clay and friable silt; 10 percent calcium carbonate accumulations; weak effervescence grading to violent effervescence with depth; moderately alkaline.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 20 to 36 inches.

The depth to free carbonates ranges from 20 to 60 inches. Reaction ranges from strongly acid to mildly alkaline in the solum and from neutral to moderately alkaline in the substratum.

The A horizon has hue of 10YR to 5Y, value of 2 to 5, and chroma of 1 to 3. It is silt loam, silty clay loam, or silty clay.

Some pedons have an E horizon. This horizon has hue of 10YR to 5Y, value of 3 to 6, and chroma of 2 to 4. It is silt loam, silty clay loam, or silty clay.

The Bt horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 to 4. It is silty clay loam, silty clay, or clay.

The C horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 1 to 4.

Limerick Series

The Limerick series consists of very deep, poorly drained soils. These soils formed in loamy alluvial deposits on flood plains. Permeability is moderate. Slopes range from 0 to 2 percent.

Limerick soils are geographically associated with the poorly drained and very poorly drained Elvers soils, the very poorly drained Saco soils, the well drained Hamlin and Wappinger soils, the moderately well drained Pawling soils, the moderately well drained and somewhat poorly drained Teel soils, and Fluvaquents and Udifluvents. Limerick soils have a mineral substratum, whereas Elvers have an organic substratum. Unlike Saco soils, Limerick soils do not have a thick, dark surface layer. They are more gray than Hamlin, Teel, and Wappinger soils and Udifluvents and are finer textured in the substratum than Pawling soils. Limerick soils have less than 15 percent rock fragments, whereas Fluvaquents have more than 15 percent.

Typical pedon of Limerick silt loam, in an area of hayland, in the town of Pittsford, 1.1 mile north of Florence and 800 feet west of Otter Creek:

Ap—0 to 7 inches; very dark grayish brown (2.5Y 3/2) silt loam, light brownish gray (2.5Y 6/2) dry; many fine prominent yellowish red (5YR 4/8 and 5YR 4/6) mottles line root channels; weak fine granular structure; friable; many roots; neutral; clear smooth boundary.

Cg1—7 to 13 inches; dark gray (5Y 4/1) silt loam; many fine prominent yellowish red (5YR 4/6) mottles line root channels; weak fine subangular blocky structure; friable; common roots; neutral; clear smooth boundary.

Cg2—13 to 17 inches; dark grayish brown (2.5Y 4/2) silt loam; common coarse prominent strong brown (7.5YR 5/6) mottles and common medium prominent yellowish red (5YR 4/6 and 5YR 4/8) mottles; weak medium subangular blocky structure; friable; many roots; neutral; clear smooth boundary.

Cg3—17 to 25 inches; dark grayish brown (2.5Y 4/2) silt loam; few fine prominent red (2.5YR 4/6) mottles lining root channels; weak medium platy structure; friable; common roots; neutral; gradual smooth boundary.

Cg4—25 to 60 inches; dark gray (5Y 4/1) silt loam; few fine prominent yellowish red (5YR 4/6) mottles lining root channels; massive; friable; few roots; neutral.

The depth to bedrock is more than 60 inches. Reaction ranges from moderately acid to neutral throughout the soils.

The A horizon has hue of 10YR to 5Y, value of 3 or 4, and chroma of 2.

The Cg horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 1 or 2. It is silt loam or very fine sandy loam.

Linwood Series

The Linwood series consists of very deep, very poorly drained soils. These soils formed in organic deposits underlain by loamy deposits in bogs and swamps on glacial till plains and flood plains. Permeability is moderately slow to moderately rapid in the organic layers and moderate in the loamy substratum. Slopes range from 0 to 2 percent.

Linwood soils are geographically associated with the very poorly drained Adrian, Birdsall, Peacham, Pinnebog, and Scarboro soils. Linwood soils are finer textured in the substratum than Adrian soils. They have a mineral substratum, whereas Pinnebog soils are organic throughout. Linwood soils have an organic surface layer that is thicker than that of Birdsall, Peacham, and Scarboro soils.

Typical pedon of Linwood muck, in a swamp, in the town of Tinmouth, 1.5 miles north of Tinmouth on Route 140, about 0.6 mile east of the road:

Oa1—0 to 23 inches; muck (sapric material), dark reddish brown (5YR 3/2) broken face and rubbed; about 40 percent fibers unrubbed, 20 percent rubbed; massive; nonsticky; primarily woody fibers; neutral; clear smooth boundary.

Oa2—23 to 36 inches; muck (sapric material), dark gray (5YR 4/1) broken face and rubbed; about 28 percent fibers unrubbed, 14 percent rubbed; massive; nonsticky; primarily woody fibers; neutral; abrupt smooth boundary.

2Cg—36 to 60 inches; light brownish gray (2.5Y 6/2) sandy loam; massive; friable; 10 percent rock fragments; neutral; slightly sticky.

The depth to bedrock is more than 60 inches. The depth to the loamy 2C horizon ranges from 16 to 51 inches. The content of coarse woody fragments in the Oa horizon ranges from 0 to 20 percent. The content of rock fragments ranges from 0 to 15 percent in the 2C horizon. Reaction is moderately acid to neutral throughout the soils.

The Oa1 horizon has hue of 2.5YR to 10YR or is neutral in hue. It has value of 2 to 5 and chroma of 0 to 2. The material is mainly muck, but layers of peat are in some pedons.

The Oa2 horizon has hue of 2.5YR to 10YR or is neutral in hue. It has value of 2 or 3 and chroma of 0 to 3. Some pedons have a mainly organic layer above the 2Cg horizon. This layer contains 10 to 15 percent mineral material.

The 2Cg horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 or 2. It is silty clay loam, silt loam, silt, loam, fine sandy loam, sandy loam, or the gravelly analogs of those textures.

Livingston Series

The Livingston series consists of very deep, very poorly drained soils. These soils formed in clayey glaciolacustrine and marine deposits on lake plains. Permeability is moderately slow in the upper part of the pedon and slow to very slow in the lower part. Slopes range from 0 to 2 percent.

Livingston soils are geographically associated with the moderately well drained Elmridge and Vergennes soils and the somewhat poorly drained Kingsbury soils. Livingston soils are finer textured in the solum than Elmridge soils and are more gray in the B horizon than Kingsbury and Vergennes soils.

Typical pedon of Livingston silty clay loam, in a forested area, in the town of West Haven, 2.9 miles south of the Benson town line, 1.3 miles east of Lake Champlain:

A—0 to 7 inches; very dark gray (10YR 3/1) silty clay loam, dark gray (10YR 4/1) dry; moderate medium granular structure; friable, sticky and plastic; many roots; neutral; abrupt smooth boundary.

Bg1—7 to 15 inches; gray (N 5/0) clay; few medium prominent yellowish brown (10YR 5/8) mottles and common medium prominent light olive brown (2.5Y 5/4) and olive brown (2.5Y 4/4) mottles; massive; firm, sticky and very plastic; few roots; neutral; clear smooth boundary.

Bg2—15 to 22 inches; gray (N 5/0) clay; common medium prominent yellowish brown (10YR 5/6) mottles and many large prominent yellowish brown (10YR 5/4) mottles; moderate fine and medium angular blocky structure; firm, sticky and very plastic; few roots; neutral; clear smooth boundary.

Bg3—22 to 33 inches; gray (N 5/0) clay; common medium prominent yellowish brown (10YR 5/6 and 5/4) mottles; moderate fine subangular blocky structure; firm, sticky and very plastic; few roots; neutral; gradual smooth boundary.

BCg—33 to 44 inches; gray (N 5/0) clay; many medium prominent yellowish brown (10YR 5/4) mottles and common medium prominent yellowish brown (10YR 5/6) mottles; massive; firm, sticky and very plastic; few roots; neutral; clear smooth boundary.

Cg—44 to 60 inches; gray (10YR 5/1) clay; many coarse distinct yellowish brown (10YR 5/4) mottles; massive; firm, sticky and very plastic; violent effervescence; mildly alkaline.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 30 to 48 inches. Reaction ranges from strongly acid to neutral in the A horizon and upper part of the B horizon, is neutral or mildly alkaline in the lower part of the B horizon, and is mildly alkaline or moderately alkaline in the C horizon.

The A horizon is neutral in hue or has hue of 10YR to 5Y. It has value of 2 or 3 and chroma of 0 or 1. It is clay, silty clay, silty clay loam, or the mucky analogs of those textures.

Some pedons have a BC horizon. The Bg, BC, and Cg horizons have hue of 10YR to 5Y or are neutral in hue. They have value of 4 or 5 and chroma of 0 to 2.

Londonderry Series

The Londonderry series consists of very shallow, well drained soils. These soils formed in loamy glacial till on mountains at high elevations. Permeability is moderate. Slopes range from 15 to 80 percent.

Londonderry soils in this survey area are only in a complex with Stratton and Ricker soils. Londonderry soils are geographically associated with the well drained Glebe, Killington, and Stratton soils and the well drained to excessively drained Ricker soils. Londonderry soils are very shallow to bedrock, whereas Glebe soils are moderately deep and Killington and Stratton soils are shallow. Londonderry soils are mainly mineral, whereas Ricker soils are mainly organic.

Typical pedon of Londonderry gravelly fine sandy loam in a forested area of Stratton-Londonderry-Ricker complex, 15 to 80 percent slopes, very rocky, on Mendon Peak, in the town of Mendon:

Oi—1 inch to 0; slightly decomposed moss and needle debris.

Oa—0 to 2 inches; highly decomposed organic matter; many roots; abrupt wavy boundary.

E—2 to 6 inches; reddish gray (5YR 5/2) gravelly fine

sandy loam; weak fine granular structure; very friable; common roots; 15 percent rock fragments; extremely acid; clear wavy boundary.
C—6 to 7 inches; light gray (5YR 7/1) fine sandy loam; massive; very friable; extremely acid; abrupt irregular boundary.
R—7 inches; schist.

The depth to bedrock and the thickness of the solum range from 2 to 10 inches. The content of rock fragments ranges from 0 to 15 percent. Reaction ranges from extremely acid to strongly acid throughout.

Some pedons have an A horizon. This horizon has hue of 7.5YR, value of 1 or 2, and chroma of 1. It is loam, silt loam, or the gravelly analogs of those textures.

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 a C horizon.

Lyman Series

The Lyman series consists of shallow, somewhat excessively drained soils. These soils formed in loamy glacial till on hills and mountains. Permeability is moderately rapid. Slopes range from 15 to 60 percent.

Lyman soils in this survey area are only in complexes or an association with Tunbridge soils. Lyman soils are geographically associated with the well drained Berkshire, Killington, Rawsonville, and Tunbridge soils. Lyman soils are shallow to bedrock, whereas Berkshire soils are very deep and Rawsonville and Tunbridge soils are moderately deep. Lyman soils have a lower content of rock fragments in the solum than Killington soils.

Typical pedon of Lyman fine sandy loam, in a forested area of Lyman-Tunbridge-Rock outcrop complex, 35 to 60 percent slopes, very stony, in the town of Mount Holly, 2.2 miles south of East Wallingford on Vermont Route 155, 1,000 feet east of the road:

Oi—2 inches to 1 inch; undecomposed leaves and twigs.
Oe—1 inch to 0; black (10YR 2/1), moderately decomposed organic matter; abrupt smooth boundary.
A—0 to 4 inches; very dark gray (10YR 3/1) fine sandy loam; weak fine granular structure; friable; many roots; 10 percent rock fragments; very strongly acid; abrupt smooth boundary.
Bhs—4 to 6 inches; dark brown (7.5YR 4/2) fine sandy loam; weak very fine subangular blocky structure; friable; common roots; 10 percent rock fragments; weakly smeary; strongly acid; clear wavy boundary.
Bs—6 to 11 inches; brown (7.5YR 4/4) fine sandy loam; weak very fine subangular blocky structure; friable; common roots; 10 percent rock fragments; weakly smeary; moderately acid; abrupt wavy boundary.
R—11 inches; schist bedrock.

The depth to bedrock ranges from 8 to 20 inches. The content of rock fragments ranges from 5 to 30 percent in the upper part of the solum and from 10 to 35 percent in the lower part. Reaction ranges from extremely acid to moderately acid throughout.

The A horizon has hue of 5YR to 10YR or is neutral in hue. It has value of 2 or 3 and chroma of 0 to 2. It is silt loam, loam, fine sandy loam, or the gravelly analogs of those textures.

Some pedons have an E horizon. This horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. It is sandy loam, fine sandy loam, loam, silt loam, or the gravelly analogs of those textures.

Some pedons have a Bh horizon. This horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 2. The Bhs horizon has hue of 5YR or 10YR and value and chroma of 3/3, 3/4, 4/3, or 4/2.

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. This horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 6.

The Bh, Bhs, Bs, and BC horizons are silt loam, loam, fine sandy loam, sandy loam, or the gravelly or very gravelly analogs of those textures.

Lyme Series

The Lyme series consists of very deep, poorly drained soils. These soils formed in loamy glacial till on till plains, swells, and knolls. Permeability is moderate or moderately rapid. Slopes range from 2 to 15 percent.

Lyme soils are geographically associated with the well drained Berkshire and Duxbury soils and the moderately well drained Peru, Sheepscot, and Sunapee soils. Lyme soils are more gray than Berkshire, Peru, and Sunapee soils and have a lower content of rock fragments in the substratum than Duxbury and Sheepscot soils.

Typical pedon of Lyme fine sandy loam, 2 to 8 percent slopes, very stony, in a forested area, in the town of Shrewsbury, 1.5 miles north of North Shrewsbury Center and 2 miles west of the Plymouth town line:

Oi—1 inch to 0; slightly decomposed leaves and twigs.
A—0 to 10 inches; very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry;

moderate medium granular structure; friable; many roots; 10 percent rock fragments; strongly acid; clear smooth boundary.

Bg—10 to 22 inches; dark grayish brown (10YR 4/2) fine sandy loam; common medium prominent light olive brown (2.5Y 5/6) mottles; moderate fine and medium granular structure; friable; many roots; 10 percent rock fragments; strongly acid; abrupt smooth boundary.

BC—22 to 24 inches; yellowish brown (10YR 5/4) gravelly fine sandy loam; common medium prominent grayish brown (2.5Y 5/2) mottles and common medium prominent light olive brown (2.5Y 5/6) mottles; weak medium subangular blocky structure; friable; 15 percent rock fragments; strongly acid; abrupt smooth boundary.

C—24 to 60 inches; light olive brown (2.5Y 5/4) gravelly sandy loam; common medium distinct light brownish gray (2.5Y 6/2), common medium distinct olive (5Y 5/3), and common medium prominent yellowish (10YR 5/6) mottles; massive; friable; strongly acid; 15 percent rock fragments; strongly acid.

The depth to bedrock is more than 60 inches. The thick ness of the solum ranges from 15 to 36 inches. The content of rock fragments ranges from 5 to 30 percent in the solum and 10 to 35 percent in the substratum. Reaction is very strongly acid or strongly acid throughout.

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, sandy loam, or the gravelly analogs of those textures.

The Bg horizon has hue of 10YR to 5Y or is neutral in hue. It has value of 4 to 6 and chroma of 0 to 2.

The BC horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 4.

The Bw and BC horizons are loam, fine sandy loam, sandy loam, or the gravelly or cobbly analogs of those textures.

The C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 to 4. It mainly is sandy loam, fine sandy loam, or the gravelly, very gravelly, cobbly, or very cobbly analogs of those textures. Below a depth of 30 inches, some pedons have layers of loamy sand or loamy coarse sand.

Lyons Series

The Lyons series consists of very deep, very poorly drained and poorly drained soils. These soils formed in calcareous, loamy glacial till on till plains. Permeability is moderately slow or moderate in the upper part of the pedon and slow or very slow in the lower part. Slopes range from 0 to 3 percent.

Lyons soils are geographically associated with the moderately well drained Amenia, Bomoseen, and Georgia soils and the poorly drained and somewhat poorly drained Massena soils. Lyons soils are more gray in the B horizon than Amenia, Bomoseen, Georgia, and Massena soils.

Typical pedon of Lyons silt loam, in overgrown pasture, in the town of Castleton, 0.75 mile south of Neshobe Beach and 85 yards west of McRae Road:

A1—0 to 7 inches; black (10YR 2/1) silt loam, gray (10YR 5/1) dry; moderate medium granular structure; friable, slightly sticky; many roots; neutral; clear smooth boundary.

A2—7 to 10 inches; very dark gray (10YR 3/1) silt loam, light gray (10YR 6/1) dry; weak coarse granular structure; slightly sticky; common roots; 5 percent rock fragments; neutral; abrupt smooth boundary.

Bg1—10 to 20 inches; gray (10YR 5/1) silt loam; common fine distinct dark brown (10YR 4/3) mottles; weak medium subangular blocky structure; slightly sticky; 10 percent rock fragments; neutral; gradual smooth boundary.

Bg2—20 to 34 inches; gray (N 5/0) gravelly loam; common fine prominent yellowish brown (10YR 5/6) mottles; weak coarse subangular blocky structure; slightly sticky; 15 percent rock fragments; neutral; clear wavy boundary.

C—34 to 60 inches; grayish brown (2.5Y 5/2) gravelly loam; common fine distinct gray (5Y 5/1) mottles and common fine distinct dark brown (10YR 4/3) mottles; massive; nonsticky; 20 percent rock fragments; slight effervescence; mildly alkaline.

The depth to bedrock is more than 60 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 40 percent in the substratum. The depth to carbonates ranges from 12 to 40 inches.

The A horizon has hue of 10YR or is neutral in hue. It has value of 2 or 3 and chroma of 0 to 2. It is fine sandy loam, silt loam, loam, or the mucky, gravelly, or channery analogs of those textures.

The Bg horizon has hue of 10YR to 5Y or is neutral in hue. It has value of 4 or 5 and chroma of 0 to 2. It is silt loam, loam, fine sandy loam, or the channery, very channery, gravelly, or very gravelly analogs of those textures.

The C 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 the channery, gravelly, very channery, or very gravelly analogs of those textures.

Macomber Series

The Macomber series consists of moderately deep, well drained soils. These soils formed in loamy glacial till on knolls, hills, and mountains. Permeability is moderate. Slopes range from 3 to 80 percent.

Macomber soils in this survey area are only in complexes with Dutchess, Hubbardton, and Taconic soils. Macomber soils are geographically associated with the moderately well drained Bomoseen and Pittstown soils, the well drained Dutchess soils, the excessively drained Hubbardton soils, and the somewhat excessively drained Taconic soils. Macomber soils are moderately deep to bedrock, whereas Bomoseen, Dutchess, and Pittstown soils are very deep, Hubbardton soils are very shallow, and Taconic soils are shallow.

Typical pedon of Macomber channery silt loam, in a forested area of Macomber-Taconic complex, 25 to 80 percent slopes, rocky, 0.5 mile south of Middletown Springs on Route 133, about 325 yards east:

Oi—2 inches to 1 inch; slightly decomposed maple leaf litter.

Oe—1 inch to 0; black (N 2/0), moderately decomposed organic matter; abrupt smooth boundary.

A—0 to 5 inches; very dark grayish brown (10YR 3/2) channery silt loam, brown (10YR 5/3) dry, weak fine granular structure; friable; many roots; 15 percent rock fragments; strongly acid; abrupt smooth boundary.

Bw—5 to 30 inches; dark yellowish brown (10YR 4/4) very channery silt loam; weak fine granular structure; friable; many roots; 35 percent rock fragments; strongly acid; abrupt smooth boundary.

C—30 to 36 inches; olive brown (2.5Y 4/4) very channery silt loam; moderate medium granular structure; friable; 45 percent rock fragments; strongly acid; abrupt wavy boundary.

R—36 inches; schist bedrock.

The depth to bedrock ranges from 20 to 40 inches. The thickness of the solum ranges from 15 to 30 inches. The content of rock fragments ranges from 10 to 35 percent in the A horizon, from 30 to 60 percent in the B horizon, and from 35 to 65 percent in the C horizon. The soils mainly are channery, flaggy, very channery, very flaggy, or extremely channery loam or silt loam. Some subhorizons are silt loam, but the control section averages more than 35 percent rock fragments. Reaction ranges from very strongly acid to moderately acid throughout.

The A horizon has hue of 10YR or 2.5Y, value of 2 to 4, and chroma of 1 to 3.

The upper part of the Bw horizon has hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 3 to 6. The lower part of the Bw horizon has hue of 2.5Y or 10YR, value of 5, and chroma of 3 to 6.

Some pedons have a BC horizon. This horizon has hue of 10YR or 2.5Y and value and chroma of 3 to 6.

The C horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 6.

Marlow Series

The Marlow series consists of well drained soils that are shallow or moderately deep to dense basal till and very deep to bedrock. These soils formed in compact, loamy glacial till on till plains, knolls, hills, and mountains. Permeability is moderate in the upper part of the pedon and moderately slow to slow in the substratum. Slopes range from 3 to 60 percent.

Marlow soils are geographically associated with the well drained Berkshire and Tunbridge soils, the poorly drained and somewhat poorly drained Brayton and Cabot soils, the moderately well drained Peru and Sunapee soils, and Udorthents. Marlow soils are moderately slowly permeable or slowly permeable in the substratum, whereas Berkshire and Sunapee soils are moderately permeable or moderately rapidly permeable throughout. Marlow soils are less gray in the B horizon than Brayton soils. Unlike Peru soils, Marlow soils do not have mottles in the spodic horizon. They are very deep to bedrock, whereas Tunbridge soils are moderately deep. Udorthents lack any soil development.

Typical pedon of Marlow fine sandy loam, 15 to 35 percent slopes, very stony, in the town of Pittsfield, 0.5 mile west of Vermont Route 100 on Upper Michigan Road, 1,500 feet north, in a housing development:

Oi—1 inch to 0; slightly decomposed leaves and twigs.

A—0 to 4 inches; dark brown (10YR 3/3) fine sandy loam; weak fine granular structure; friable; many roots; 10 percent rock fragments; very strongly acid; clear smooth boundary.

Bs—4 to 13 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak fine subangular blocky structure; friable; many roots; 10 percent rock fragments; weakly smeary; very strongly acid; clear smooth boundary.

BC—13 to 23 inches; light olive brown (2.5Y 5/4) fine sandy loam; weak medium subangular blocky structure; friable to firm; common roots; 10 percent rock fragments; very strongly acid; gradual smooth boundary.

Cd—23 to 60 inches; olive (5Y 4/3) gravelly fine sandy loam; massive; very firm; few roots in upper part; 20 percent rock fragments; strongly acid.

The thickness of the solum ranges from 14 to 35 inches. The depth to bedrock is more than 60 inches. The content of rock fragments ranges from 5 to 35 percent throughout. Reaction ranges from extremely acid to moderately acid.

The A horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 to 3. It is fine sandy loam, loam, silt loam, or the gravelly analogs of those textures.

Some pedons have an E horizon. This horizon has hue of 5YR or 7.5YR, value of 5 or 6, and chroma of 1 or 2. It is fine sandy loam, sandy loam, or the gravelly analogs of those textures.

Some pedons have a Bh horizon. This horizon has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 1 or 2.

Some pedons have a Bhs horizon. This horizon has hue of 5YR to 10YR and value and chroma of ¾, ⅔, or ⅔.

The Bs horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 6.

The BC horizon has hue of 7.5YR to 5Y, value of 4 or 5, and chroma of 3 to 6.

The Bh, Bs, Bhs, and BC horizons are loam, sandy loam, fine sandy loam, or the gravelly analogs of those textures.

The Cd horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 4. It is loam, sandy loam, fine sandy loam, or the gravelly analogs of those textures.

Massena Series

The Massena series consists of very deep, poorly drained or somewhat poorly drained soils. These soils formed in loamy calcareous glacial till on till plains, swells, and knolls. Permeability is moderate in the upper part of the pedon and moderately slow or slow in the lower part. Slopes range from 0 to 8 percent.

Massena soils are geographically associated with the moderately well drained Amenia, Bomoseen, Georgia, and Pittstown soils; the poorly drained and very poorly drained Lyons soils; and the well drained Stockbridge soils. Massena soils are more gray in the B horizon than Amenia, Bomoseen, Georgia, Pittstown, and Stockbridge soils and less gray in the B horizon than Lyons soils.

Typical pedon of Massena silt loam, 0 to 8 percent slopes, very stony, in pasture, in the town of Castleton, 0.75 mile south on North Road from its intersection with Eaton Hill Road, 110 yards east of the road:

Ap—0 to 9 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 6/1) dry; weak fine granular structure; friable; many roots; 10 percent rock fragments; neutral; abrupt smooth boundary.

Bg1—9 to 15 inches; olive (5Y 5/3) channery loam, olive gray (5Y 5/2) ped surfaces; common fine faint olive (5Y 5/4) mottles and many medium faint olive gray (5Y 5/2) mottles; weak medium subangular blocky structure; friable; common roots; 20 percent rock fragments; neutral; gradual wavy boundary.

Bg2—15 to 26 inches; olive gray (5Y 5/2) channery loam; common medium prominent light olive brown (2.5Y 5/4) mottles; weak medium subangular blocky structure; friable; few roots; 20 percent rock fragments; neutral; clear wavy boundary.

Cg1—26 to 38 inches; grayish brown (2.5Y 5/2) channery loam; many medium prominent yellowish brown (10YR 5/4) mottles weak medium platy structure; firm; 25 percent rock fragments; slight effervescence; neutral; gradual smooth boundary.

Cg2—38 to 60 inches; dark grayish brown (10YR 4/2) channery loam; common medium prominent yellowish brown (10YR 5/6) mottles; massive; firm; 30 percent rock fragments; moderate effervescence to strong effervescence with depth; mildly alkaline.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 18 to 36 inches. The content of rock fragments ranges from 5 to 30 percent in the solum and from 5 to 50 percent in the substratum. The depth to carbonates ranges from 20 to 45 inches. Reaction ranges from moderately acid to neutral in the solum and from neutral to moderately alkaline in the substratum.

The A horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 1 or 2. It is fine sandy loam, loam, silt loam, or the gravelly or channery analogs of those textures.

The Bg horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 4. It is sandy loam, fine sandy loam, loam, or the gravelly or channery analogs of those textures.

The Cg horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 4. It is sandy loam, fine sandy loam, loam, or the gravelly, channery, very gravelly, or very channery analogs of those textures.

Middlebury Series

The Middlebury series consists of very deep, moderately well drained soils. These soils formed in loamy alluvial deposits on flood plains. Permeability is moderate in the upper part of the pedon and moderately rapid or rapid in the lower part. Slopes range from 0 to 2 percent.

Middlebury soils are geographically associated with the poorly drained and very poorly drained Elvers and Saco soils, the well drained Hamlin and Tioga soils, the poorly drained Rippowam soils, and the moderately well drained and somewhat poorly drained Teel soils.

Middlebury soils have a mineral substratum, whereas Elvers soils have an organic substratum. Unlike Hamlin and Tioga soils, Middlebury soils have gray mottles within a depth of 24 inches. They are less gray in the B horizon than Rippowam soils. Unlike Saco soils, Middlebury soils do not have a thin, dark surface layer. They have less silt in the particle-size control section than Teel soils.

Typical pedon of Middlebury loam, in an area of hayland, in the town of Wallingford, 3.3 miles south of the intersection of U.S. Route 7 and Vermont Route 140 and 600 feet east of Route 7, on the east side of Otter Creek:

Ap—0 to 12 inches; very dark grayish brown (10YR 3/2) loam, pale brown (10YR 6/3) dry; weak medium angular blocky structure; friable; common roots; neutral; clear smooth boundary.

Bw1—12 to 18 inches; olive brown (2.5Y 4/4) loam; few fine prominent strong brown (7.5YR 4/6) mottles and common medium prominent olive gray (5Y 5/2) mottles; weak medium angular blocky structure; friable; common roots; neutral; clear smooth boundary.

Bw2—18 to 24 inches; olive (5Y 5/3) very fine sandy loam; few fine prominent strong brown (7.5YR 4/6) mottles and common medium faint olive gray (5Y 5/2) mottles; weak medium and coarse angular blocky structure; friable; few roots; neutral; clear smooth boundary.

C1—24 to 57 inches; olive gray (5Y 5/2) fine sandy loam; few fine prominent strong brown (7.5YR 4/6) mottles; massive; friable; few roots; neutral; gradual smooth boundary.

C2—57 to 60 inches; grayish brown (2.5Y 5/2) sandy loam; common medium prominent strong brown (7.5Y 5/8) mottles; massive; very friable; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 15 to 27 inches. The content of rock fragments ranges from 0 to 5 percent in the solum and from 0 to 10 in the substratum. Reaction ranges from moderately acid to neutral throughout.

The A horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 or 3. It is loam, silt loam, or fine sandy loam.

The B horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 to 4. It is very fine sandy loam, fine sandy loam, silt loam, or loam.

The C horizon has hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 to 4. It is dominantly fine sandy loam, sandy loam, silt loam, or loam. In some pedons, however, layers of sand or loamy fine sand are below a depth of 40 inches.

Mundal Series

The Mundal series consists of well drained and moderately well drained soils that are moderately deep to dense basal till and very deep to bedrock. These soils formed in compact, loamy glacial till on hills and mountains. Permeability is moderate in the upper part of the pedon and slow or moderately slow in the lower part of the pedon. Slopes range from 15 to 60 percent.

Mundal soils are geographically associated with the well drained Glebe, Houghtonville, Killington, and Rawsonville xoils and the moderately well drained Peru soils. Mundal soils are very deep to bedrock, whereas Glebe and Rawsonville soils are moderately deep and Killington soils are shallow. Unlike Houghtonville soils, Mundal soils have a firm or very firm substratum. Unlike Peru soils, they do not have mottles in the spodic horizon.

Typical pedon of Mundal loam, 35 to 60 percent slopes, very stony, in a forested area, in the town of Sherburne, 3,690 feet west of Cherry Knoll and 3,760 feet southeast of Bear Mountain:

Oe—3 inches to 0; moderately decomposed leaf litter.

Oa—0 to 5 inches; dark reddish brown (5YR 2/2) highly decomposed leaf litter; weak fine granular structure; very friable; very strongly acid; abrupt smooth boundary.

A—5 to 6 inches; black (5YR 2/0) loam; weak fine granular structure; very friable; many roots; 5 percent rock fragments; very strongly acid; abrupt smooth boundary.

E—6 to 9 inches; light reddish brown (5YR 6/3) fine sandy loam; weak fine subangular blocky structure; friable; common roots; 5 percent rock fragments; strongly acid; abrupt irregular boundary.

Bh—9 to 13 inches; dusky red (2.5YR 3/2) loam; moderate fine subangular blocky structure; friable; few roots; 5 percent rock fragments; moderately smeary; strongly acid; abrupt wavy boundary.

Bhs—13 to 16 inches; dark reddish brown (5YR 3/4) loam; moderate fine subangular blocky structure; friable; few roots; 10 percent rock fragments; moderately smeary; strongly acid; abrupt wavy boundary.

Bs1—16 to 19 inches; dark brown (7.5YR 4/4) loam; moderate medium subangular blocky structure; friable; 12 percent rock fragments; weakly smeary; strongly acid; abrupt wavy boundary.

Bs2—19 to 24 inches; dark brown (7.5YR 4/4) gravelly loam; common fine prominent yellowish brown (10YR 5/6) mottles; moderate medium angular blocky structure; firm; 15 percent rock fragments; weakly smeary; strongly acid; clear wavy boundary.

Cd—24 to 60 inches; light olive brown (2.5Y 5/4) gravelly fine sandy loam; common medium distinct grayish brown (2.5Y 5/2) and olive (5Y 5/3) mottles; moderate thick platy structure; firm and brittle; 18 percent rock fragments; moderately acid.

The thickness of the solum ranges from 20 to 30 inches. The depth to bedrock is more than 60 inches. The content of rock fragments ranges from 5 to 25 percent in the solum and from 5 to 35 percent in the substratum. Reaction ranges from extremely acid to moderately acid in the surface layer and subsoil and from strongly acid to slightly acid in the substratum.

The A horizon has hue of 5YR to 10YR or is neutral in hue. It has value of 2 or 3 and chroma of 0 to 2. It is loam, fine sandy loam, or the gravelly analogs of those textures.

The E horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 to 3. It is loam, fine sandy loam, or the gravelly analogs of those textures.

The Bh horizon has hue of 2.5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. It is loam, fine sandy loam, or the gravelly analogs of those textures.

The Bhs horizon has hue of 5YR to 10YR, value of 3, and chroma of 3 or 4. It is loam, fine sandy loam, sandy loam, or the gravelly analogs of those textures.

The Bs horizon has hue of 7.5YR or 10YR, value of 4, and chroma of 3 or 4. It is loam, fine sandy loam, sandy loam, or the gravelly analogs of those textures. It is faintly mottled in some pedons.

The combined thickness of the Bh, Bhs, and Bs horizons is more than 18 inches.

The Cd horizon has hue of 2.5Y, value of 4 or 5, and chroma of 3 or 4. It is distinctly mottled in some pedons. It is fine sandy loam, sandy loam, or the gravelly analogs of those textures.

Nellis Series

The Nellis series consists of very deep, well drained soils. These soils formed in calcareous, loamy glacial till on till plains, knolls, and hills. Permeability is moderate in the upper part of the pedon and moderate or moderately slow in the lower part. Slopes range from 3 to 25 percent.

Nellis soils in this survey area are only in complexes with Farmington and Galway soils. Nellis soils are geographically associated with the well drained and somewhat excessively drained Farmington soils, the somewhat excessively drained and excessively drained Galoo soils, the excessively drained Groton soils, the well drained Galway soils, the moderately well drained Georgia soils, and the well drained Stockbridge soils. Nellis soils are very deep to bedrock, whereas Farmington soils are shallow, Galoo soils are very shallow, Galway soils are moderately deep. Unlike Stockbridge soils, Nellis soils have carbonates within a depth of 40 inches. They have less sand in the particle-size control section than Groton soils.

Typical pedon of Nellis silt loam, in a forested area of Galway-Nellis-Farmington complex, 15 to 25 percent slopes, rocky, in the town of Danby, 1.7 miles south of the village of Danby and 1.5 miles northeast of Dorset Peak:

Oi—1 inch to 0; undecomposed leaf litter.
Oa—0 to 1 inch; very dark gray (10YR 3/1) highly decomposed leaf litter.
A—1 to 2 inch; very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; very friable; many roots; 10 percent rock fragments; slightly acid; abrupt smooth boundary.
Bw1—2 to 5 inches; dark brown (10YR 3/3) silt loam; weak fine granular structure; very friable; many roots; 10 percent rock fragments; slightly acid; clear smooth boundary.
Bw2—5 to 12 inches; brown (10YR 4/3) gravelly fine sandy loam; weak fine granular structure; very friable; common roots; 20 percent rock fragments; slightly acid; clear smooth boundary.
Bw3—12 to 22 inches; brown (10YR 4/3) gravelly fine sandy loam; weak fine subangular blocky structure; friable; 25 percent rock fragments; slightly acid; clear smooth boundary.
C1—22 to 34 inches; dark grayish brown (2.5Y 4/2) gravelly fine sandy loam; massive; friable; 30 percent rock fragments; neutral; clear smooth boundary.
C2—34 to 60 inches; dark grayish brown (2.5Y 4/2) gravelly fine sandy loam; massive; friable; 30 percent rock fragments; slight effervescence; mildly alkaline.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 15 to 36 inches. The content of rock fragments ranges from 5 to 30 percent in the solum, and from 5 to 40 percent in the substratum. Reaction ranges from moderately acid to neutral in the upper part of the solum, moderately acid to mildly alkaline in the lower part of the sooum, and neutral to moderately alkaline in the substratum.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. It is silt loam, loam, fine sandy loam, or the gravelly analogs of those textures.

The B horizon has hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 4. It is fine sandy loam, loam, silt loam, or the gravelly analogs of those textures.

The C horizon has hue of 10YR or 2.5Y, value of 3

to 5, and chroma of 2 to 6. It is loam, fine sandy loam, sandy loam, or the gravelly analogs of those textures.

Ninigret Series

The Ninigret series consists of very deep, moderately well drained soils. These soils formed in loamy glaciofluvial deposits underlain by sandy glaciofluvial deposits on kames, stream terraces, deltas, and valley trains. Permeability is moderate or moderately rapid in the upper part of the pedon and rapid or very rapid in the lower part. Slopes range from 0 to 4 percent.

Ninigret soils formed in material similar to that of the moderately well drained Deerfield soils, the excessively drained Hinckley and Windsor soils, the moderately well drained and somewhat poorly drained Sudbury soils, and the poorly drained Walpole soils. Ninigret soils are finer textured in the B horizon than Deerfield and Hinckley soils. Unlike Windsor soils, Ninigret soils have gray mottles within a depth of 24 inches. They have less sand in the particle-size control section than Sudbury soils and are less gray than Walpole soils.

Typical pedon of Ninigret fine sandy loam, 0 to 4 percent slopes in pasture, in the town of Rutland, 0.6 mile north of the intersection of U.S. Route 7 and Middle Road, on Route 7, about 0.4 mile west of the road:

Ap—0 to 9 inches; dark brown (10YR 3/3) fine sandy loam; pale brown (10YR 6/3) dry; weak medium granular structure; friable; many roots; moderately acid; abrupt wavy boundary.

Bw—9 to 20 inches; light olive brown (2.5Y 5/6) fine sandy loam; weak medium subangular blocky structure; friable; common roots; moderately acid; abrupt smooth boundary.

2C1—20 to 37 inches; light olive brown (2.5Y 5/4) loamy sand; common fine distinct light olive brown (2.5Y 5/6), fine prominent yellowish brown (10YR 5/8), and few fine distinct light brownish gray (2.5Y 6/2) mottles; massive; friable; few roots; 10 percent rock fragments; moderately acid; clear wavy boundary.

2C2—37 to 60 inches; olive brown (2.5Y 4/4) gravelly sand; common fine distinct olive (2.5Y 5/6) mottles; massive friable; 30 percent rock fragments; moderately acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 18 to 34 inches. The content of rock fragments ranges from 0 to 10 percent in the solum and from 0 to 30 percent in the substratum. Reaction ranges from moderately acid to very strongly acid throughout.

The A horizon has hue of 10YR or 2.5Y and value and chroma of 2 to 4. It is very fine sandy loam or fine sandy loam.

The upper part of the Bw horizon has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 6. The lower part of the Bw horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 6. It is very fine sandy loam or fine sandy loam.

The 2C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 6. It is loamy fine sand, loamy sand, sand, or the gravelly analogs of those textures.

Pawling Series

The Pawling series consists of very deep, moderately well drained soils. These soils formed in loamy alluvial deposits underlain by sandy alluvial deposits on flood plains. Permeability is moderate in the upper part of the pedon and moderately rapid or rapid in the lower part. Slopes range from 0 to 2 percent.

Pawling soils are geographically associated with the well drained Hamlin and Wappinger soils, the poorly drained Limerick soils, and the moderately well drained and somewhat poorly drained Teel soils. Pawling soils are coarser textured in the substratum than Hamlin, Limerick, and Teel soils. Unlike Wappinger soils, Pawling soils have gray mottles within a depth of 24 inches.

Typical pedon of Pawling silt loam, in a cornfield, in the town of Castleton, 0.7 mile north of the intersection of East Hubbardton Road and Belgo Road and 430 yards west of East Hubbardton Road:

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) silt loam; weak medium granular structure; friable; many roots; neutral; abrupt smooth boundary.

Bw1—9 to 18 inches; olive (5Y 4/3) silt loam; weak coarse prismatic structure; friable; common roots; slightly acid; clear smooth boundary.

Bw2—18 to 27 inches; olive brown (2.5Y 4/4) loam; few fine prominent reddish brown (5YR 4/4) mottles and common medium distinct dark grayish brown (2.5Y 4/2) mottles; weak coarse prismatic structure; friable; few roots; slightly acid; abrupt smooth boundary.

2C1—27 to 33 inches; dark grayish brown (2.5Y 4/2) gravelly sand; single grain; nonsticky; 30 percent rock fragments; slightly acid; clear smooth boundary.

2C2—33 to 60 inches; dark grayish brown (2.5Y 4/2) very gravelly loamy sand; single grain; nonsticky; 45 percent rock fragments; slightly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 25 to 40 inches. The content of rock fragments ranges from 0 to 10

percent in the solum and from 15 to 70 percent in the substratum. Reaction ranges from strongly acid to neutral in the upper 20 inches and from moderately acid to neutral below a depth of 20 inches.

The A horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 or 3. It is loam or silt loam.

The Bw horizon has hue of 7.5YR to 5Y, value of 4 or 5, and chroma of 3 or 4. It is loam, silt loam, or fine sandy loam.

The 2C horizon has hue of 2.5Y, value of 4 or 5, and chroma of 1 to 3. It is gravelly, very gravelly, or extremely gravelly coarse sand or loamy sand.

Paxton Series

The Paxton series consists of well drained soils that are moderately deep to dense basal till and very deep to bedrock. These soils formed in compact, loamy glacial till on till plains, knolls, and hills. Permeability is moderate in the upper part of the pedon and slow or very slow in the lower part. Slopes range from 2 to 35 percent.

Paxton soils are geographically associated with the moderately well drained Amenia and Georgia soils; the excessively drained Groton, Hinckley, and Windsor soils; and Udorthents. Unlike Amenia and Georgia soils, Paxton soils do not have gray mottles within a depth of 24 inches. They are finer textured in the substratum than Groton, Hinckley, and Windsor soils. Udorthents lack any soil development.

Typical pedon of Paxton fine sandy loam, 2 to 8 percent slopes, in an area of hayland, in the town of Clarendon, 0.9 mile south of Pierces Corner on Route 7B and 300 feet west of the road:

Ap—0 to 12 inches; dark brown (10YR 3/3) fine sandy loam, pale brown (10YR 6/3) dry; weak fine granular structure; friable; many roots; 10 percent rock fragments; moderately acid; abrupt wavy boundary.

Bw1—12 to 18 inches; yellowish brown (10YR 5/6) fine sandy loam; weak fine granular structure; friable; common roots; 10 percent rock fragments; moderately acid; clear wavy boundary.

Bw2—18 to 26 inches; yellowish brown (10YR 5/4) fine sandy loam; moderate medium granular structure; friable; common roots; 10 percent rock fragments; strongly acid; clear wavy boundary.

Cd—26 to 60 inches; olive brown (2.5Y 4/4) fine sandy loam; few medium distinct yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; firm; 10 percent rock fragments; moderately acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 20 to 38 inches. The content of rock fragments ranges from 10 to 35 percent in the solum and from 10 to 40 in the substratum. Reaction ranges from very strongly acid to moderately acid throughout.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 2 to 4. It is fine sandy loam or gravelly fine sandy loam.

The Bw horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 4 to 6. It is loam, fine sandy loam, sandy loam, or the gravelly analogs of those textures. Some pedons are mottled in the lower part of the Bw horizon.

The Cd horizon has hue of 2.5Y or 5Y, value of 4 to 6, and chroma of 2 to 4. It is loamy sand, sandy loam, fine sandy loam, loam, or the gravelly analogs of those textures.

Peacham Series

The Peacham series consists of very poorly drained soils that are shallow to dense basal till and very deep to bedrock. These soils formed in organic deposits and in the underlying compact, loamy glacial till. Thye are in swamps on till plains and knolls. Permeability is moderate or moderately slow in the upper part of the pedon and slow or very slow in the lower part. Slopes range from 0 to 8 percent.

Peacham soils are geographically associated with the poorly drained and somewhat poorly drained Brayton and Cabot soils, the very poorly drained Adrian and Linwood soils, and the moderately well drained Peru soils. Unlike Brayton, Cabot, and Peru soils, Peacham soils have an organic surface layer. The organic surface layer is thinner than that of Adrian and Linwood soils.

Typical pedon of Peacham muck, 0 to 8 percent slopes, in a forested area, in the town of Sherburne, 100 feet south of the intersection of Roaring Brook Road and Telefon Trail and 50 feet east of Roaring Brook Road:

Oi—5 inches to 0; slightly decomposed needles, leaves and roots.

Oa—0 to 5 inches; muck (sapric material), very dark gray (10YR 3/1) broken face and rubbed; moderate medium angular blocky structure; friable; many roots; very strongly acid; abrupt smooth boundary.

Bg—5 to 10 inches; grayish brown (2.5Y 5/2) gravelly sandy loam; few fine distinct light olive brown (2.5Y 5/4) mottles; massive; friable; few roots; 15 percent rock fragments; neutral; clear smooth boundary.

Cdg—10 to 60 inches; grayish brown (2.5Y 5/2) sandy loam; many medium prominent light olive brown

(2.5Y 5/6) mottles; massive; firm; 10 percent rock fragments; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 2 to 12 inches. The content of rock fragments ranges from 5 to 30 percent in the mineral horizons. Reaction ranges from very strongly acid to neutral throughout.

The Oa horizon has hue of 10YR or is neutral in hue. It has value of 2 or 3 and chroma of 0 or 1. Some pedons have an Oe horizon.

Some pedons have an A horizon. This horizon has hue of 10YR, value of 2 or 3, and chroma of 1 or 2. It is silt loam, loam, fine sandy loam, or the mucky or gravelly analogs of those textures.

The Bg horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 1 or 2. It is fine sandy loam, sandy loam, or the gravelly analogs of those textures.

The Cdg horizon has hue of 2.5Y, value of 4 or 5, and chroma of 1 or 2. It is fine sandy loam, sandy loam, or the gravelly analogs of those textures.

Peru Series

The Peru series consists of moderately well drained soils that are shallow or moderately deep to dense basal till and very deep to bedrock. These soils formed in compact, loamy glacial till on till plains, knoll, shills, and mountains. Permeability is moderate in the upper part of the pedon and moderately slow or slow in the lower part. Slopes range from 3 to 25 percent.

Peru soils are geographically associated with the poorly drained and somewhat poorly drained Brayton and Cabot soils, the poorly drained Lyme soils, the well drained Marlow soils, the moderately well drained Sunapee soils, the moderately well drained and well drained Mundal soils, and the very poorly drained Peacham soils. Peru soils are less gray in the B horizon than Brayton, Cabot, and Lyme soils. Unlike Marlow and Mundal soils, Peru soils have mottles in the spodic horizon. Unlike Sunapee soils, they have a firm or very firm substratum. Unlike Peacham soils, they do not have a thick organic surface layer.

Typical pedon of Peru gravelly fine sandy loam, 15 to 25 percent slopes, very stony, in a forested area, in the town of Shrewsbury, 0.9 mile southeast of Spring Lake and 0.7 mile southwest of Vermont Route 103:

A—0 to 2 inches; very dark grayish brown (10YR 3/2) gravelly fine sandy loam; weak fine granular structure; friable; many roots; 23 percent rock fragments; strongly acid; clear smooth boundary.

Bhs—2 to 7 inches; dark brown (7.5YR 4/2) gravelly fine sandy loam; weak fine subangular blocky structure; friable; many roots; 23 percent rock fragments; strongly acid; clear wavy boundary.

Bs—7 to 17 inches; dark yellowish brown (10YR 4/4) gravelly fine sandy loam; common medium prominent light brownish gray (2.5Y 6/2) mottles and common medium prominent strong brown (7.5YR 4/6) mottles; massive; friable; many roots; 23 percent rock fragments; moderately acid; clear wavy boundary.

Cd1—17 to 29 inches; light olive brown (2.5Y 5/4) gravelly sandy loam; many medium distinct light brownish gray (2.5Y 6/2) mottles and many large prominent strong brown (7.5YR 4/6) mottles; moderate medium platy structure; firm; 28 percent rock fragments; slightly acid; clear wavy boundary.

Cd2—29 to 60 inches; light olive brown (2.5Y 5/4) gravely sandy loam; common medium distinct light brownish gray (2.5Y 6/2) mottles and common medium prominent strong brown (7.5YR 4/6) mottles; moderate medium platy structure; very firm; 28 percent rock fragments; slightly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 16 to 33 inches. The content of rock fragments ranges from 5 to 30 percent in the solum and from 0 to 30 percent in the substratum. Reaction ranges from extremely acid to moderately acid.

The A horizon has hue of 5YR to 10YR, value of 2 to 4, and chroma of 1 to 3. It is loam, fine sandy loam, or the gravelly analogs of those textures.

Some pedons have an E horizon. This horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 2.

Some pedons have a Bh horizon. This horizon has hue of 5YR to 10YR, value of 3, and chroma of 1 or 2. It is loam, fine sandy loam, sandy loam, or the gravelly analogs of those textures.

The Bhs horizon has hue of 5YR to 10YR and value and chroma of 3/3, 3/4, 4/2, or 4/3. It is loam, fine sandy loam, sandy loam, or the gravelly analogs of those textures.

The Bs horizon has hue of 5YR to 10YR, value of 3 to 5, and chroma of 4 to 6. It is loam, fine sandy loam, sandy loam, or the gravelly analogs of those textures.

Some pedons have a BC horizon. This horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 4. It is fine sandy loam, loam, or the gravelly analogs of those textures.

The Cd horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 4. It is loam, fine sandy loam, sandy loam, or the gravelly analogs of those textures.

Pinnebog Series

The Pinnebog series consists of very deep, very poorly drained soils. These soils formed in organic

deposits in bogs and swamps on lake plains, valley trains, and glacial till plains. Permeability is moderately slow to moderately rapid. Slopes range from 0 to 2 percent.

Pinnebog soils are geographically associated with the very poorly drained Adrian, Linwood, and Saco soils and the poorly drained and very poorly drained Elvers soils. Pinnebog soils are organic to a depth more than 51 inches, whereas Adrian and Linwood soils have a mineral substratum within a depth of 51 inches, Elvers soils have a mineral surface layer and subsurface layer and Saco soils are mainly mineral.

Typical pedon of Pinnebog muck, in a forested area, in the town of Fair Haven, 1.8 miles south of intersection of U.S. Route 4 and Vermont Route 22A, in Cedar Swamp, 0.7 mile west of Vermont Route 22A:

Oa1—0 to 8 inches; muck (sapric material), black (5YR 2/1) broken face and rubbed; about 40 percent fibers unrubbed, 15 percent rubbed; massive; 10 percent woody fragments; common roots; primarily woody fibers; neutral; clear smooth boundary.

Oa2—8 to 13 inches; muck (sapric material), black (5YR 2/2) broken face and rubbed; about 55 percent fibers unrubbed, 15 percent rubbed; massive; 10 percent woody fragments; few roots; primarily woody fibers; neutral; abrupt smooth boundary.

Oa3—13 to 28 inches; muck (sapric material), very dark gray (5YR 3/1) broken face and rubbed; about 55 percent fibers unrubbed, 15 percent rubbed; massive; neutral; abrupt smooth boundary.

Oa4—28 to 35 inches; muck (sapric material), black (5YR 2/1) and dark reddish brown (2.5YR 3/4) broken face and rubbed; about 45 percent fibers unrubbed, 15 percent rubbed; massive; neutral; clear smooth boundary.

Oe1—35 to 46 inches; mucky peat (hemic material), black (5YR 2/1) broken face and rubbed; about 65 percent fibers unrubbed, 30 percent rubbed; massive; neutral; clear smooth boundary.

Oe2—46 to 60 inches; mucky peat (hemic material), reddish brown (5YR 4/4) broken face and dark reddish brown (5YR 3/3) rubbed; about 80 percent fibers unrubbed, 60 percent rubbed; weak coarse blocky structure; neutral.

The depth to bedrock is more than 60 inches. The organic material is more than 51 inches thick. The content of woody fragments ranges from 0 to 15 percent. Reaction ranges from moderately acid to mildly alkaline throughout.

The surface tier has hue of 2.5YR to 10YR, value of 2 to 5, and chroma of 1 to 4. It is muck or mucky peat.

The subsurface and bottom tiers have hue of 2.5YR to 10YR, value of 2 to 5, and chroma of 1 to 4. At least 10 inches of the subsurface and bottom teirs consists of mucky peat.

Pittstown Series

The Pittstown series consists of moderately well drained soils that are shallow or moderately deep to dense basal till and very deep to bedrock. These soils formed in compact, loamy glacial till on drumlins, knolls, hills, and mountains. Permeability is moderate in the upper part of the pedon and slow in the lower part. Slopes range from 2 to 40 percent.

Pittstown soils in this survey area are only in undifferentiated groups with Bomoseen soils. Pittstown soils are geographically associated with the moderately well drained Bomoseen soils, the well drained Dutchess and Macomber soils, the somewhat poorly drained and poorly drained Massena soils, the excessively drained Quonset soils, and the somewhat excessively drained Taconic and Warwick soils. Pittstown soils have a lower base status than Bomoseen soils. Unlike Dutchess, Macomber, Quonset, Taconic, and Warwick soils, Pittstown soils have gray mottles within a depth of 24 inches. They are very deep to rock, whereas Macomber soils are moderately deep and Taconic soils are shallow. Pittstown soils are less gray in the subsoil than Massena soils.

Typical pedon of Pittstown silt loam, in a forested area of Bomoseen and Pittstown soils, 15 to 25 percent slopes, in the town of Wells, 1,200 feet north of the Wells-Pawlet town line and 0.7 mile northwest of the Cobble, 300 feet south of a town road:

Ap—0 to 7 inches; dark brown (10YR 4/3) silt loam; weak medium granular structure; friable; many roots; 5 percent rock fragments; strongly acid; clear smooth boundary.

Bw1—7 to 15 inches; light olive brown (2.5Y 5/4) silt loam; weak fine granular structure; friable; common roots; 10 percent rock fragments; strongly acid; clear wavy boundary.

Bw2—15 to 18 inches; olive (5Y 5/3) silt loam; few fine prominent light olive brown (2.5Y 5/6) mottles; weak medium granular structure; friable; common roots; 10 percent rock fragments; moderately acid; clear smooth boundary.

BC—18 to 22 inches; olive (5Y 5/3) gravelly silt loam; common fine prominent light olive brown (2.5Y 5/6) and common fine distinct olive gray (5Y 5/2) mottles; weak medium subangular blocky structure; friable to firm; few roots; 15 percent rock fragments; moderately acid; abrupt smooth boundary.

Cd—22 to 60 inches; olive gray (5Y 4/2) gravelly silt loam; common medium prominent olive (5Y 5/6)

mottles; weak thin platy structure; very firm; 20 percent rock fragments; moderately acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 15 to 30 inches. The content of rock fragments ranges from 5 to 35 percent in the solum and from 20 to 40 percent in the substratum. Reaction ranges from very strongly acid to moderately acid throughout.

The A horizon has hue of 10YR, value of 2 to 4, and chroma of 2 or 3. It is silt loam, loam, very fine sandy loam, or the channery or gravelly analogs of those textures.

The upper part of the B horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 3 or 4. The lower part of the B horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 3 or 4. It is silt loam, loam, very fine sandy loam, or the channery or gravelly analogs of those textures.

The Cd horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 or 3. It is silt loam, loam, very fine sandy loam, or the channery, gravelly, very channery, or very gravelly analogs of those textures.

Quonset Series

The Quonset series consists of very deep, excessively drained soils. These soils formed in sandy glaciofluvial deposits on kames, stream terraces, deltas, eskers, and valley trains. Permeability is moderately rapid or rapid in the upper part of the pedon and very rapid in the lower part. Slopes range from 0 to 45 percent.

Quonset soils in this survey area are only in complexes with Warwick soils. Quonset soils are geographically associated with the moderately well drained Bomoseen, Pittstown, and Castile soils; the well drained Dutchess soils; the poorly drained and somewhat poorly drained Fredon soils; the somewhat excessively drained Warwick soils; and Udipsamments. Unlike Bomoseen, Pittstown, Castile, and Fredon soils, Quonset soils do not have mottles within a depth of 24 inches. They are coarser textured in the substratum than Dutchess soils and have more sand in the particle-size control section than Warwick soils. Udipsamments lack any soil development.

Typical pedon of Quonset very gravelly loamy sand, in a forested area of Quonset-Warwick complex, 25 to 45 percent slopes, 1.0 mile east of Middletown Springs on a dirt road, 215 yards north of Route 133, in a gravel pit:

Oi—3 inches to 0; slightly decomposed pine needles.
Oa—0 to 2 inches; strong brown (7.5YR 5/6) highly decomposed organic material.
A—2 to 7 inches; dark brown (10YR 3/3) very gravelly loamy sand; weak fine granular structure; very friable; many roots; 38 percent rock fragments; strongly acid; abrupt smooth boundary.
Bw1—7 to 13 inches; yellowish brown (10YR 5/6) very gravelly and very channery loamy sand; weak fine granular structure; very friable; many roots; 50 percent rock fragments; strongly acid; clear smooth boundary.
Bw2—13 to 20 inches; olive brown (2.5Y 4/4) very gravelly and very channery loamy coarse sand; single grain; loose; 53 percent rock fragments; strongly acid; abrupt smooth boundary.
2C—20 to 60 inches; light olive brown (2.5Y 5/4) very channery coarse sand; single grain; loose; 58 percent rock fragments; slightly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 15 to 30 inches. The content of rock fragments ranges from 0 to 55 percent in the solum, and from 35 to 80 percent in the 2C horizon. Dark slate or phyllite fragments make up 25 to 75 percent of the rock fragments. Reaction ranges from extremely acid to strongly acid in the solum and from strongly acid to slightly acid in the substratum.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 1 to 3. It is fine sandy loam, sandy loam, loamy sand, loamy fine sand, or the channery, very channery, gravelly, or very gravelly analogs of those textures.

The Bw horizon has hue of 7.5YR to 10YR, value of 3 to 5, and chroma of 3 to 6 in the upper part and hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 3 to 6 in the lower part. The Bw horizon is channery, gravelly, very channery, or very gravelly loamy sand.

The 2C horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 to 4. It is very channery, very gravelly, extremely channery, or extremely gravelly sand or coarse sand.

Rawsonville Series

The Rawsonville series consists of moderately deep, well drained soils. These soils formed in loamy glacial till on knolls, hills, and mountains. Permeability is moderate or moderately rapid. Slopes range from 5 to 70 percent.

Rawsonville soils in this survey area are only in complexes with Houghtonville and Killington soils or in an association with Killington soils. Rawsonville soils are geographically associated with the well drained Glebe, Houghtonville, Killington and Tunbridge soils; the well drained and moderately well drained Mundal soils; and the somewhat excessively drained Lyman soils. Rawsonville soils have a lower organic matter content

in the upper part of the B horizon than Glebe soils. Rawsonville soils are moderately deep to bedrock, whereas Houghtonville and Mundal soils are very deep and Killington and Lyman soils are shallow. Rawsonville soils have a spodic horizon that is thicker than that of Tunbridge soils.

Typical pedon of Rawsonville gravelly fine sandy loam, in a forested area of Rawsonville-Houghtonville complex, 15 to 35 percent slopes, rocky, in the town of Shrewsbury, 500 feet east-southeast of Russell Hill:

Oi—1 inch to 0; slightly decomposed leaves, twigs, and branches.
Oa—0 to 1 inch; black (10YR 2/1) highly decomposed organic material.
A—1 to 3 inches; very dark gray (10YR 3/1) gravelly fine sandy loam; weak fine and very fine granular structure; very friable; many roots; 20 percent rock fragments; very strongly acid; abrupt smooth boundary.
Bh—3 to 10 inches; dark brown (7.5YR 3/2) gravelly fine sandy loam; weak fine subangular blocky structure; friable; many roots; 20 percent rock fragments; moderately smeary; very strongly acid; clear smooth boundary.
Bs—10 to 23 inches; dark yellowish brown (10YR 4/4) gravelly fine sandy loam; weak fine subangular blocky structure; friable; common roots; 20 percent rock fragments; moderately smeary; strongly acid; abrupt wavy boundary.
BC—23 to 30 inches; yellowish brown (10YR 5/4) gravelly sandy loam; weak fine subangular blocky structure; very friable; few roots; 25 percent rock fragments; strongly acid; abrupt wavy boundary.
R—30 inches; schist bedrock.

The depth to bedrock and the thickness of the solum range from 20 to 40 inches. The content of rock fragments ranges from 0 to 20 percent in the upper part of the solum and from 5 to 35 percent in the lower part of the solum. Reaction ranges from extremely acid to strongly acid throughout.

The A horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. It is fine sandy loam, silt loam, loam, or the gravelly analogs of those textures.

Some pedons have an E horizon. This horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 or 2. It is sandy loam, fine sandy loam, silt loam, or the gravelly analogs of those textures.

The Bh horizon has hue of 5YR to 7.5YR, value of 2 or 3, and chroma of 2.

Some pedons have a Bhs horizon. This horizon has hue of 5YR to 10YR and value and chroma of 3/3, 3/4, or 4/3.

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, silt loam, loam, or the gravelly analogs of those textures.

The combined thickness of the Bh, Bhs, and Bs horizons is more than 16 inches.

The BC horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 to 4. It is sandy loam, fine sandy loam, or the gravelly analogs of those textures.

Some pedons have a C horizon. This horizon has hue of 2.5Y or 5Y, value of 3 to 5, and chroma of 2 to 4. It is sandy loam, fine sandy loam, or the gravelly analogs of those textures.

Raynham Series

The Raynham series consists of very deep, poorly drained soils. These soils formed in loamy glaciolacustrine deposits on lake plains and terraces. Permeability is moderate or moderately slow in the upper part of the pedon and slow in the lower part. Slopes range from 0 to 4 percent.

Raynham soils formed in material similar to that of the moderately well drained Belgrade and Tisbury soils, the very poorly drained Birdsall soils, the poorly drained Canandaigua and Enosburg soils, and the well drained Hartland soils. Raynham soils are more gray in the B horizon than Belgrade and Hartland soils. Unlike Enosburg soils, Raynham soils have a B horizon. They are less gray in the B horizon than Birdsall and Canandaigua soils. Raynham soils have a substratum that is finer textured than that of Tisbury soils.

Typical pedon of Raynham silt loam, 0 to 4 percent slopes, in pasture, in the town of Clarendon, 0.1 mile west of U.S. Route 7, about 0.1 mile east of Vermont Route 7, and 0.1 mile southeast of Smith Cemetery:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; many roots; neutral; abrupt wavy boundary.
Bw—9 to 13 inches; olive (5Y 5/4) silt loam; many fine prominent strong brown (7.5YR 5/6) mottles; moderate medium subangular blocky structure; friable; few roots; neutral; abrupt wavy boundary.
BC—13 to 22 inches; olive (5Y 5/3) silt loam; many medium prominent strong brown (7.5Y 5/8) and common medium faint olive gray (5Y 5/2) mottles; weak medium subangular blocky structure; friable; neutral; clear wavy boundary.
C—22 to 60 inches; olive gray (5Y 5/2) silt; many coarse prominent strong brown (7.5YR 5/8) mottles; massive; firm; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 16 to 30 inches. The content of rock fragments ranges from 0 to 2 percent. Reaction ranges from strongly acid to neutral in the solum and from moderately acid to mildly alkaline in the substratum.

The A horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2. It is very fine sandy loam, silt loam, or silt.

The B horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 4.

The C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 to 3. It is very fine sandy loam, silt loam, or silt.

Ricker Series

The Ricker series consists of very shallow to moderately deep, well drained to excessively drained soils. These soils formed in organic deposits underlain in most places by very thin mineral layers over bedrock. These soils are on mountains. Permeability is moderately rapid in the organic material and moderate or moderately rapid in the mineral material. Slopes range from 15 to 80 percent.

Ricker soils in this survey area are only in a complex with Londonderry and Stratton soils or an association with Killington soils. Ricker soils are geographically associated with the well drained Glebe, Killington, Londonderry, and Stratton soils. Ricker soils are mainly organic, whereas Glebe, Londonderry, Killington, and Stratton soils are mainly mineral.

Typical pedon of Ricker peat, in a forested area of Stratton-Londonderry-Ricker complex, 15 to 80 percent slopes, very rocky, in the town of Sherburne, near Deer Leap rock, 325 yards north of Route 4:

Oi—0 to 3 inches; slightly decomposed spruce and fir needles.

Oe—3 to 13 inches; black (5YR 2/1), moderately decomposed organic matter; many roots; 5 percent rock fragments; extremely acid; abrupt wavy boundary.

E—13 to 15 inches; reddish gray (5YR 5/2) loamy fine sand; weak very fine granular structure; very friable; common roots; 5 percent rock fragments; extremely acid; abrupt wavy boundary.

Bh—15 to 16 inches; dark reddish brown (5YR 2/2) very cobbly fine sandy loam; weak fine granular structure; very friable; common roots; 39 percent rock fragments; moderately smeary; extremely acid; abrupt wavy boundary.

R—16 inches; schist bedrock.

The depth to bedrock ranges from 2 to 26 inches. Very thin mineral horizons are at the bedrock interface in most places. The content of rock fragments ranges from 5 to 50 percent in the mineral layers. The organic material is extremely acid and the mineral layers are extremely acid or very strongly acid.

The Oi horizon is undecomposed or slightly decomposed needles, leaves, twigs, and moss.

The Oe horizon is moderately decomposed organic matter.

Some pedons have an Oa horizon. This horizon has hue of 5YR to 10YR or is neutral in hue. It has value of 2 to 5 and chroma of 0 or 1. It is highly decomposed organic matter.

The E horizon has hue of 5YR to 10YR, value of 5 to 7, and chroma of 1 or 2. It is fine sandy loam, loamy fine sand, or the gravelly or very gravelly analogs of those textures. Some pedons do not have an E horizon.

The Bh horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2. Some pedons do not have a Bh horizon.

Some pedons have a Bhs horizon. This horizon has hue of 5YR to 10YR, value of 4, and chroma of 3.

Rippowam Series

The Rippowam series consists of very deep, poorly drained soils. These soils formed in loamy alluvial deposits underlain by sandy alluvial deposits on flood plains. Permeability is moderate or moderately rapid in the upper part of the pedon and rapid or very rapid in the lower part. Slopes range from 0 to 3 percent.

Rippowam soils are geographically associated with the very poorly drained Adrian and Saco soils, the moderately well drained and somewhat poorly drained Middlebury and Teel soils, and the well drained Tioga soils. Unlike Adrian soils, Rippowam soils do not have a thick organic surface layer. They are less gray than Saco soils and are more gray in the upper part than Middlebury, Teel, and Tioga soils.

Typical pedon of Rippowam fine sandy loam, in an area of hayland, in the town of Clarendon, 0.6 mile west of Vermont Route 7B on Alfrecha Road, 270 yards south of Alfrecha Road:

Ap—0 to 5 inches; very dark grayish brown (10YR 3/2) fine sandy loam; weak fine granular structure; very friable; many roots; strongly acid; abrupt wavy boundary.

C1—5 to 15 inches; grayish brown (2.5Y 5/3) fine sandy loam; common coarse faint light brownish gray (2.5Y 6/2) and few medium prominent strong brown (7.5YR 5/6) mottles; massive; friable; common roots; strongly acid; abrupt wavy boundary.

C2—15 to 25 inches; olive (5Y 5/3) fine sandy loam;

common coarse prominent strong brown (7.5YR 5/6) mottles and common coarse faint olive gray (5Y 5/2) mottles; massive; friable; moderately acid; abrupt wavy boundary.

2Cg—25 to 60 inches; light gray (5Y 6/1), stratified fine sand and sand; massive; nonsticky, nonplastic; slightly acid.

The depth to bedrock is more than 60 inches. The depth to the sandy part of the substratum ranges from 20 to 30 inches. The content of rock fragments ranges from 0 to 15 percent in the lower part of the pedon and from 0 to 40 percent in the sandy part. Reaction ranges from very strongly acid to neutral.

The A 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 C horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 or 3. It is fine sandy loam or sandy loam.

The 2C horizon has hue of 10YR to 5Y, value of 3 to 6, and chroma of 1 to 3. It is loamy sand, loamy fine sand, fine sand, sand, or the gravelly analogs of those textures.

Saco Series

The Saco series consists of very deep, very poorly drained soils. These soils formed in loamy alluvial deposits in depressions, swamps, and marshes on flood plains. Permeability is moderate. Slopes range from 0 to 2 percent.

Saco soils are geographically associated with the poorly drained Limerick and Rippowam soils, the moderately well drained and somewhat poorly drained Middlebury and Teel soils, the well drained Tioga soils, the very poorly drained Pinnebog soils, and Fluvaquents and Udifluvents. Unlike Limerick, Middlebury, Rippowam, and Teel soils, Saco soils have a thick, dark surface layer. They are mainly mineral, whereas Pinnebog soils are organic. Saco soils are more gray than Tioga soils and Udifluvents. Unlike Fluvaquents, Saco soils have a mucky surface layer.

Typical pedon of Saco mucky silt loam, in a swamp, in the town of Wells, 0.3 mile north of the Pawlet town line, 0.4 mile south of Vermont Route 30 and 0.8 mile east of Vermont Route 30:

A—0 to 11 inches; very dark gray (10YR 3/1) mucky silt loam; gray (10YR 5/1) dry; weak medium granular structure; friable; many roots; neutral; abrupt smooth boundary.

Cg1—11 to 22 inches; gray (5Y 5/1 and N 5/0) silt loam; few fine prominent strong brown (7.5YR 5/6) mottles; weak medium subangular blocky structure; friable; few roots; neutral; gradual smooth boundary.

Cg2—22 to 34 inches; gray (5Y 4/1 and N 5/0) silt loam; massive; friable; few roots; neutral; clear smooth boundary.

Cg3—34 to 50 inches; very dark grayish brown (2.5Y 3/2) and gray (5Y 4/1) silt loam; massive; friable; few roots; neutral; clear smooth boundary.

Cg4—50 to 60 inches; black (5Y 3/1) very fine sandy loam; massive; friable; few roots; neutral.

The depth to bedrock is more than 60 inches. The content of rock fragments ranges from 0 to 5 percent. Reaction ranges from strongly acid to neutral in the upper 30 inches and is slightly acid or neutral below a depth of 30 inches.

The A horizon has hue of 10YR, value of 2 or 3, and chroma of 1 or 2. It is mucky silt loam, silt loam, or very fine sandy loam.

The C horizon has hue of 2.5Y or 5Y or is neutral in hue. It has value of 3 to 5 and chroma of 0 to 2. It is silt loam, silt, or very fine sandy loam.

Some pedons have a 2C horizon below a depth of 40 inches. This horizon has hue of 2.5Y or 5Y or is neutral in hue. It has value of 3 or 4 and chroma of 0 or 1. It is sand, gravely sand, or very gravelly sand.

Scarboro Series

The Scarboro series consists of very deep, very poorly drained soils. These soils formed in organic deposits and in the underlying glaciofluvial deposits. They are in depressions, swamps, and marshes on kames, stream terraces, deltas, and valley trains. Permeability is rapid or very rapid. Slopes range from 0 to 2 percent.

Scarboro soils are geographically associated with the very poorly drained Adrian and Linwood soils, the moderately well drained Deerfield soils, and the poorly drained Walpole soils. Scarboro soils have an organic surface layer that is thinner than that of Adrian and Linwood soils. Scarboro soils are more gray than Deerfield and Walpole soils.

Typical pedon of Scarboro muck, in a forested area, in the town of Clarendon, 250 yards east of Vermont Route 103, 170 yards west of the Shrewsbury town line:

Oi—5 inches to 0; very dark grayish brown (10YR 3/2), slightly decomposed sphagnum roots and moss; many roots.

Oa—0 to 9 inches; black (N 2/0) muck; common roots; neutral; abrupt smooth boundary.

Eg—9 to 16 inches; dark grayish brown (2.5Y 4/2) sand; common medium prominent olive yellow (2.5Y 6/6) mottles; single grain; loose; neutral; clear smooth boundary.

C1g—16 to 32 inches; grayish brown (2.5Y 5/2) sand; common medium prominent yellowish brown (10YR 5/6) mottles; single grain; loose; neutral; clear smooth boundary.
C2g—32 to 60 inches; olive (5Y 5/3) sand; few fine prominent yellowish brown (10YR 5/6) mottles; massive; friable to loose; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 5 to 20 inches. The content of rock fragments ranges from 0 to 10 percent in the solum and from 0 to 30 percent in the substratum. Reaction ranges from moderately acid to neutral in the Oa and E horizon and from slightly acid to neutral in the C horizon.

The Oa horizon has hue of 7.5YR or 10YR or is neutral in hue. It has value of 2 or 3 and chroma of 0 to 2. It is muck or mucky peat.

Some pedons have an A horizon. This horizon has hue of 5YR to 2.5Y, value of 2 or 3, and chroma of 1 or 2. It is loamy sand, sand, fine sandy loam, mucky loamy sand, mucky sand, or mucky fine sandy loam.

The E horizon has hue of 10YR or 2.5Y or is neutral in hue. It has value of 4 to 7 and chroma of 0 to 2. It is loamy sand, sand, or fine sandy loam.

The C horizon has hue of 10YR to 5Y or 5GY, value of 4 or 5, and chroma of 1 to 3. It is loamy fine sand, sand, or the gravelly analogs of those textures.

Sheepscot Series

The Sheepscot series consists of very deep, moderately well drained soils. These soils formed in loamy glaciofluvial deposits and in the underlying sandy glaciofluvial deposits. They are on kames, stream terraces, deltas, eskers, and valley trains. Permeability is moderately rapid in the upper part of the pedon and rapid or very rapid in the lower part. Slopes range from 2 to 15 percent.

Sheepscot soils are geographically associated with the excessively drained Colton soils, the well drained Duxbury soils, the poorly drained Lyme soils, and the moderately well drained Sunapee soils. Unlike Colton and Duxbury soils, Sheepscot soils have mottles within a depth of 40 inches. They have more rock fragments in the substratum than Lyme and Sunapee soils.

Typical pedon of Sheepscot fine sandy loam, 2 to 8 percent slopes, in forest, in the town of Mendon, 1.8 miles northeast of the intersection of Notch Road and Wheelerville Road, 365 yards east of Wheelerville Road:

Oi—2 inches to 1 inch; slightly decomposed leaves, needles, twigs.
Oe—1 inch to 0; moderately decomposed organic matter.
A—0 to 2 inches; black (5YR 2/1) fine sandy loam; weak fine granular structure; friable; many roots; 17 percent rock fragments; extremely acid; abrupt wavy boundary.
E—2 to 5 inches; pale brown (10YR 6/2) gravelly fine sandy loam; moderate medium granular structure; friable; many roots; 17 percent rock fragments; extremely acid; clear wavy boundary.
Bh—5 to 7 inches; dark brown (7.5YR 3/2) gravelly fine sandy loam; moderate medium granular structure; friable; many roots; 17 percent rock fragments; moderately smeary; extremely acid; clear wavy boundary.
Bs—7 to 14 inches; brown (7.5YR 4/4) gravelly fine sandy loam; moderate medium granular structure; friable; many roots; 30 percent rock fragments; moderately smeary; extremely acid; abrupt wavy boundary.
2BC—14 to 19 inches; strong brown (7.5YR 5/6) very gravelly loamy sand; many fine prominent light yellowish brown (2.5Y 6/4) mottles; weak thick platy structure; friable; common roots; 45 percent rock fragments; moderately smeary; very strongly acid; clear wavy boundary.
2C—19 to 60 inches; light olive brown (2.5Y 5/4) extremely gravelly loamy sand; common fine prominent strong brown (7.5YR 5/6) mottles and common fine distinct light brownish gray (2.5Y 6/2) mottles; massive; friable; few roots; 70 percent rock fragments; very strongly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 14 to 30 inches. The content of rock fragments ranges from 0 to 40 percent in the A horizon and upper part of the B horizon and from 35 to 65 percent in the lower part of the B horizin and in the 2C horizon. Reaction ranges from extremely acid to moderately acid in the solum and from very strongly acid to moderately 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 loam, fine sandy loam, sandy loam, or the gravelly analogs of those textures.

The E horizon has hue of 5YR to 10YR, value of 5 or 6, and chroma of 1 or 2. It is fine sandy loam, sandy loam, or the gravelly analogs of those textures.

The Bh horizon has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 1 or 2.

Some pedons have a Bhs horizon. This horizon has hue of 5YR or 7.5YR and value and chroma of 3/3, 3/4, or 4/3.

The Bs horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 6.

The Bw horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 6.

The Bh, Bhs, Bs, and Bw horizons are very fine sandy loam, fine sandy loam, sandy loam, or the gravelly or very gravelly analogs of those textures within a depth of 10 inches; fine sandy loam, sandy loam, loamy sand, or the gravelly or very gravelly analogs of those textures from a depth of 10 to 17 inches; and loamy sand, sand, coarse sand, or the gravelly or very gravelly analogs of those textures below a depth of 17 inches.

The 2BC horizon has hue of 7.5YR to 2.5Y, value of 5, and chroma of 6. It is very gravelly or extremely gravelly loamy sand, sand, or coarse sand.

The 2C horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is gravelly or very gravelly loamy sand or sand.

Stockbridge Series

The Stockbridge series consists of very deep, well drained soils. These soils formed in calcareous, loamy glacial till on till plains, knolls, and hills. Permeability is moderate in the upper part of the pedon and slow or moderately slow in the lower part. Slopes range from 3 to 45 percent.

Stockbridge soils are geographically associated with the moderately well drained Amenia and Georgia soils, the poorly drained and somewhat poorly drained Massena soils, the well drained Nellis soils, the well drained and somewhat excessively drained Copake soils, and the excessively drained Groton soils. Unlike Amenia, Georgia, and Massena soils, Stockbridge soils do not have gray mottles within a depth of 24 inches. Unlike Nellis soils, they do not have carbonates within a depth of a depth of 40 inches. Stockbridge soils are finer textured in the substratum than Copake and Groton soils.

Typical pedon of Stockbridge gravelly silt loam, 3 to 8 percent slopes, in an area of hayland, in the town of Ira, 700 yards south of the West Rutland town line, and 1,000 yards west of the Clarendon town line:

Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) gravelly silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; many roots; 20 percent rock fragments; moderately acid; abrupt smooth boundary.

Bw1—6 to 13 inches; brown (10YR 4/3) gravelly silt loam; weak fine granular structure; very friable; common roots; 25 percent rock fragments; moderately acid; clear smooth boundary.

Bw2—13 to 28 inches; yellowish brown (10YR 5/4) gravelly silt loam; weak fine granular structure; very friable; common grading to few roots; 25 percent rock fragments; slightly acid; clear smooth boundary.

C—28 to 60 inches; olive (5Y 4/3) gravelly silt loam; massive; firm; 30 percent coarse fragments; moderately acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 20 to 40 inches. The content of rock fragments ranges from 5 to 35 percent in the solum and from 5 to 50 percent in the substratum. Reaction ranges from strongly acid to neutral in the A horizon, from moderately acid to neutral in the part of the B and C horizons within a depth of 40 inches, and from moderately acid to moderately alkaline below a depth of 40 inches.

The A horizon has hue of 10YR, value of 3 or 4, and a chroma of 2 or 3. It is silt loam, loam, very fine sandy loam, or the gravelly analogs of those textures.

The B horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 3 or 4. It is loam, silt loam, or the gravelly analogs of those textures.

The C horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 or 3. It is loam, silt loam, fine sandy loam, or the gravelly or very gravelly analogs of those textures.

Stratton Series

The Stratton series consists of shallow, well drained soils. These soils formed in loamy glacial till on mountains at high elevations. Permeability is moderate or moderately rapid. Slopes range from 15 to 80 percent.

Stratton soils in this survey area are only in complexes or an association with Glebe soils or in a complex with Londonderry and Ricker soils. Stratton soils are geographically associated with the well drained Glebe, Killington, and Londonderry soils and the well drained to excessively drained Ricker soils. Stratton soils are shallow to bedrock, whereas Glebe soils are moderately deep and Londonderry soils are very shallow. Stratton soils have more organic matter in the upper part of the B horizon than Killington soils. Stratton soils are mainly mineral, whereas Ricker soils are mainly organic.

Typical pedon of Stratton very cobbly loam, in a forested area of Stratton-Londonderry-Ricker complex, 15 to 80 percent slopes, very rocky, in the town of Sherburne, 200 feet southwest of Killington peak:

Oi—2 inches to 0; slightly decomposed leaf and needle litter, and root mat.

Oa—0 to 2 inches; black (10YR 2/1) highly decomposed organic matter; weak fine and very fine granular structure; friable; many roots; 50

percent rock fragments; strongly acid; clear wavy boundary.
A—2 to 5 inches; very dark gray (5YR 3/1) very cobbly loam, weak fine granular structure; friable; common roots; 50 percent rock fragments; very strongly acid; clear wavy boundary.
Bh—5 to 18 inches; very dark gray (5YR 3/1) very cobbly loam; weak fine and medium subangular blocky structure; friable; few roots; 70 percent rock fragments; moderately smeary; very strongly acid; abrupt irregular boundary.
R—18 inches; schist bedrock.

The depth to bedrock ranges from 10 to 20 inches. The content of rock fragments ranges from 35 to 80 percent. Reaction ranges from extremely acid to strongly acid throughout.

The A horizon has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 1. It is silt loam, loam, or the very gravelly, very cobbly, extremely gravelly, or extremely cobbly analogs of those textures.

Some pedons have an E horizon. This horizon has hue of 5YR to 10YR, value of 5, and chroma of 1. It is fine sandy loam, loam, or the very gravelly, very cobbly, extremely gravelly, or extremely cobbly analogs of those textures.

The Bh horizon has hue of 5YR or 7.5YR, value of 2 or 3, and chroma of 1 or 2.

Some pedons have a Bhs or Bs horizon, which has hue of 2.5YR to 7.5YR and value and chroma of 3 or more.

The Bh and Bs horizons are fine sandy loam, loam, silt loam, or the very gravelly, very cobbly, extremely gravelly, or extremely cobbly analogs of those textures.

Sudbury Series

The Sudbury series consists of very deep, moderately well drained and somewhat poorly drained soils. These soils formed in loamy glaciofluvial deposits underlain by sandy glaciofluvial deposits on kames, stream terraces, deltas, and valley trains. Permeability is moderately rapid in the solum and rapid in the substratum. Slopes range from 0 to 8 percent.

Sudbury soils formed in material similar to that of the moderately well drained Deerfield, Ninigret, and Tisbury soils; the excessively drained Hinckley and Windsor soils; the poorly drained Walpole soils; and Fluvaquents and Udifluvents. Sudbury soils have more rock fragments in the substratum than Deerfield soils. They have more sand in the particle-size control section than Ninigret and Tisbury soils. Unlike Hinckley and Windsor soils, Sudbury soils have gray mottles within a depth of 24 inches. Sudbury soils are less gray in the B horizon than Walpole soils. Fluvaquents and Udifluvents lack any soil development.

Typical pedon of Sudbury fine sandy loam, 3 to 8 percent slopes, in a forested area, in the town of Clarendon, 1.2 miles east of U.S. Route 7 on Vermont Route 103 and 0.5 mile east of the Rutland Municipal Airport:

Oi—1 inch to 0; slightly decomposed pine needles.
A—0 to 3 inches; very dark grayish brown (10YR 3/2) fine sandy loam; weak fine granular structure; very friable; many roots; 7 percent rock fragments; strongly acid; abrupt smooth boundary.
Bw1—3 to 9 inches; dark brown (10YR 4/3) fine sandy loam; moderate fine subangular blocky structure; friable; many roots; 11 percent rock fragments; slightly acid; clear smooth boundary.
Bw2—9 to 19 inches; light olive brown (2.5Y 5/4) sandy loam; common medium prominent olive (10YR 5/6) mottles; weak fine subangular blocky structure; friable; common roots; 10 percent rock fragments; slightly acid; clear smooth boundary.
BC—19 to 27 inches; light olive brown (2.5Y 5/4) gravelly sandy loam; common medium prominent yellowish brown (10YR 5/6) mottles and common medium prominent grayish brown (10YR 5/2) mottles; weak thin platy structure; friable; few roots; 15 percent rock fragments; slightly acid; abrupt smooth boundary.
2C1—27 to 41 inches; light olive brown (2.5Y 5/4) very gravelly coarse sand, 1-to-2-inch-thick silt lenses; many large prominent yellowish brown (10YR 5/6) mottles and many large prominent light brownish gray (10YR 6/2) mottles in the silt lenses; single grain; loose; 37 percent rock fragments; neutral; clear smooth boundary.
2C2—41 to 60 inches; light olive brown (2.5Y 5/4) very gravelly coarse sand; single grain; loose; 52 percent rock fragments; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum is 18 to 30 inches. The content of rock fragments ranges from 0 to 30 percent in the solum and 25 to 60 percent in the substratum. Reaction ranges from strongly acid to slightly acid in the solum and is neutral in the substratum.

The A horizon has hue of 7.5YR or 10YR, value of 3 or 4, and chroma of 2 to 4. It is fine sandy loam, sandy loam, or the gravelly analogs of those textures.

The B horizon has hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 6. It is fine sandy loam, sandy loam, or the gravelly analogs of those textures.

The BC horizon has hue of 10YR to 2.5Y, value of 4

or 5, and chroma of 2 to 4. It is gravelly or very gravelly sandy loam or fine sandy loam.

The 2C horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 4. It is gravelly or very gravelly sand or coarse sand.

Sunapee Series

The Sunapee series consists of very deep, moderately well drained soils. These soils formed in loamy glacial till on knolls, hills, and mountains. Permeability is moderate in the upper part of the pedon and moderate or moderately rapid in the lower part. Slopes range from 3 to 50 percent.

Sunapee soils are geographically associated with the well drained Berkshire and Marlow soils, the poorly drained and somewhat poorly drained Cabot and Brayton soils, the poorly drained Lyme soils, and the moderately well drained Peru and Sheepscot soils. Unlike Berkshire soils, Sunapee soils have mottles in the spodic horizon. They have a very friable or friable substratum, whereas Cabot and Peru soils have a firm or very firm substratum. Sunapee soils are less gray in the B horizon than Brayton, Lyme, and Marlow soils and have a lower content of rock fragments in the substratum than Sheepscot soils.

Typical pedon of Sunapee fine sandy loam, 8 to 15 percent slopes, very stony, in forest, in the town of Shrewsbury, 4,225 feet north of the intersection of Town Roads 3 and 19, about 50 feet west of Town Road 19:

Oi—1 inch to 0; undecomposed and slightly decomposed leaves, needles, and twigs.

A—0 to 2 inches; black (10YR 2/1) fine sandy loam; weak fine granular structure; very friable; many roots; 7 percent rock fragments; very strongly acid; abrupt smooth boundary.

Bhs—2 to 14 inches; dark brown (10YR 3/3) gravelly fine sandy loam; weak very fine subangular blocky structure; friable; many roots; 30 percent rock fragments; moderately smeary; very strongly acid; gradual wavy boundary.

Bs—14 to 28 inches; yellowish brown (10YR 5/4) gravelly fine sandy loam; common fine prominent yellowish red (5YR 4/6) mottles and few coarse distinct light yellowish brown (2.5Y 6/4) mottles; weak medium platy structure; friable; common roots; 20 percent fragments; weakly smeary; strongly acid; clear wavy boundary.

C1—28 to 35 inches; light yellowish brown (2.5Y 6/4) and brown (10YR 4/3) very gravelly fine sandy loam; common fine distinct yellowish brown (10YR 5/6) mottles; massive; friable; 45 percent rock fragments; strongly acid; clear wavy boundary.

C2—35 to 50 inches; pale olive (5Y 6/3) very gravelly fine sandy loam; many coarse prominent strong brown (7.5YR 4/6) mottles and few medium prominent brown (10YR 4/3) mottles; massive; friable; 35 percent rock fragments; strongly acid; clear wavy boundary.

C3—50 to 60 inches; light olive brown (2.5Y 5/4) very gravelly fine sandy loam; few fine prominent strong brown (7.5YR 4/6) mottles and few medium distinct brown (10YR 4/3) mottles; massive; friable; 40 percent rock fragments; moderately acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 18 to 36 inches. The content of rock fragments ranges from 5 to 35 percent in the solum and from 10 to 55 percent in the substratum. Reaction ranges from extremely acid to strongly acid in the solum and from extremely acid to moderately 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 fine sandy loam, loam, or the gravelly or cobbly analogs of those textures.

Some pedons have an E horizon. This horizon has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 1 or 2. It is fine sandy loam, loam, or the gravelly or cobbly analogs of those textures.

Some pedons have a Bh horizon. This horizon has 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 to 10YR and value and chroma of 3/3 or 3/4.

The Bs horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 6.

Some pedons have a BC horizon. This horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 3 to 6.

The Bh, Bhs, Bs, and BC horizons are fine sandy loam, sandy loam, or the gravelly or cobbly analogs of those textures.

The C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 4. It is fine sandy loam, sandy loam, or the gravelly or cobbly analogs of those textures.

Taconic Series

The Taconic series consists of shallow, somewhat excessively drained soils. These soils formed in loamy glacial till on knolls, hills, and mountains. Permeability is moderate or moderately rapid. Slopes range from 8 to 80 percent.

Taconic soils in this survey area are only in complexes with Hubbardton and Macomber soils.

Taconic soils are geographically associated with the moderately well drained Bomoseen and Pittstown soils, the well drained Dutchess and Macomber soils, and the excessively drained Hubbardton soils. Taconic soils are shallow to bedrock, whereas Bomoseen, Dutchess, and Pittstown soils are very deep, Macomber soils are moderately deep, and Hubbardton soils are very shallow.

Typical pedon of Taconic channery silt loam, in a forested area of Taconic-Hubbardton-Macomber complex, 25 to 80 percent slopes, very rocky, in the town of Hubbardton, 2,200 feet north and 600 feet west of the intersection of Brandon Mountain Road (Town Road 4) and Monument Hill Road (Town Road 2):

Oi—2 inches to 1 inch; undecomposed leaf litter.
Oe—1 inch to 0; black (10YR 2/1), moderately decomposed leaf litter; many roots; abrupt wavy boundary.
A—0 to 3 inches; very dark grayish brown (10YR 3/2) channery silt loam; weak fine granular structure; very friable; many roots; 15 percent rock fragments; strongly acid; abrupt wavy boundary.
Bw1—3 to 6 inches; brown (10YR 4/3) very channery silt loam; weak fine granular structure; very friable; many roots; 40 percent rock fragments; strongly acid; clear wavy boundary.
Bw2—6 to 14 inches; olive brown (2.5Y 4/4) very channery silt loam; weak fine subangular blocky structure; very friable; common to few roots; 40 percent rock fragments; strongly acid; clear wavy boundary.
C—14 to 18 inches; light olive brown (2.5Y 5/4) very channery silt loam; weak fine subangular blocky structure; very friable; 50 percent rock fragments; strongly acid; abrupt wavy boundary.
R—18 inches; slate bedrock.

The depth to bedrock and the thickness of the solum range from 10 to 20 inches. The content of rock fragments ranges from 10 to 60 percent in the A horizon and from 35 to 60 percent in the B and C horizons. The soils are channery, very channery, or extremely channery loam or silt loam. Some subhorizons are silt loam or loam, but the control section averages more than 35 percent rock fragments. Reaction ranges from very strongly acid to moderately acid throughout.

The A horizon has hue of 7.5YR to 2.5Y, value of 2 to 4, and chroma of 1 to 3.

The Bw horizon has hue of 7.5YR to 5Y, value of 3 to 5, and chroma of 2 to 6.

The C horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 4.

Teel Series

The Teel series consists of very deep, moderately well drained and somewhat poorly drained soils. These soils formed in loamy alluvial deposits on flood plains. Permeability is moderate in the upper part of the pedon and moderately rapid or rapid in the lower part. Slopes range from 0 to 3 percent.

Teel soils are geographically associated with the well drained Hamlin, Tioga, and Wappinger soils; the poorly drained Limerick and Rippowam soils; the moderately well drained Pawling soils; the poorly drained and very poorly drained Elvers soils; the very poorly drained Saco soils; and the moderately well drained and somewhat poorly drained Middlebury soils. Unlike Hamlin and Tioga soils, Teel soils have gray mottles within a depth of 24 inches. Teel soils are less gray than Limerick and Rippowam soils. They have more silt in the particle-size control section than Middlebury soils. Unlike Elvers soils, Teel soils do not have an organic substratum. They are finer textured in the substratum than Pawling and Wappinger soils. Unlike Saco soils, Teel soils do not have a thick, dark surface layer.

Typical pedon of Teel silt loam, sandy substratum, in a cornfield, in the town of Castleton, 0.6 mile south of the intersection of Route 4A and Route 30, about 0.6 mile west of Route 30:

Ap—0 to 11 inches; dark grayish brown (10YR 4/2) silt loam; light brownish gray (10YR 6/2) dry; weak moderate granular structure; friable; common roots; slightly acid; abrupt smooth boundary.
Bw1—11 to 19 inches; dark brown (10YR 4/3) silt loam; weak moderate subangular blocky structure; friable; common roots; neutral; clear smooth boundary.
Bw2—19 to 31 inches; brown (10YR 4/3) silt loam; common medium distinct gray (10YR 5/1) mottles; weak medium subangular blocky structure; friable; few roots; neutral; clear smooth boundary.
C—31 to 41 inches; gray (5Y 5/1) silt loam; massive; very friable; neutral; abrupt smooth boundary.
2C—41 to 60 inches; dark gray (5Y 4/1) loamy coarse sand; single grain; loose; 5 percent rock fragments; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 24 to 40 inches. The depth to the sandy substratum ranges from 40 to 60 inches. The content of rock fragments ranges from 0 to 5 percent. Reaction is moderately acid to neutral throughout.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. It is silt loam or very fine sandy loam.

The B horizon has hue of 10YR, value of 3 to 5, and chroma of 2 or 3. It is silt loam or very fine sandy loam.

The C horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 1 to 4. It is silt loam, very fine sandy loam, or fine sandy loam.

The 2C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 to 4. It is loamy sand, loamy coarse sand, or sand.

Tioga Series

The Tioga series consists of very deep, well drained soils. These soils formed in loamy alluvial deposits on flood plains. Permeability is moderate or moderately rapid in the upper part of the pedon and moderate to rapid in the lower part. Slopes range from 0 to 3 percent.

Tioga soils are geographically associated with the well drained Hamlin soils, the moderately well drained and somewhat poorly drained Middlebury and Teel soils, the poorly drained Rippowam soils, and the very poorly drained Saco soils. Tioga soils have less silt in the particle-size control section than Hamlin and Teel soils. Unlike Middlebury and Rippowam soils, Tioga soils do not have mottles within a depth of 24 inches. Tioga soils are less gray than Saco soils.

Typical pedon of Tioga fine sandy loam, in cropland, in the town of Pittsford, 50 feet west of Otter Creek, 1.2 miles northeast of Florence, 0.5 mile west of U.S. Route 7:

Ap—0 to 12 inches; dark grayish brown (2.5Y 4/2) fine sandy loam, yellowish brown (10YR 5/4) dry; weak very fine subangular structure; friable; common roots; neutral; clear smooth boundary.

Bw—12 to 28 inches; light olive brown (2.5Y 5/4) fine sandy loam; weak very fine and fine subangular blocky structure; friable; few roots; neutral; gradual smooth boundary.

C—28 to 60 inches; light olive brown (2.5Y 5/4) fine sandy loam; massive; friable; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 18 to 40 inches. The content of rock fragments ranges from 0 to 5 percent. Reaction ranges from strongly acid to neutral in the surface layer and subsoil and from moderately acid to mildly alkaline in the substratum.

The A horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2. It is fine sandy loam, very fine sandy loam, silt loam, or loam.

The B horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 3 or 4. It mainly is silt loam, very fine sandy loam, or fine sandy loam. Some pedons have individual subhorizons of sandy loam or loamy sand.

The C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 4. It is silt loam, very fine sandy loam, fine sandy loam, or loamy sand.

Tisbury Series

The Tisbury series consists of very deep, moderately well drained soils. These soils formed in loamy eolian or glaciofluvial deposits over sandy glaciofluvial deposits on stream terraces, deltas, and valley trains. Permeability is moderate in the upper part of the pedon and rapid or very rapid in the lower part. Slopes range from 0 to 3 percent.

Tisbury soils are geographically associated with the moderately well drained Belgrade and Castile soils, the poorly drained and somewhat poorly drained Fredon soils, the poorly drained Raynham soils, and the moderately well drained and somewhat poorly drained Sudbury soils. Tisbury soils are coarser textured in the substratum than Belgrade and Raynham soils, have a lower content of rock fragments in the solum than Castile soils, are less gray in the B horizon than Fredon soils, and have more silt and less sand in the solum than Sudbury soils.

Typical pedon of Tisbury silt loam, 0 to 3 percent slopes, in an area of hayland, in the town of Pawlet, 495 yards west of the intersection of Route 153 and Rush Hollow Road:

Ap1—0 to 6 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; weak fine granular structure; very friable; many roots; neutral; abrupt smooth boundary.

Ap2—6 to 12 inches; dark brown (10YR 3/3) silt loam; weak fine granular structure; very friable; many roots; 1 percent rock fragments; slightly acid; abrupt wavy boundary.

Bw1—12 to 16 inches; yellowish brown (10YR 5/4) very fine sandy loam; common medium prominent light brownish gray (2.5Y 6/2) mottles and distinct yellowish brown (10YR 5/6) mottles; weak fine subangular blocky structure; very friable; common roots; 4 percent rock fragments; slightly acid; abrupt wavy boundary.

Bw2—16 to 22 inches; light olive brown (2.5Y 5/4) very fine sandy loam; common medium distinct light brownish gray (2.5Y 6/2) mottles and prominent brownish yellow (10YR 5/6) mottles; weak medium subangular blocky structure; friable; few roots; 4 percent rock fragments; moderately acid; abrupt wavy boundary.

2C1-22 to 31 inches; light olive brown (2.5Y 5/4) very gravelly coarse sand; single grain; loose; 40 percent rock fragments; moderately acid; abrupt wavy boundary.

2C2—31 to 60 inches; light olive brown (2.5Y 5/4)

extremely gravelly coarse sand; single grain; loose; 65 percent rock fragments; moderately acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 17 to 40 inches. The content of rock fragments ranges from 0 to 5 percent in the solum and from 25 to 70 percent in the substratum. Unless limed, the soil ranges from very strongly acid to moderately acid.

The A horizon has hue of 10YR, value of 3, and chroma of 2 to 4.

The Bw horizon has hue of 10YR to 2.5Y, value of 4 or 5, and chroma of 3 to 6. It is silt loam or very fine sandy loam.

The 2C horizon has hue of 2.5Y, value of 4 or 5, and chroma of 2 to 6. It is gravelly, very gravelly, or extremely gravelly sand or coarse sand.

Tunbridge Series

The Tunbridge series consists of moderately deep, well drained soils. These soils formed in loamy glacial till on knolls, hills, and mountains. Permeability is moderate or moderately rapid. Slopes range from 3 to 75 percent.

Tunbridge soils in this survey area are only in complexes or associations with Berkshire, Lyman, and Marlow soils. Tunbridge soils are geographically associated with the well drained Berkshire, Houghtonville, Marlow, and Rawsonville soils and the somewhat excessively drained Lyman soils. Tunbridge soils are moderately deep to bedrock, whereas Berkshire, Houghtonville, and Marlow soils are very deep and Lyman soils are shallow. Tunbridge soils have a spodic horizon that is thinner than that of Rawsonville soils.

Typical pedon of Tunbridge gravelly fine sandy loam, in a forested area of Lyman-Tunbridge-Rock outcrop complex, 35 to 60 percent slopes, very stony, in the town of Shrewsbury, 0.8 mile east of the intersection of Vermont Route 103 and Airport Road:

Oi—1 inch to 0; undecomposed organic matter.

A—0 to 2 inches; very dark grayish brown (10YR 2/2) gravelly fine sandy loam; weak very fine granular structure; very friable; many roots; 30 percent rock fragments; very strongly acid; abrupt wavy boundary.

E—2 to 4 inches; brown (7.5YR 5/2) gravelly fine sandy loam; weak medium granular structure; very friable; many roots; 30 percent rock fragments; very strongly acid; abrupt wavy boundary.

Bs—4 to 16 inches; strong brown (7.5YR 5/6) very stony fine sandy loam; weak medium granular structure; very friable; many roots; 35 percent rock fragments; moderately smeary; very strongly acid; clear wavy boundary.

BC1—16 to 25 inches; brown (7.5YR 4/4) very stony fine sandy loam; weak medium granular structure; very friable; common roots; 35 percent rock fragments; very strongly acid; gradual wavy boundary.

BC2—25 to 35 inches; yellowish brown (10YR 5/6) stony fine sandy loam; weak medium subangular blocky structure; friable; common roots; 25 percent rock fragments; very strongly acid; abrupt irregular boundary.

R—35 inches; schist bedrock.

The depth to bedrock ranges from 20 to 40 inches. The thickness of the solum ranges from 14 to 38 inches. The content of rock fragments ranges from 5 to 35 percent throughout. Reaction ranges from extremely acid to moderately acid in the solum and from strongly acid to slightly acid in the substratum.

The A horizon has hue of 5YR to 10YR or is neutral in hue. It has value of 2 to 5 and chroma of 0 to 4. It is silt loam, loam, fine sandy loam, or the gravelly analogs of those textures.

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 the gravelly analogs of those textures.

Some pedons have a Bh horizon. This horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 2.

Some pedons have a Bhs horizon. This horizon has hue of 5YR to 10YR and value and chroma of 3/3, 3/4, 3/6, or 4/3.

The Bs horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 6.

The BC horizon has hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 3 to 6.

The Bh, Bhs, Bs, and BC horizons are loam, silt loam, fine sandy loam, or the gravelly, channery, cobbly, or stony analogs of those textures.

Some pedons have a C horizon. This horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 3 to 6. It is silt loam, fine sandy loam, or the gravelly, cobbly, stony, or channery analogs of those textures.

Udifluvents

Udifluvents consists of very deep, moderately well drained to excessively drained soils. These soils formed in sandy and loamy alluvial deposits on flood plains. Slopes range from 0 to 3 percent.

Udifluvents in this survey area are only in an undifferentiated group with Fluvaquents. Udifluvents are geographically associated with the moderately well drained Deerfield soils, the excessively drained Hinckley soils, the poorly drained Limerick soils, the very poorly

drained Saco soils, the moderately well drained and somewhat poorly drained Sudbury soils, and Fluvaquents. Unlike Deerfield, Hinckley, and Sudbury soils, Udifluvents are frequently flooded. Unlike Limerick and Saco soils, they are not gray in the subsoil and upper part of the substratum. Unlike Fluvaquents, they do not have mottles within a depth of 20 inches.

Because of the variability of the Udifluvents, a typical pedon is not described. These soils have a surface layer that is 3 to 6 inches thick and is underlain by stratified material. The depth to bedrock is more than 60 inches. The content of rock fragments ranges from 15 to 75 percent throughout. Reaction ranges from strongly acid to neutral.

Udipsamments

Udipsamments consists of very deep, moderately well drained to excessively drained soils. These soils formed in sandy material in an areas that have been altered by construction equipment for the purpose of extracting sand or gravel, by grading to prepare for construction, or for disposal of construction or industrial wastes such as foundry wastes. Slopes range from 0 to 3 percent.

Udipsamments are geographically associated with the well drained and excessively drained Adams soils; the excessively drained Colton, Hinckley, and Quonset soils; the moderately well drained Deerfield soils; the well drained Duxbury soils; and the somewhat excessively drained Warwick soils. Unlke Adams, Colton, Hinckley, Quonset, Deerfield, Duxbury, and Warwick soils, Udipsamments do not have a subsoil.

Because of the variability of the Udipsamments, a typical pedon is not described. These soils have a surface layer that is 0 to 6 inches thick and is underlain by sandy material. The depth to bedrock ranges from 2 inches to at least 60 inches. The content of rock fragments ranges from 0 to 75 percent. Reaction ranges from extremely acid to moderately alkaline.

Udorthents

Udorthents consists of very deep, moderately well drained and well drained soils. These soils formed in loamy material in an areas that have been altered by construction equipment for the purpose of leveling to prepare for construction, by extracting loamy material for fill, or for disposal of construction or municipal wastes. Slopes range from 0 to 65 percent.

Udorthents are geographically associated with the well drained Berkshire, Dutchess, Duxbury, Hartland, Marlow, and Paxton soils. Unlike Berkshire, Dutchess, Duxbury, Hartland, Marlow, and Paxton soils, Udorthents do not have a subsoil.

Because of the variability of the Udorthents, a typical pedon is not described. These soils have a surface layer that is 0 to 6 inches thick and is underlain by loamy material. The depth to bedrock ranges from 2 inches to at least 60 inches. The content of rock fragments ranges from 0 to 65 percent. Reaction ranges from extremely acid to neutral.

Vergennes Series

The Vergennes series consists of very deep, moderately well drained soils. These soils formed in calcareous, clayey glaciolacustrine and marine deposits on lake plains. Permeability is moderately slow to very slow in the upper part of the pedon and very slow in the lower part of the pedon. Slopes range from 3 to 50 percent.

Vergennes soils are geographically associated with the moderately well drained Elmridge soils, the well drained and somewhat excessively drained Farmington soils, the excessively drained and somewhat excessively drained Galoo and Benson soils, the well drained and moderately well drained Galway soils, the somewhat poorly drained Kingsbury soils, and the very poorly drained Livingston soils, Aquents, and Histosols. Vergennes soils are finer textured in the solum than Elmridge soils. They are very deep to bedrock, whereas Farmington and Benson soils are shallow, Galoo soils are very shallow, and Galway soils are moderately deep. Vergennes soils are less gray in the B horizon than Kingsbury and Livingston soils. Aquents lack any soil development. Histosols formed in organic material.

Typical pedon of Vergennes clay, 15 to 25 percent slopes, in pasture, in the town of West Haven, 1.25 miles west of West Haven Center and 0.5 mile north of the road:

Ap—0 to 3 inches; dark grayish brown (10YR 4/2) clay; moderate medium granular structure; friable, sticky and plastic; many roots; moderately acid; abrupt smooth boundary.

E—3 to 6 inches; brown (10YR 5/3) clay; moderate medium and fine angular blocky structure; firm, sticky and plastic; many roots; moderately acid; clear irregular boundary.

B/E—6 to 11 inches; brown (10YR 5/3) clay tonguing into dark brown (10YR 4/3) clay; common fine faint grayish brown (10YR 5/2) and dark yellowish brown (10YR 4/4) mottles; strong medium angular blocky structure; firm, sticky and plastic; few roots; few moderate thick clay films on ped faces; slight effervescence; neutral; clear irregular boundary.

Bt—6 to 18 inches; dark brown (10YR 4/3) clay; common fine faint grayish brown (10YR 5/2) mottles and dark yellowish brown (10YR 4/4) mottles;

strong medium angular blocky structure; firm, sticky and plastic; few roots; few moderate thick clay films on ped faces; slight effervescence; neutral; gradual smooth boundary.

C—18 to 60 inches; brown (10YR 5/3) clay; common medium distinct gray (10YR 5/1) mottles and common medium distinct yellowish brown (10YR 5/6) mottles; massive; very firm, sticky and plastic; common coarse calcium carbonate accumulations; violent effervescence; mildly alkaline.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 14 to 40 inches. The depth to free carbonates ranges from 18 to 40 inches. Reaction ranges from moderately acid to neutral in the upper 30 inches and is mildly alkaline or moderately alkaline below a depth of 30 inches.

The A horizon has hue of 10YR, value of 3 to 5, and chroma of 2 to 4. It is silty clay, silty clay loam, or clay.

The E horizon has hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 2 or 3. It is silty clay loam, silty clay, or clay.

The B/E horizon has colors and textures similar to those of the Bt and E horizons.

The Bt horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4.

Some pedons have a Bw or BC horizon, which has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4.

The C horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 4.

Walpole Series

The Walpole series consists of very deep, poorly drained soils. These soils formed in loamy glaciofluvial deposits underlain by sandy glaciofluvial deposits on kames, stream terraces, deltas, and valley trains. Permeability is moderately rapid in the upper part of the pedon and rapid or very rapid in the lower part. Slopes range from 0 to 5 percent.

Walpole soils are geographically associated with the very poorly drained Adrian and Scarboro soils, the moderately well drained Deerfield and Ninigret soils, the poorly drained Enosburg soils, and the moderately well drained and somewhat poorly drained Sudbury soils. Unlike Adrian and Scarboro soils, Walpole soils do not have a thick organic surface layer. They are more gray in the B horizon than Deerfield, Ninigret, and Sudbury soils. Unlike Enosburg soils, Walpole soils have a B horizon.

Typical pedon of Walpole fine sandy loam, 0 to 5 percent slopes, in an area of hayland, in the town of Rutland, 900 feet west of U.S. Route 7, about 0.5 mile south of the intersection of Prospect Hill Road and U.S. Route 7:

Ap—0 to 9 inches; very dark gray (10YR 3/1) fine sandy loam; moderate medium granular structure; very friable; many very fine roots; slightly acid; abrupt smooth boundary.

Bw—9 to 20 inches; dark brown (10YR 4/3) fine sandy loam; common fine distinct grayish brown (2.5Y 5/2) mottles and many medium distinct yellowish brown (10YR 5/6) mottles; weak fine subangular blocky structure; very friable; few roots; slightly acid; abrupt smooth boundary.

2C1—20 to 26 inches; olive brown (2.5Y 4/4) fine sand; common medium distinct light olive brown (2.5Y 5/6) mottles and common medium prominent olive gray (5Y 4/2) mottles; single grained; nonsticky, nonplastic; neutral; clear smooth boundary.

2C2—26 to 60 inches; olive (5Y 5/3) fine sand; common medium prominent light olive brown (2.5Y 5/6) mottles and common medium faint olive gray (5Y 5/2) mottles; single grained; nonsticky, nonplastic; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 18 to 28 inches. The content of rock fragments ranges from 0 to 5 percent in the solum, and from 0 to 25 percent in the substratum. Reaction ranges from very strongly acid to neutral.

The A horizon has hue of 10YR, value of 2 or 3, and chroma of 1 or 2. It is sandy loam or fine sandy loam.

The B horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma or 2 or 3. It is fine sandy loam or sandy loam.

The 2C horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 2 to 4. It is sand or fine sand, or the gravelly analogs of those textures.

Wappinger Series

The Wappinger series consists of very deep, well drained soils. These soils formed in loamy alluvial deposits underlain by sandy alluvial deposits on flood plains. Permeability is moderate in the upper part of the pedon and moderately rapid to rapid in the lower part. Slopes range from 0 to 2 percent.

Wappinger soils are geographically associated with the well drained Hamlin soils, the poorly drained Limerick soils, the moderately well drained Pawling soils, and the moderately well drained and somewhat poorly drained Teel soils. Wappinger soils are coarser textured in the substratum than Hamlin, Limerick, and Teel soils. Unlike Pawling soils, Wappinger soils do not have gray mottles within a depth of 24 inches.

Typical pedon of Wappinger silt loam, in alfalfa field, in the town of Wells, 1.2 miles north of the Pawlet town line on Vermont Route 30, about 325 yards south of Route 30 and across Wells Brook:

Ap—0 to 10 inches; very dark grayish brown (10YR 3/2) silt loam, light brownish gray (2.5Y 6/2) dry; weak coarse granular structure; very friable; many roots; neutral; abrupt smooth boundary.
Bw1—10 to 22 inches; olive brown (2.5Y 4/4) and brown (10YR 4/3) silt loam; weak coarse prismatic structure parting to weak coarse subangular blocky; friable; common roots; neutral; clear smooth boundary.
Bw2—22 to 30 inches; dark grayish brown (2.5Y 4/2) and olive brown (2.5Y 4/4) loam and pockets of fine sandy loam and silt loam; weak coarse subangular blocky structure parting to weak thick platy; very friable; common roots; neutral; abrupt smooth boundary.
2C1—30 to 36 inches; variegated very gravelly fine sand; single grain; loose; 40 percent rock fragments; neutral; abrupt smooth boundary.
2C2—36 to 60 inches; variegated stratified sand, gravel, and cobblestones; single grain; loose, nonsticky; 60 percent rock fragments; neutral.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 25 to 35 inches. The content of rock fragments ranges from 0 to 10 percent in the solum and upper part of the substratum and from 15 to 70 percent in the lower part of the substratum. Reaction ranges from moderately acid to neutral throughout.

The A horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 or 3. It is silt loam or loam.

The Bw horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 2 to 4. It is silt loam, loam, or fine sandy loam.

Some pedons have a C horizon. This horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 3 or 4. It is loam, silt loam, fine sandy loam, sandy loam, or the gravelly or channery analogs of those textures.

The 2C horizon has hue of 10YR to 5Y, value of 4 or 5, and chroma of 3 or 4. It is gravelly, very gravelly, or extremely gravelly loamy sand, sand, or coarse sand.

Warwick Series

The Warwick series consists of very deep, somewhat excessively drained soils. These soils formed in loamy glaciofluvial deposits underlain by sandy glaciofluvial deposits on kames, stream terraces, deltas, eskers, and valley trains. Permeability is moderately rapid in the upper part of the pedon and very rapid in the lower part. Slopes range from 0 to 45 percent.

Warwick soils in this survey area are only in complexes with Quonset soils. Warwick soils are geographically associated with the moderately well drained Bomoseen, Castile, and Pittstown soils; the well drained Dutchess soils; the poorly drained and somewhat poorly drained Fredon soils; the excessively drained Quonset soils; and Udipsamments. Unlike Bomoseen, Castile, and Pittstown soils, Warwick soils do not have gray mottles within a depth of 24 inches. Warwick soils have more rock fragments in the substratum than Dutchess soils, are less gray in the B horizon than Fredon soils, and have less sand in the particle-size control section than Quonset soils. Udipsamments lack any soil development.

Typical pedon of Warwick channery fine sandy loam in an area of Warwick-Quonset complex, 3 to 8 percent slopes, in a pasture, in the town of Middletown Springs, 0.9 mile east of Middletown Springs, 215 yards north of the road:

Ap—0 to 6 inches; dark brown (10YR 3/3) channery fine sandy loam; weak fine granular structure; very friable; many roots; 20 percent rock fragments; very strongly acid; abrupt smooth boundary.
Bw1—6 to 12 inches; dark yellowish brown (10YR 4/4) very channery fine sandy loam; weak fine granular structure; very friable; many roots; 40 percent rock fragments; very strongly acid; clear smooth boundary.
Bw2—12 to 27 inches; light olive brown (2.5Y 5/6) very channery fine sandy loam; weak fine granular structure; very friable; common roots; 50 percent rock fragments; very strongly acid; abrupt smooth boundary.
2C—27 to 60 inches; olive brown (2.5Y 4/4) very channery sand; single grain; loose; 60 percent rock fragments; very strongly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 20 to 30 inches. The content of rock fragments ranges from 15 to 60 percent in the solum and 40 to 75 percent in the substratum. Dark flat slate, phyllite, and schist fragments make up 50 to 75 percent of the rock fragments. Reaction ranges from extremely acid to moderately acid in the surface layer, from very strongly acid to moderately acid in the subsoil, and from very strongly acid to slightly acid in the substratum.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. It is channery or very channery fine sandy loam or sandy loam.

The Bw horizon has hue of 7.5YR or 10YR in the upper part and 10YR or 2.5Y in the lower part, value of

3 to 5, and chroma of 3 to 6. It is flaggy or very flaggy, channery or very channery fine sandy loam or sandy loam.

The 2C horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 2 to 4. It is extremely or very channery or extremely or very flaggy sand or loamy sand.

Windsor Series

The Windsor series consists of very deep, excessively drained soils. These soils formed in sandy glaciofluvial deposits on kames, stream terraces, deltas, eskers, and valley trains. Permeability is rapid or very rapid. Slopes range from 3 to 60 percent.

Windsor soils are geographically associated with the moderately well drained Deerfield, Eldridge, and Ninigret soils; the excessively drained Hinckley soils; the well drained to excessively drained Adams soils; the well drained Hartland and Paxton soils; and the moderately well drained and somewhat poorly drained Sudbury soils. Unlike Deerfield and Sudbury soils, Windsor soils do not have gray mottles within a depth of 24 inches. Windsor soils are coarser textured in the substratum than Eldridge soils, have a lower content of rock fragments in the substratum than Hinckley soils, and have more sand in the substratum than Paxton soils. Unlike Adams soils, Windsor soils do not have a spodic horizon. They are coarser textured than Hartland soils. Unlike Ninigret soils, Windsor soils do not have mottles within a depth of 24 inches.

Typical pedon of Windsor loamy sand, 3 to 8 percent slopes, in a forested area, in the town of Fair Haven, 0.6 mile east of intersection of Route 22A and River Road. 110 yards north of River Road:

Oi—2 inches to 1 inch; undecomposed organic matter consisting of leaves, twigs, and pine needles.

Oe—1 inch to 0; dark reddish brown (5YR 3/2), moderately decomposed organic matter; many roots; strongly acid; abrupt smooth boundary.

A—0 to 2 inches; dark brown (10YR 4/3) loamy sand; weak very fine granular structure; very friable; many roots; strongly acid; abrupt smooth boundary.

Bw1—2 to 12 inches; yellowish brown (10YR 5/6) loamy sand; weak fine granular structure; very friable; many roots; strongly acid; abrupt smooth boundary.

Bw2—12 to 24 inches; light olive brown (2.5Y 5/6) sand; weak medium granular structure; very friable; common roots; strongly acid; abrupt wavy boundary.

C1—24 to 58 inches; light olive brown (2.5Y 5/4) sand; single grain; loose; common to few roots; strongly acid; clear smooth boundary.

C2—58 to 60 inches; light olive brown (2.5Y 5/4) sand; single grain; loose; few roots; slightly acid.

The depth to bedrock is more than 60 inches. The thickness of the solum ranges from 20 to 32 inches. The content of rock fragments ranges from 0 to 10 percent in the solum and from 0 to 15 percent in the substratum. Reaction ranges from very strongly acid to moderately acid in the solum and from very strongly acid to slightly acid in the substratum.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. It is loamy fine sand or loamy sand.

The Bw horizon has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8. It is loamy fine sand or loamy sand in the upper part and loamy fine sand, loamy sand, or sand in the lower part.

The C horizon has hue of 7.5YR to 5Y, value of 4 to 7, and chroma of 3 to 6. It is sand or fine sand.

Formation of the Soils

Soil forms through the interaction of five major factors: the physical, chemical, and mineralogical 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 (*3*).

Climate and plant and animal life are the active forces in soil formation. They 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 to change 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 of any one factor unless conditions are specified for the other four. Many of the processes of soil formation are unknown.

Parent Material

Parent material is the mineral or organic mass from which a soil forms. Most of the parent materials of the soils in Rutland County are unconsolidated material that was deposited by glaciers or by meltwater from the glaciers. Some of the unconsolidated materials were reworked and redeposited by water and wind after the glaciers had receded. The glaciers covered the county about 10,000 to 12,000 years ago. The unconsolidated parent materials in Rutland County were deposited as glacial till, outwash deposits, lacustrine and marine deposits, alluvium, and organic material.

Glacial till is material laid down directly by glaciers with a minimum of sorting by water action. The till consists of particles of different sizes that are mixed together. The small pebbles in glacial till commonly have sharp corners, indicating that they have not been worn by water washing. The glacial till in Rutland County is loamy and is both calcareous and acid. Peru soils, for example, formed in glacial till.

Outwash is material that was sorted and deposited by running glacial meltwater. The size of the particles that make up outwash material varies according to the stream flow that carried them. As the streamflow lessened, the coarser particles were deposited first. Slower moving water carried only the finer particles such as very fine sand, silt, and clay. Outwash deposits generally consist of layers of soil particles of similar size, such as sandy loam or sand or coarse fragments such as gravel. Hinckley soils, for example, formed in outwash deposits of sand and gravel.

Lacustrine and marine material was deposited from still or ponded glacial meltwater. Because the coarser fragments drop out of the moving water as outwash, only the finer particles, such as very fine sand, silt, and clay, remain to settle out in still water. In Rutland County, soils formed in lacustrine deposits are typically very fine sandy loam, silt loam, or clay. Belgrade and Kingsbury soils are examples.

Alluvium is material deposited by floodwaters of present streams in recent times. Its range in texture depends on the speed of the water that deposited it. Tioga soils, for instance, are alluvial soils deposited near the banks of streams where the velocity of the water is greatest. Tioga soils are coarser textured than Limerick soils, which are alluvial soils deposited in backswamp areas where the water is moving more slowly or is ponded and still.

Organic material consists mainly of plant remains. After the glaciers receded in the area, water stood in depressions on valley trains, flood plains, moraines, and till plains. Grasses, sedges, and wetland plants growing around the edges of these lakes died, and the remains fell into the water. Because of the wetness of the areas, the plant remains did not decompose but remained around the edge of the lakes and ponds. Later, water-tolerant trees and shrubs grew on the areas. As these trees died, their residues became a part of the organic accumulation. Eventually the lakes were filled with organic material and developed into areas of muck.

Pinnebog soils are an example of soils formed in organic material.

Plant and Animal Life

Green plants have been the principal organisms influencing the soils in Rutland County, but bacteria, fungi, earthworms, mammals, reptiles, birds, and humans have also been important. The chief contribution of plant and animal life is the addition of organic matter and nitrogen to the soil. The kind of organic material on and in the soil depends on the kinds of plants that grew on the soil. The remains of these plants accumulate on the surface, decay, and eventually become organic matter. Roots of the plants provide channels for downward movement of water through the soil and also add organic matter as they decay. Bacteria in the soil help to break down the organic matter so that it can be used by growing plants.

The original vegetation in Rutland County was deciduous and coniferous. Differences in natural soil drainage, changes in climate with elevation, and differences in parent material affected the composition of the forest species.

In general the well drained upland soils at mid-elevations in the Green Mountains and the Vermont Valley, such as the Tunbridge and Berkshire soils, were mainly covered with sugar maple, beech, and birch trees. The well drained upland soils at high elevations in the Green Mountains and the Taconic Mountains were mainly covered with red spruce and balsam fir. The excessively drained and somewhat excessively drained upland soils in the Taconic mountains and the Champlain Valley, such as the Hubbardton and Taconic soils, were mainly covered with hophornbeam and red oak. The well drained soils in the Taconic Mountains and the Champlain Valley, such as the Macomber and Dutchess soils, were mainly covered with sugar maple, beech, and red oak. The poorly drained and very poorly soils were covered mainly with red maple, elm, ash, and tamarack. The Adrian and Linwood soils formed under wet conditions, and they contain considerable organic matter.

Climate

Climate determines the kind of plant and animal life on and in the soils, the temperature at which chemical reactions will occur in the soils, and the amount of water available for weathering of minerals and the transporting of soil material. Climate, through its influence on temperatures in the soil, determines the rate of chemical reactions that occur in the soil.

The climate in Rutland County is cool and humid, presumably similar to that which existed when the soils formed. The soils in Rutland County differ from soils formed in a dry, warm climate and from those formed in a hot, moist climate. Climate is variable throughout the county, and its effect is modified locally by proximity to large lakes, by elevation, and by proximity to hilly and mountainous terrain. Soils in the Green Mountains are cooler than those in the Vermont Valley and the Champlain Valley. More intense weathering has taken place in the cool, moist conditions of the upper elevations of the Green Mountains.

Relief

Relief, or topography, has a marked influence on the soils of Rutland County through its influence on natural drainage, erosion, plant cover, and soil temperature. In Rutland County, slopes range from 0 to 80 percent. Natural soil drainage ranges from excessively drained to well drained on ridgetops to poorly and very poorly drained in depressions.

Relief influences the formation of soils by affecting runoff and drainage; drainage in turn, through its affect on aeration of the soil, determines the color of the soils. Runoff is greatest on the steeper slopes. In some low areas, water is temporarily ponded. Water and air move more freely through soils that are well drained and slowly through soils that are very poorly drained. In soils that are well aerated, the iron and aluminum compounds that give most soils their color are brightly colored and oxidized; in poorly aerated soils the color is dull gray. Soils that are well aerated during part of the year and poorly aerated during part of the year, because of a seasonal high water table, are commonly mottled with both bright and dull splotches of color. Hartland soils are examples of well drained, well aerated soils. Canandaigua soils are examples of poorly aerated, poorly drained soils. Belgrade soils are examples of moderately well drained soils that have a seasonal high water table and are mottled. All three soils formed in similar parent material.

Time

Time, usually a long time, is required for the processes of soil formation to develop distinct horizons from parent material. The differences in length of time that the parent materials have been in place are commonly reflected in the degree of development of the soil profile. Some soils develop rapidly, others slowly.

The soils in Rutland County ranges from young to mature. The glacial deposits from which many of the soils in Rutland County formed have been exposed to soil-forming factors for a long enough time to allow distinct horizons to develop. Berkshire soils, which formed in glacial deposits, are mature soils that have

distinct horizons. Soils that formed in recent alluvial sediments have not been in place long enough for distinct horizons to develop. Teel soils, for instance, are young soils that formed in alluvium.

Processes of Soil Formation

The processes responsible for the development of the soil horizons from the unconsolidated parent material are referred to as soil genesis. The physical, chemical, and biological properties of the various soil horizons are termed soil morphology.

Four main processes were involved in the development of soil horizons in the soils of Rutland County; (1) accumulation of organic matter; (2) leaching of lime (calcium carbonates) and other bases; (3) chemical changes, such as oxidation, reduction, and hydration and the transfer or losses of the products of these changes; and (4) formation and translocation of silicate clay minerals. In most soils of Rutland County more than one of the processes have been active in the development of the horizons.

Organic matter has accumulated to some degree in all of the soils in the county to form an A or O horizon. The A or O horizon is mixed into a plow layer (Ap) when the soil is plowed. In the soils of Rutland County, the surface layer ranges from high to moderate in organic matter content. Canandaigua soils, for example, have a high organic matter content in the surface layer, and the Windsor soils have a moderate organic matter content.

Leaching of carbonates and other bases has occurred in most of the soils. Soil scientists generally agree that leaching of bases in soils usually precedes the translocation of silicate clay minerals. Many of the soils in tbe county are moderately to strongly leached. For example, Stockbridge soils are leached of carbonates to a depth of greater than 40 inches, whereas Nellis soils are leached to a depth of only 23 inches or less. Difference in the depth of leaching is a result of time and parent material as soil-forming factors.

The reduction and transfer of iron, a process called gleying, is evident in the somewhat poorly drained, poorly drained, and very poorly drained soils. The gray color in the subsoil is indicative of the reduction and loss of iron. Birdsall soils, for example, are strongly gleyed in the subsoil.

In some soils sesquioxides have moved from the surface and subsurface horizons to the lower horizons and have formed metal-organic complexes. The complexes are precipitated in the subsoil as iron oxides, which give the subsoil a reddish or brownish color. Tunbridge soils have an accumulation of sesquioxides in the subsoil.

Translocation of clay minerals has also contributed to horizon development. The eluviated or leached E horizon typically is lower in content of clay and typically is lighter in color than the illuviated B horizon. In some soils, such as the Vergennes soils, the B horizon has an accumulation of clay (clay films) in pores and on the faces of peds.

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

Ablation till. Loose, permeable till deposited during the final downwasting of glacial ice. Lenses of crudely sorted sand and gravel are common.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher), or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Area reclaim (in tables). An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Association, soil. A group of soils geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 40-inch profile or to a limiting layer is expressed as—Inches

Very low	0 to 2.4
Low	2.4 to 3.2
Moderate	3.2 to 5.2
High	more than 5.2

Backswamp. Marshy, depressed flood-plain area between the natural levee of the river or stream and the valley sides or terraces.

Badland. Steep or very steep, commonly nonstony, barren land dissected by many intermittent drainage channels. Badland is most common in semiarid and arid regions where streams are entrenched in soft geologic material. Local relief generally ranges from 25 to 500 feet. Runoff potential is very high, and geologic erosion is active.

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, K), expressed as a percentage of the total cation-exchange capacity.

Bedding planes. Fine stratifications, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediments.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on the contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout. A shallow depression from which all or most of the soil material has been removed by wind. A blowout has a flat or irregular floor formed by a resistant layer or by an accumulation of pebbles or cobbles. In some blowouts the water table is exposed.

Bottom land. The normal flood plain of a stream, subject to flooding.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Broad-base terrace. A ridge-type terrace built to control erosion by diverting runoff along the contour at a nonscouring velocity. The terrace is 10 to 20 inches high and 15 to 30 feet wide and has gently sloping sides, a rounded crown, and a dish-shaped channel along the upper side. It may be nearly level or have a grade toward one or both ends.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Caliche. A more or less cemented deposit of calcium carbonate in soils of warm-temperate, subhumid to arid areas. Caliche occurs as soft, thin layers in the soil or as hard, thick beds just beneath the solum, or it is exposed at the surface by erosion.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of a standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

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.

Catsteps. Very small, irregular terraces on steep hillsides, especially in pasture, formed by the trampling of cattle or the slippage of saturated soil.

Cement rock. Shaly limestone used in the manufacture of cement.

Channery soil. A soil that is, by volume, more than 15 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches along the longest axis. A single piece is called a channer.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

Climax vegetation. 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 fragments. If round, mineral or rock particles 2 millimeters to 25 centimeters (10 inches) in diameter; if flat, mineral or rock particles (flagstone) 15 to 38 centimeters (6 to 15 inches) long.

Coarse textured soil. Sand or loamy sand.

Cobblestone (or cobble). A rounded or partly rounded fragment of rock 3 to 10 inches (7.5 to 25 centimeters) in diameter.

Colluvium. Soil material, 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 constructing terraces, diversions, and other water-control measures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil 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 are somewhat similar in all areas.

Compressible (in tables). Excessive decrease in volume of soft soil under load.

Concretions. Grains, pellets, or nodules of various sizes, shapes, and colors consisting of concentrated compounds or cemented soil grains. The composition of most concretions is unlike that of the surrounding soil. Calcium carbonate and iron oxide are common compounds in concretions.

Congeliturbate. Soil material disturbed by frost action.

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. The feel of the soil and the ease with which a lump can be crushed by the fingers. Terms commonly used to describe consistence are—

Loose.—Noncoherent when dry or moist; does not hold together in a mass.

Friable.—When moist, crushes easily under gentle pressure between thumb and forefinger and can be pressed together into a lump.

Firm.—When moist, crushes under moderate pressure between thumb and forefinger, but resistance is distinctly noticeable.

Plastic.—When wet, readily deformed by moderate pressure but can be pressed into a lump; will form a "wire" when rolled between thumb and forefinger.

Sticky.—When wet, adheres to other material and tends to stretch somewhat and pull apart rather than to pull free from other material.

Hard.—When dry, moderately resistant to pressure; can be broken with difficulty between thumb and forefinger.

Soft.—When dry, breaks into powder or individual grains under very slight pressure.

Cemented.—Hard; little affected by moistening.

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coprogenous earth (sedimentary peat). Fecal material deposited in water by aquatic organisms.

Corrosive. High risk of corrosion to uncoated steel or deterioration of concrete.

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.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth to rock (in tables). Bedrock is too near the surface for the specified use.

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 periods of saturation or partial saturation during soil formation, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven classes of natural soil drainage are recognized:

Excessively drained.—Water is removed from the soil very rapidly. Excessively drained soils are commonly very coarse textured, rocky, or shallow. Some are steep. All are free of the mottling related to wetness.

Somewhat excessively drained.—Water is removed from the soil rapidly. Many somewhat excessively drained soils are sandy and rapidly pervious. Some are shallow. Some are so steep that much of the water they receive is lost as runoff. All are free of the mottling related to wetness.

Well drained.—Water is removed from the soil readily, but not rapidly. It is available to plants throughout most of the growing season, and wetness does not inhibit growth of roots for significant periods during most growing seasons. Well drained soils are commonly medium textured. They are mainly free of mottling.

Moderately well drained.—Water is removed from the soil somewhat slowly during some periods. Moderately well drained soils are wet for only a short time during the growing season, but periodically they are wet long enough that most mesophytic crops are affected. They commonly have a slowly pervious layer within or directly below the solum, or periodically receive high rainfall, or both.

Somewhat poorly drained.—Water is removed slowly enough that the soil is wet for significant periods during the growing season. Wetness markedly restricts the growth of mesophytic crops unless artificial drainage is provided. Somewhat poorly drained soils commonly have a slowly pervious layer, a high water table, additional water from seepage, nearly continuous rainfall, or a combination of these.

Poorly drained.—Water is removed so slowly that the soil is saturated periodically during the growing season or remains wet for long periods. Free water is commonly at or near the surface for long enough during the growing season that most

mesophytic crops cannot be grown unless the soil is artificially drained. The soil is not continuously saturated in layers directly below plow depth. Poor drainage results from a high water table, a slowly pervious layer within the profile, seepage, ne-arly continuous rainfall, or a combination of these.
Very poorly drained.—Water is removed from the soil so slowly that free water remains at or on the surface during most of the growing season. Unless the soil is artificially drained, most mesophytic crops cannot be grown. Very poorly drained soils are commonly level or depressed and are frequently ponded. Yet, where rainfall is high and nearly continuous, they can have moderate or high slope gradients.

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.

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.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on 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 the activities of man or other animals or of a catastrophe in nature, for example, fire, that exposes the surface.

Erosion pavement. A layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

Esker (geology). A narrow, winding ridge of stratified gravelly and sandy drift deposited by a stream flowing in a tunnel beneath a glacier.

Excess alkali (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Excess fines (in tables). Excess silt and clay in the soil. The soil is not a source of gravel or sand for construction purposes.

Excess lime (in tables). Excess carbonates in the soil that restrict the growth of some plants.

Excess salts (in tables). Excess water-soluble salts in the soil that restrict the growth of most plants.

Excess sulfur (in tables). Excessive amount of sulfur in the soil. The sulfur causes extreme acidity if the soil is drained, and the growth of most plants is restricted.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grains are grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fast intake (in tables). The rapid movement of water into the soil.

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, and clay.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

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.

Foot slope. The inclined surface at the base of a hill.

Forb. Any herbaceous plant not a grass or a sedge.

Fragile (in tables). A soil that is easily damaged by use or disturbance.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher

bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Frost action (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

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.

Gilgai. Commonly a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope. Typically, the microrelief of Vertisols—clayey soils having a high coefficient of expansion and contraction with changes in moisture content.

Glacial drift (geology). 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 (geology). Gravel, sand, and silt, commonly stratified, deposited by glacial meltwater.

Glacial till (geology). Unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice.

Glaciofluvial deposits (geology). 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 and mottles.

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 up to 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that is 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, up to 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water (geology). Water filling all the unblocked pores of underlying 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.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric and the more decomposed sapric material.

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. The major horizons 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, any plowed or disturbed surface layer.

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 O, A, or E horizon. The B horizon is in part a layer of transition from the overlying horizon to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) granular, 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 horizon. 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.—Hard, consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon but 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-producing characteristics. The chief consideration is the inherent capacity of soil bare of vegetation to permit infiltration. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff. Soils are assigned to four groups. In group A are soils having a high infiltration rate when thoroughly wet and having a low runoff potential. They are mainly deep, well drained, an-d sandy or gravelly. In group D, at the other extreme, are soils having a very slow infiltration rate and thus a high runoff potential. They have a claypan or clay layer at or near the surface, have a permanent high water table, or are shallow over nearly impervious bedrock or other material. A soil is assigned to two hydrologic groups if part of the acreage is artificially drained and part is undrained.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake in inches per hour is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, invader plants follow disturbance of the surface.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are—

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Kame (geology). An irregular, short ridge or hill of stratified glacial drift.

Karst (topography). The relief of an area underlain by limestone that dissolves in differing degrees, thus forming numerous depressions or small basins.

Lacustrine deposit (geology). 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.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

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.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Low strength. The soil is not strong enough to support loads.

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, and fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, and silty clay loam.

Moraine (geology). 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. Mottling generally indicates poor aeration and impeded drainage. 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 1-5 millimeters (about 0.2 to 0.6 inch); and *coarse*, more than 15 millimeters (about 0.6 inch).

Muck. Dark colored, 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 of 10YR hue, value of 6, and chroma of 4.

Narrow-base terrace. A terrace no more than 4 to 8 feet wide at the base. A narrow-base terrace is similar to a broad-base terrace, except for the width of the ridge and channel.

Neutral soil. A soil having a pH value between 6.6 and 7.3. (See Reaction, soil.)

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.

Outwash, glacial. Stratified sand and gravel produced by glaciers and carried, sorted, and deposited by glacial meltwater.

Outwash plain. A landform of mainly sandy or coarse textured material of glaciofluvial origin. An outwash plain is commonly smooth; where pitted, it is generally low in relief.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan.*

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The downward movement of water through the soil.

Percs slowly (in tables). The slow movement of water through the soil, adversely affecting the specified use.

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 to move downward through the profile. Permeability is measured as the number of inches per hour that water moves downward through the saturated soil. Terms describing permeability are:

Very slow	less than 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. For example, slope, stoniness, and thickness.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting ground ice. They form on the soil after plant cover is removed.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poor filter (in tables). Because of rapid permeability, the soil may not adequately filter effluent from a waste disposal system.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Poor outlets (in tables). Refers to areas where surface or subsurface drainage outlets are difficult or expensive to install.

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.

Range condition. The present composition of the plant community on a range site in relation to the potential natural plant community for that site. Range condition is expressed as excellent, good, fair, or poor, on the basis of how much the present plant community has departed from the potential.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Range site. An area of rangeland where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. A range 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 range sites in kind or proportion of species or total production.

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 degree of acidity or alkalinity is expressed as—pH

Extremely acid	below 4.5
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Medium acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Mildly 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

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill is generally a few inches deep and

not wide enough to be an obstacle to farm machinery.

Rippable. Bedrock or hardpan can be excavated using a single-tooth ripping attachment mounted on a tractor with a 200-300 draw bar horsepower rating.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rooting depth (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts roots.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Salty water (in tables.) Water that is too salty for consumption by livestock.

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-size 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 (soil science). Unconsolidated residual material underlying the soil and grading to hard bedrock below.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

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 or of the underlying material. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shrink-swell. The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

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.

Sinkhole. A depression in the landscape where limestone has been dissolved.

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 feet.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slick spot. A small area of soil having a puddled, crusted, or smooth surface and an excess of exchangeable sodium. The soil is generally silty or clayey, is slippery when wet, and is low in productivity.

Slippage (in tables). Soil mass susceptible to movement downslope when loaded, excavated, or wet.

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.

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Sloughed till. Water-saturated till that has flowed slowly downhill from its original place of deposit by glacial ice. It may rest on other till, on glacial outwash, or on a glaciolacustrine deposit.

Slow intake (in tables). The slow movement of water into the soil.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Small stones (in tables). Rock fragments less than 3 inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^{+} to $Ca^{++} + Mg^{++}$. The degrees of sodicity are—SAR

Slight	less than 13:1
Moderate	13-30:1
Strong	more than 30:1

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 of separates recognized in the United States are as follows:Millimeters

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 underlying material. 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.

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 which provide vegetative barriers to wind 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 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. Breaking up a compact subsoil by pulling a special chisel through the soil.

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.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from about 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. It includes all subdivisions of these horizons.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series

because they differ in ways too small to be of consequence in interpreting their use and behavior.

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.

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."

Thin layer (in tables). Otherwise suitable soil material too thin for the specified use.

Till plain. An extensive flat to undulating area underlain by glacial till.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toe slope. The outermost inclined surface at the base of a hill; part of a foot slope.

Too arid (in tables). The soil is dry most of the time, and vegetation is difficult to establish.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Toxicity (in tables). Excessive amount of toxic substances, such as sodium or sulfur, that severely hinder establishment of vegetation or severely restrict plant growth.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, are in soils in extremely small amounts. They are essential to plant growth.

Tuff. A compacted deposit that is 50 percent or more volcanic ash and dust.

Unstable fill (in tables). Risk of caving or sloughing on banks of fill material.

Upland (geology). Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Variant, soil. A soil having properties sufficiently different from those of other known soils to justify a new series name, but occurring in such a limited geographic area that creation of a new series is not justified.

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 of 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.

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.

Tables

TABLE 1.--TEMPERATURE AND PRECIPITATION

(Recorded in the period 1951-81 at Rutland, Vermont)

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average daily	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January	30.2	11.1	20.7	57	-18	7	2.25	1.22	3.15	6	14.5
February	32.9	12.6	22.8	58	-20	7	1.90	1.18	2.55	5	15.6
March	42.5	22.9	32.7	71	-5	27	2.28	1.40	3.06	7	11.9
April	56.3	33.8	45.1	81	15	178	2.72	1.85	3.51	7	3.0
May	69.1	44.1	56.6	89	27	515	3.21	2.13	4.19	8	.1
June	77.3	53.5	65.4	92	35	762	3.61	1.82	5.17	8	.0
July	81.6	58.0	69.8	95	42	924	3.43	1.83	4.83	7	.0
August	79.3	56.3	67.8	91	38	862	3.89	2.24	5.34	8	.0
September	71.4	48.8	60.1	88	28	603	3.42	1.94	4.73	7	.0
October	60.8	38.9	49.9	81	19	314	2.70	1.34	3.87	6	.3
November	47.3	30.5	38.9	72	9	86	2.86	1.79	3.81	8	4.6
December	34.3	17.6	26.0	61	-13	13	2.64	1.42	3.70	7	15.2
Yearly:											
Average	56.9	35.7	46.3	---	---	---	---	---	---	---	---
Extreme	---	---	---	95	-22	---	---	---	---	---	---
Total	---	---	---	---	---	4,298	34.91	29.59	40.01	84	65.2

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

TABLE 2.--FREEZE DATES IN SPRING AND FALL

(Recorded in the period 1951-81 at Rutland, Vermont)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Apr. 28	May 12	May 27
2 years in 10 later than--	Apr. 23	May 7	May 22
5 years in 10 later than--	Apr. 13	Apr. 27	May 12
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 7	Sept. 23	Sept. 14
2 years in 10 earlier than--	Oct. 13	Sept. 30	Sept. 19
5 years in 10 earlier than--	Oct. 24	Oct. 13	Sept. 29

TABLE 3.--GROWING SEASON

(Recorded in the period 1951-81 at Rutland, Vermont)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	172	144	118
8 years in 10	179	152	125
5 years in 10	193	168	140
2 years in 10	207	184	154
1 year in 10	214	192	162

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Map symbol	Soil name	Acres	Percent
1B	Marlow fine sandy loam, 3 to 8 percent slopes	307	0.1
1C	Marlow fine sandy loam, 8 to 15 percent slopes	723	0.1
1D	Marlow fine sandy loam, 15 to 25 percent slopes	343	0.1
2C	Marlow fine sandy loam, 8 to 15 percent slopes, very stony	1,732	0.3
2D	Marlow fine sandy loam,15 to 35 percent slopes,very stony	4,213	0.7
2E	Marlow fine sandy loam, 35 to 60 percent slopes, very stony	882	0.1
3B	Peru gravelly fine sandy loam, 3 to 8 percent slopes	1,098	0.2
3C	Peru gravelly fine sandy loam, 8 to 15 percent slopes	1,812	0.3
4B	Peru gravelly fine sandy loam, 3 to 8 percent slopes, very stony	1,855	0.3
4C	Peru gravelly fine sandy loam, 8 to 15 percent slopes, very stony	8,310	1.3
4D	Peru gravelly fine sandy loam, 15 to 25 percent slopes, very stony	6,976	1.2
6A	Cabot gravelly fine sandy loam, 0 to 8 percent slopes, very stony	1,541	0.3
7C	Brayton loam, 8 to 15 percent slopes, very stony	822	0.1
9	Pits-Dumps complex	2,583	0.4
11C	Taconic-Hubbardton complex, 8 to 25 percent slopes, very rocky	15,406	2.5
12F	Taconic-Hubbardton-Macomber complex, 25 to 80 percent slopes, very rocky	45,296	7.5
13B	Hinckley gravelly loamy fine sand, 0 to 8 percent slopes	4,997	0.8
13C	Hinckley gravelly loamy fine sand, 8 to 15 percent slopes	2,055	0.3
13D	Hinckley gravely loamy fine sand, 15 to 25 percent slopes	1,576	0.3
13E	Hinckley gravelly loamy fine sand, 25 to 40 percent slopes	1,554	0.3
14A	Sudbury fine sandy loam, 0 to 3 percent slopes	863	0.1
14B	Sudbury fine sandy loam, 3 to 8 percent slopes	764	0.1
15A	Walpole fine sandy loam, 0 to 5 percent slopes	784	0.1
18B	Windsor loamy sand, 3 to 8 percent slopes	4,170	0.7
18C	Windsor loamy sand, 8 to 15 percent slopes	1,353	0.2
18D	Windsor loamy sand, 15 to 25 percent slopes	702	0.1
18E	Windsor loamy sand, 25 to 60 percent slopes	626	0.1
21	Rippowam fine sandy loam	1,111	0.2
22	Saco mucky silt loam	1,134	0.2
23	Adrian muck	936	0.2
24	Pinnebog muck	5,813	1.0
25A	Belgrade silt loam, 0 to 3 percent slopes	930	0.2
25B	Belgrade silt loam, 3 to 8 percent slopes	1,621	0.3
25C	Belgrade silt loam, 8 to 15 percent slopes	549	0.1
26A	Raynham silt loam, 0 to 4 percent slopes	1,035	0.2
28	Udifluvents and Fluvaquents, nearly level	1,436	0.2
29	Histosols and Aquents, ponded	757	0.1
30B	Paxton fine sandy loam, 2 to 8 percent slopes	4,599	0.8
30C	Paxton fine sandy loam, 8 to 15 percent slopes	2,639	0.4
30D	Paxton fine sandy loam, 15 to 25 percent slopes	561	0.1
31B	Paxton fine sandy loam, 2 to 8 percent slopes, very stony	1,039	0.2
31C	Paxton fine sandy loam, 8 to 15 percent slopes, very stony	3,032	0.5
31D	Paxton fine sandy loam, 15 to 25 percent slopes, very stony	2,321	0.4
31E	Paxton fine sandy loam, 25 to 35 percent slopes, very stony	894	0.1
38A	Tisbury silt loam, 0 to 3 percent slopes	686	0.1
39B	Galway-Nellis-Farmington complex, 3 to 8 percent slopes	1,576	0.3
40C	Galway-Nellis-Farmington complex, 8 to 15 percent slopes, rocky	3,583	0.6
40D	Galway-Nellis-Farmington complex, 15 to 25 percent slopes, rocky	2,427	0.4
41C	Farmington-Galway-Galoo complex, 5 to 25 percent slopes, very rocky	12,740	2.1
41E	Farmington-Galway-Galoo complex, 25 to 50 percent slopes, very rocky	8,769	1.5
42C	Macomber-Taconic complex, 8 to 15 percent slopes, rocky	13,899	2.3
42D	Macomber-Taconic complex, 15 to 25 percent slopes, rocky	16,118	2.7
42F	Macomber-Taconic complex, 25 to 80 percent slopes, rocky	18,042	3.0
43C	Taconic-Macomber complex, 8 to 25 percent slopes, very rocky	24,842	4.1
44B	Dutchess silt loam, 3 to 8 percent slopes	1,032	0.2
44C	Dutchess silt loam, 8 to 15 percent slopes	2,345	0.4
44D	Dutchess silt loam, 15 to 25 percent slopes	957	0.2
47B	Dutchess silt loam, 3 to 8 percent slopes, very stony	366	0.1
47C	Dutchess silt loam, 8 to 15 percent slopes, very stony	2,086	0.3
47D	Dutchess silt loam, 15 to 25 percent slopes, very stony	3,762	0.6
47E	Dutchess silt loam, 25 to 60 percent slopes, very stony	6,346	1.0
50A	Massena silt loam, 0 to 8 percent slopes	1,853	0.3
52B	Macomber-Dutchess complex, 3 to 8 percent slopes	3,386	0.6
53	Elvers silt loam	613	0.1
54A	Ninigret fine sandy loam, 0 to 4 percent slopes	348	0.1

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	Percent
56B	Colton-Duxbury complex, 2 to 8 percent slopes, very stony	1,295	0.2
56C	Colton-Duxbury complex, 8 to 15 percent slopes, very stony	1,454	0.2
56D	Colton-Duxbury complex, 15 to 25 percent slopes, very stony	1,080	0.2
56E	Colton-Duxbury complex, 25 to 50 percent slopes, very stony	1,492	0.2
57B	Duxbury-Colton complex, 2 to 8 percent slopes	1,400	0.2
58C	Colton-Duxbury complex, 8 to 15 percent slopes	1,231	0.2
58D	Colton-Duxbury complex, 15 to 25 percent slopes	788	0.1
59A	Deerfield loamy sand, 0 to 4 percent slopes	2,960	0.5
61A	Eldridge fine sandy loam, 0 to 3 percent slopes	417	0.1
61B	Eldridge fine sandy loam, 3 to 8 percent slopes	632	0.1
62	Enosburg loamy fine sand	256	*
64B	Stockbridge gravelly silt loam, 3 to 8 percent slopes	1,305	0.2
64C	Stockbridge gravelly silt loam, 8 to 15 percent slopes	2,066	0.3
64D	Stockbridge gravelly silt loam, 15 to 25 percent slopes	958	0.2
65B	Stockbridge gravelly silt loam, 3 to 8 percent slopes, very stony	248	*
65C	Stockbridge gravelly silt loam, 8 to 15 percent slopes, very stony	1,285	0.2
65D	Stockbridge gravelly silt loam, 15 to 25 percent slopes, very stony	1,795	0.3
65E	Stockbridge gravelly silt loam, 25 to 45 percent slopes, very stony	1,241	0.2
66B	Georgia and Amenia soils, 3 to 8 percent slopes	4,617	0.8
66C	Georgia and Amenia soils, 8 to 15 percent slopes	2,424	0.4
67B	Georgia and Amenia soils, 3 to 8 percent slopes, very stony	3,593	0.6
67C	Georgia and Amenia soils, 8 to 15 percent slopes, very stony	3,625	0.6
67D	Georgia and Amenia soils, 15 to 25 percent slopes, very stony	1,232	0.2
68A	Massena silt loam, 0 to 8 percent slopes, very stony	1,505	0.2
71A	Castile gravelly fine sandy loam, 0 to 3 percent slopes	1,969	0.3
72A	Fredon gravelly loam, 0 to 3 percent slopes	932	0.2
73	Scarboro muck	988	0.2
80A	Kingsbury silty clay loam, 0 to 3 percent slopes	6,184	1.0
80B	Kingsbury silty clay loam, 3 to 8 percent slopes	7,840	1.3
81	Livingston silty clay loam	927	0.2
82B	Vergennes clay, 3 to 8 percent slopes	2,738	0.5
82C	Vergennes clay, 8 to 15 percent slopes	2,770	0.5
82D	Vergennes clay, 15 to 25 percent slopes	2,268	0.4
82E	Vergennes clay, 25 to 50 percent slopes	1,725	0.3
86	Linwood muck	3,037	0.5
88	Birdsall muck	694	0.1
90B	Hartland silt loam, 3 to 8 percent slopes	248	*
90C	Hartland silt loam, 8 to 15 percent slopes	228	*
90D	Hartland silt loam, 15 to 25 percent slopes	335	0.1
95	Udorthents loamy	572	0.1
96	Udipsamments, nearly level	1,492	0.2
97A	Warwick-Quonset complex, 0 to 3 percent slopes	2,004	0.3
97B	Warwick-Quonset complex, 3 to 8 percent slopes	3,411	0.6
97C	Warwick-Quonset complex, 8 to 15 percent slopes	1,716	0.3
97D	Warwick-Quonset complex, 15 to 25 percent slopes	1,182	0.2
98E	Quonset-Warwick complex, 25 to 45 percent slopes	1,247	0.2
99B	Copake gravelly fine sandy loam, 2 to 8 percent slopes	851	0.1
104B	Groton gravelly loam, 2 to 8 percent slopes	236	*
105	Tioga fine sandy loam	1,250	0.2
106	Middlebury loam	1,698	0.3
108	Hamlin silt loam	409	0.1
109	Teel silt loam, sandy substratum	1,655	0.3
110	Limerick silt loam	2,623	0.4
111	Livingston silty clay loam, frequently flooded	494	0.1
118C	Adams loamy fine sand, 8 to 15 percent slopes	492	0.1
122B	Lyme fine sandy loam, 2 to 8 percent slopes, very stony	2,045	0.3
122C	Lyme fine sandy loam, 8 to 15 percent slopes, very stony	884	0.1
123B	Sheepscot fine sandy loam, 2 to 8 percent slopes	1,672	0.3
123C	Sheepscot fine sandy loam, 8 to 15 percent slopes	1,586	0.3
124B	Sunapee fine sandy loam, 3 to 8 percent slopes, very stony	1,856	0.3
124C	Sunapee fine sandy loam, 8 to 15 percent slopes, very stony	7,838	1.3
124D	Sunapee fine sandy loam, 15 to 35 percent slopes, very stony	5,412	0.9
124E	Sunapee fine sandy loam, 35 to 50 percent slopes, very stony	609	0.1

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	Percent
125B	Berkshire gravelly fine sandy loam, 3 to 8 percent slopes, very stony	852	0.1
125C	Berkshire gravelly fine sandy loam, 8 to 15 percent slopes, very stony	2,392	0.4
125D	Berkshire gravelly fine sandy loam, 15 to 35 percent slopes, very stony	3,869	0.6
125E	Berkshire gravelly fine sandy loam, 35 to 50 percent slopes, very stony	1,241	0.2
127C	Houghtonville gravelly fine sandy loam, 8 to 15 percent slopes, very stony	382	0.1
127D	Houghtonville gravelly fine sandy loam, 15 to 35 percent slopes, very stony	2,018	0.3
127E	Houghtonville gravelly fine sandy loam, 35 to 60 percent slopes, very stony	2,467	0.4
128C	Rawsonville-Houghtonville complex, 8 to 15 percent slopes, rocky	642	0.1
128D	Rawsonville-Houghtonville complex, 15 to 35 percent slopes, rocky	7,787	1.3
128E	Rawsonville-Houghtonville complex, 35 to 60 percent slopes, rocky	7,809	1.3
129D	Killington-Rawsonville complex, 15 to 35 percent slopes, very rocky	1,063	0.2
129F	Killington-Rawsonville complex, 35 to 70 percent slopes, very rocky	4,983	0.8
130B	Tunbridge-Berkshire complex, 3 to 8 percent slopes, rocky	838	0.1
130C	Tunbridge-Berkshire complex, 8 to 15 percent slopes, rocky	7,022	1.2
130D	Tunbridge-Berkshire complex, 15 to 35 percent slopes, rocky	25,104	4.1
130E	Tunbridge-Berkshire complex, 35 to 60 percent slopes, rocky	10,615	1.7
131D	Lyman-Tunbridge-Rock outcrop complex, 15 to 35 percent slopes, very stony	4,313	0.7
131E	Lyman-Tunbridge-Rock outcrop complex, 35 to 60 percent slopes, very stony	10,322	1.7
132C	Glebe-Stratton complex, 8 to 25 percent slopes, very stony	871	0.1
132E	Glebe-Stratton complex, 25 to 60 percent slopes, very stony	2,867	0.5
134F	Stratton-Londonderry-Ricker complex, 15 to 80 percent slopes, very rocky	1,725	0.3
135D	Mundal loam, 15 to 35 percent slopes, very stony	411	0.1
135E	Mundal loam, 35 to 60 percent slopes, very stony	862	0.1
138C	Berkshire gravelly fine sandy loam, 8 to 15 percent slopes	275	*
139B	Sunapee fine sandy loam, 3 to 8 percent slopes	270	*
139C	Sunapee fine sandy loam, 8 to 15 percent slopes	539	0.1
140C	Benson very channery loam, 3 to 15 percent slopes	277	*
140D	Benson very channery loam, 15 to 25 percent slopes	549	0.1
140E	Benson very channery loam, 25 to 50 percent slopes	372	0.1
148B	Bomoseen and Pittstown soils, 2 to 8 percent slopes	3,755	0.6
148C	Bomoseen and Pittstown soils, 8 to 15 percent slopes	6,573	1.1
148D	Bomoseen and Pittstown soils, 15 to 25 percent slopes	4,025	0.7
149B	Bomoseen and Pittstown soils, 3 to 8 percent slopes, very stony	1,697	0.3
149C	Bomoseen and Pittstown soils, 8 to 15 percent slopes, very stony	4,919	0.8
149D	Bomoseen and Pittstown soils, 15 to 25 percent slopes, very stony	5,158	0.9
149E	Bomoseen and Pittstown soils, 25 to 40 percent slopes, very stony	1,665	0.3
150A	Peacham muck, 0 to 8 percent slopes	1,060	0.2
152	Lyons silt loam	1,383	0.2
161A	Elmridge sandy loam, 0 to 3 percent slopes	313	0.1
161B	Elmridge sandy loam, 3 to 8 percent slopes	454	0.1
163	Canandaigua silt loam	891	0.1
175	Wappinger silt loam	361	0.1
177	Pawling silt loam	616	0.1
202E	Rawsonville-Killington association, very hilly, very rocky	8,336	1.4
203D	Peru-Marlow association, hilly, very stony	18,632	3.1
205D	Tunbridge-Berkshire-Marlow association, hilly, rocky	16,136	2.7
213E	Glebe-Stratton association, very hilly, very rocky	3,856	0.6
221F	Tunbridge-Berkshire association, very steep, very stony	340	0.1
402D	Tunbridge-Lyman association, hilly, rocky	163	*
403C	Brayton-Cabot-Pinnebog association, rolling, very stony	3,391	0.6
405D	Tunbridge-Berkshire association, hilly, very rocky	3,710	0.6
505D	Berkshire-Colton association, hilly, stony	6,479	1.1
702F	Killington-Ricker-Rock outcrop association, very steep, very stony	2,751	0.4
703D	Mundal-Cabot assocation, hilly, very stony	2,586	0.4
705D	Rawsonville-Houghtonville association, hilly, rocky	10,258	1.7
W	Water	7,680	1.3
	Total	604,467	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
1B	Marlow fine sandy loam, 3 to 8 percent slopes
3B	Peru gravelly fine sandy loam, 3 to 8 percent slopes
14A	Sudbury fine sandy loam, 0 to 3 percent slopes
14B	Sudbury fine sandy loam, 3 to 8 percent slopes
15A	Walpole fine sandy loam, 0 to 5 percent slopes (where drained)
25A	Belgrade silt loam, 0 to 3 percent slopes
26A	Raynham silt loam, 0 to 4 percent slopes (where drained)
30B	Paxton fine sandy loam, 2 to 8 percent slopes
38A	Tisbury silt loam, 0 to 3 percent slopes
39B	Galway-Nellis-Farmington complex, 3 to 8 percent slopes
44B	Dutchess silt loam, 3 to 8 percent slopes
50A	Massena silt loam, 0 to 8 percent slopes (where drained)
54A	Ninigret fine sandy loam, 0 to 4 percent slopes
57B	Duxbury-Colton complex, 2 to 8 percent slopes
61A	Eldridge fine sandy loam, 0 to 3 percent slopes
61B	Eldridge fine sandy loam, 3 to 8 percent slopes
62	Enosburg loamy fine sand (where drained)
64B	Stockbridge gravelly silt loam, 3 to 8 percent slopes
66B	Georgia and Amenia soils, 3 to 8 percent slopes
71A	Castile gravelly fine sandy loam, 0 to 3 percent slopes
72A	Fredon gravelly loam, 0 to 3 percent slopes (where drained)
97A	Warwick-Quonset complex, 0 to 3 percent slopes
97B	Warwick-Quonset complex, 3 to 8 percent slopes
99B	Copake gravelly fine sandy loam, 2 to 8 percent slopes
105	Tioga fine sandy loam
106	Middlebury loam
108	Hamlin silt loam
109	Teel silt loam, sandy substratum
139B	Sunapee fine sandy loam, 3 to 8 percent slopes
148B	Bomoseen and Pittstown soils, 2 to 8 percent slopes
152	Lyons silt loam (where drained)
161A	Elmridge sandy loam, 0 to 3 percent slopes
161B	Elmridge sandy loam, 3 to 8 percent slopes
163	Canandaigua silt loam (where drained)
175	Wappinger silt loam
177	Pawling silt loam

TABLE 6.--LAND CAPABILITY CLASSES AND YIELDS PER ACRE OF CROPS AND PASTURE

(Yields are those that can be expected under a high level of management. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Soil name and map symbol	Land capability	Corn silage	Alfalfa hay	Grass-legume hay	Grass hay	Pasture	Grass-clover
		tons	tons	tons	tons	aum	aum
1B---------- Marlow	IIe	22	4.5	4.0	4.0	---	6.4
1C---------- Marlow	IIIe	20	4.5	4.0	4.0	---	6.4
1D---------- Marlow	IVe	---	4.0	3.5	3.5	---	5.6
2C, 2D---------- Marlow	VIs	---	---	---	---	3.8	---
2E---------- Marlow	VIIs	---	---	---	---	3.0	---
3B---------- Peru	IIw	20	4.0	4.0	4.0	---	6.4
3C---------- Peru	IIIe	18	4.0	4.0	4.0	---	6.4
4B, 4C---------- Peru	VIs	---	---	---	---	3.8	---
4D---------- Peru	VIs	---	---	---	---	3.4	---
6A---------- Cabot	VIs	---	---	---	---	2.7	---
7C---------- Brayton	VIIs	---	---	---	---	2.7	---
9*---------- Pits-Dumps	---	---	---	---	---	---	---
11C---------- Taconic-Hubbardton	VIIs	---	---	---	---	1.6	---
12F---------- Taconic-Hubbardton-Macomber	VIIs	---	---	---	---	---	---
13B---------- Hinckley	IIIs	12	3.0	2.5	2.5	---	4.0
13C---------- Hinckley	IVs	10	2.5	2.0	2.0	---	3.2
13D---------- Hinckley	VIs	---	---	---	---	---	2.4
13E---------- Hinckley	VIIs	---	---	---	---	---	---

See footnote at end of table.

TABLE 6.--LAND CAPABILITY CLASSES AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Corn silage	Alfalfa hay	Grass-legume hay	Grass hay	Pasture	Grass-clover
		tons	tons	tons	tons	aum	aum
14A, 14B-------- Sudbury	IIw	18	3.5	4.0	4.0	---	6.4
15A---------- Walpole	IVw	---	---	---	---	---	---
18B---------- Windsor	IIIs	14	3.0	2.5	2.0	---	4.0
18C---------- Windsor	IVs	12	3.0	2.5	2.0	---	4.0
18D---------- Windsor	VIs	---	2.5	2.0	---	---	3.2
18E---------- Windsor	VIIs	---	---	---	---	---	---
21---------- Rippowam	IVw	---	---	3.0	3.0	---	4.8
22---------- Saco	VIw	---	---	---	---	---	---
23---------- Adrian	Vw	---	---	---	---	---	---
24---------- Pinnebog	Vw	---	---	---	---	---	---
25A---------- Belgrade	IIw	24	4.5	4.0	4.0	---	6.4
25B---------- Belgrade	IIe	22	4.0	3.5	3.5	---	5.6
25C---------- Belgrade	IIIe	19	4.0	3.5	3.5	---	5.6
26A---------- Raynham	IVw	---	---	3.5	3.5	---	5.6
28---------- Udifluvents and Fluvaquents	---	---	---	---	---	---	---
29---------- Histosols and Aquents	---	---	---	---	---	---	---
30B---------- Paxton	IIe	24	4.5	4.0	4.0	---	6.4
30C---------- Paxton	IIIe	22	4.5	4.0	4.0	---	5.6

See footnote at end of table.

TABLE 6.--LAND CAPABILITY CLASSES AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Corn silage	Alfalfa hay	Grass-legume hay	Grass hay	Pasture	Grass-clover
		tons	tons	tons	tons	aum	aum
30D---------- Paxton	IVe	---	4.0	3.5	3.5	---	5.6
31B, 31C, 31D--- Paxton	VIs	---	---	---	---	3.4	---
31E---------- Paxton	VIIs	---	---	---	---	---	---
38A---------- Tisbury	IIw	24	4.0	4.0	4.0	---	6.4
39B---------- Galway-Nellis-Farmington	IIe	19	4.5	4.0	4.0	---	6.4
40C---------- Galway-Nellis-Farmington	IIIe	16	4.0	3.5	3.5	---	5.6
40D---------- Galway-Nellis-Farmington	VIs	---	---	---	---	---	4.8
41C---------- Farmington-Galway-Galoo	VIs	---	---	---	---	2.8	---
41E---------- Farmington-Galway-Galoo	VIIs	---	---	---	---	---	---
42C---------- Macomber-Taconic	VIs	---	---	---	---	2.8	---
42D---------- Macomber-Taconic	VIs	---	---	---	---	2.4	---
42F---------- Macomber-Taconic	VIIs	---	---	---	---	---	---
43C---------- Taconic-Macomber	VIs	---	---	---	---	2.2	---
44B---------- Dutchess	IIe	22	4.5	4.0	4.0	---	6.4
44C---------- Dutchess	IIIe	20	4.5	4.0	4.0	---	6.4
44D---------- Dutchess	IVe	17	4.0	3.5	3.5	---	5.6
47B, 47C, 47D--- Dutchess	VIs	---	---	---	---	3.5	---

See footnote at end of table.

TABLE 6.--LAND CAPABILITY CLASSES AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Corn silage	Alfalfa hay	Grass-legume hay	Grass hay	Pasture	Grass-clover
		tons	tons	tons	tons	aum	aum
47E---------- Dutchess	VIIs	---	---	---	---	---	---
50A---------- Massena	IIIw	18	---	3.0	3.5	---	4.8
52B---------- Macomber-Dutchess	IIe	17	4.0	3.5	3.5	---	5.6
53---------- Elvers	VIw	---	---	---	---	---	---
54A---------- Ninigret	IIw	22	4.0	4.0	4.0	---	6.4
56B, 56C, 56D--- Colton-Duxbury	VIs	---	---	---	---	---	---
56E---------- Colton-Duxbury	VIIs	---	---	---	---	---	---
57B---------- Duxbury-Colton	IIe	17	3.0	2.5	2.5	---	4.0
58C---------- Colton-Duxbury	IVs	---	2.5	2.0	2.0	---	3.2
58D---------- Colton-Duxbury	VIs	---	2.5	2.0	2.0	---	3.2
59A---------- Deerfield	IIIw	16	3.5	3.0	3.0	---	4.8
61A, 61B-------- Eldridge	IIw	16	4.0	3.5	3.0	---	5.6
62---------- Enosburg	IVw	---	---	3.0	3.0	---	4.8
64B---------- Stockbridge	IIe	24	5.0	4.5	4.5	---	7.2
64C---------- Stockbridge	IIIe	22	5.0	4.5	4.5	---	7.2
64D---------- Stockbridge	IVe	---	4.5	4.0	4.0	---	6.4
65B, 65C, 65D--- Stockbridge	VIs	---	---	---	---	4.4	---
65E---------- Stockbridge	VIIs	---	---	---	---	---	---
66B---------- Georgia and Amenia	IIe	24	5.0	4.5	4.0	---	7.2
66C---------- Georgia and Amenia	IIIe	22	4.5	4.0	4.0	---	6.4

See footnote at end of table.

TABLE 6.--LAND CAPABILITY CLASSES AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Corn silage	Alfalfa hay	Grass-legume hay	Grass hay	Pasture	Grass-clover
		tons	tons	tons	tons	aum	aum
67B, 67C, 67D---Georgia and Amenia	VIs	---	---	---	---	3.8	---
68A---Massena	VIs	---	---	---	---	2.8	---
71A---Castile	IIw	22	4.0	3.5	4.0	---	5.6
72A---Fredon	IIIw	20	---	3.0	3.0	4.8	---
73---Scarboro	Vw	---	---	---	---	---	---
80A, 80B---Kingsbury	IIIw	16	---	3.0	3.5	---	5.6
81---Livingston	Vw	---	---	---	---	---	---
82B---Vergennes	IIe	15	4.5	3.5	4.5	---	5.6
82C---Vergennes	IIIe	13	4.5	3.5	4.5	---	5.6
82D---Vergennes	IVe	---	3.5	3.0	3.5	---	4.8
82E---Vergennes	VIIe	---	---	---	---	---	---
86---Linwood	Vw	---	---	---	---	---	---
88---Birdsall	Vw	---	---	---	---	---	---
90B---Hartland	IIe	28	5.0	4.5	4.5	---	7.2
90C---Hartland	IIIe	26	4.5	4.0	4.5	---	6.4
90D---Hartland	IVe	---	4.0	3.5	4.0	---	5.6
95. Udorthents							
96. Udipsamments							
97A---Warwick-Quonset	IIs	19	4.0	3.5	3.5	---	5.6
97B---Warwick-Quonset	IIe	18	3.5	3.0	3.0	---	4.8

See footnote at end of table.

TABLE 6.--LAND CAPABILITY CLASSES AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Corn silage	Alfalfa hay	Grass-legume hay	Grass hay	Pasture	Grass-clover
		tons	tons	tons	tons	aum	aum
97C---------- Warwick-Quonset	IIIe	---	3.5	3.0	3.0	---	4.8
97D---------- Warwick-Quonset	IVe	---	3.0	2.5	2.5	---	4.0
98E---------- Quonset-Warwick	VIIs	---	---	---	---	---	---
99B---------- Copake	IIe	24	5.0	4.5	4.5	---	7.2
104B---------- Groton	IIIs	16	4.5	3.0	3.5	---	4.8
105---------- Tioga	I	28	4.5	3.5	3.5	8.5	5.6
106---------- Middlebury	IIw	26	4.5	3.5	3.5	---	5.6
108---------- Hamlin	I	29	6.0	5.0	5.0	---	8.0
109---------- Teel	IIw	26	4.5	4.0	4.0	---	6.4
110---------- Limerick	IIIw	20	---	3.5	3.5	---	5.6
111---------- Livingston	Vw	---	---	---	---	---	---
118C---------- Adams	IVe	12	2.5	2.5	2.5	4.5	4.0
122B, 122C------ Lyme	VIIs	---	---	---	---	---	---
123B---------- Sheepscot	IIe	16	4.5	3.5	4.0	6.5	5.6
123C---------- Sheepscot	IIIe	13	4.5	3.5	4.0	6.5	5.6
124B, 124C, 124D Sunapee	VIs	---	---	---	---	2.8	---
124E---------- Sunapee	VIIs	---	---	---	---	---	---
125B, 125C, 125D Berkshire	VIs	---	---	---	---	3.8	---
125E---------- Berkshire	VIIs	---	---	---	---	---	---
127C---------- Houghtonville	VIs	---	---	---	---	3.6	---

See footnote at end of table.

TABLE 6.--LAND CAPABILITY CLASSES AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Corn silage	Alfalfa hay	Grass-legume hay	Grass hay	Pasture	Grass-clover
		tons	tons	tons	tons	aum	aum
127D, 127E---- Houghtonville	VIIs	---	---	---	---	---	---
128C---- Rawsonville-Houghtonville	VIs	---	---	---	---	3.0	---
128D, 128E---- Rawsonville-Houghtonville	VIIs	---	---	---	---	---	---
129D, 129F---- Killington-Rawsonville	VIIs	---	---	---	---	---	---
130B, 130C---- Tunbridge-Berkshire	VIs	---	---	---	---	3.2	---
130D, 130E---- Tunbridge-Berkshire	VIIs	---	---	---	---	---	---
131D, 131E---- Lyman-Tunbridge-Rock outcrop	VIIs	---	---	---	---	---	---
132C, 132E---- Glebe-Stratton	VIIs	---	---	---	---	---	---
134F---- Stratton-Londonderry-Ricker	VIIs	---	---	---	---	---	---
135D, 135E---- Mundal	VIIs	---	---	---	---	---	---
138C---- Berkshire	IIIe	20	4.0	3.5	---	---	5.6
139B---- Sunapee	IIw	20	3.5	3.0	3.0	---	4.8
139C---- Sunapee	IIIe	18	3.0	2.5	2.5	---	4.0
140C---- Benson	IVe	9	---	2.5	2.0	---	4.0
140D---- Benson	VIe	---	---	2.0	1.5	---	3.2
140E---- Benson	VIIe	---	---	---	---	---	---

See footnote at end of table.

TABLE 6.--LAND CAPABILITY CLASSES AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Corn silage	Alfalfa hay	Grass-legume hay	Grass hay	Pasture	Grass-clover
		tons	tons	tons	tons	aum	aum
148B---------- Bomoseen and Pittstown	IIe	20	4.3	3.8	3.8	---	6.0
148C---------- Bomoseen and Pittstown	IIIe	18	4.3	3.8	3.8	---	6.0
148D---------- Bomoseen and Pittstown	IVe	---	3.8	3.3	3.3	---	5.2
149B, 149C------ Bomoseen and Pittstown	VIs	---	---	---	---	3.6	---
149D---------- Bomoseen and Pittstown	VIs	---	---	---	---	3.1	---
149E---------- Bomoseen and Pittstown	VIIs	---	---	---	---	---	---
150A---------- Peacham	Vw	---	---	---	---	---	---
152---------- Lyons	Vw	---	---	---	---	---	---
161A---------- Elmridge	IIw	24	4.0	4.0	4.0	---	6.4
161B---------- Elmridge	IIe	24	4.0	4.0	4.0	---	6.4
163---------- Canandaigua	IIIw	17	---	3.5	3.5	---	5.6
175---------- Wappinger	I	26	4.5	3.5	3.5	---	5.6
177---------- Pawling	IIw	24	4.5	3.5	3.5	---	5.6
202E*:							
Rawsonville----	VIIs	---	---	---	---	---	---
Killington-----	VIIs	---	---	---	---	---	---
203D*:							
Peru----------	VIs	---	---	---	---	---	---
Marlow---------	VIs	---	---	---	---	---	---
205D*:							
Tunbridge------	VIIs	---	---	---	---	---	---
Berkshire------	VIIs	---	---	---	---	---	---
Marlow---------	VIIs	---	---	---	---	---	---

See footnote at end of table.

TABLE 6.--LAND CAPABILITY CLASSES AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Corn silage	Alfalfa hay	Grass-legume hay	Grass hay	Pasture	Grass-clover
		tons	tons	tons	tons	aum	aum
213E*:							
Glebe	VIIs	---	---	---	---	---	---
Stratton	VIIs	---	---	---	---	---	---
221F*:							
Tunbridge	VIIs	---	---	---	---	---	---
Berkshire	VIIs	---	---	---	---	---	---
402D*:							
Tunbridge	VIs	---	---	---	---	---	---
Lyman	VIIs	---	---	---	---	---	---
403C*:							
Brayton	VIIs	---	---	---	---	---	---
Cabot	VIs	---	---	---	---	---	---
Pinnebog	Vw	---	---	---	---	---	---
405D*:							
Tunbridge	VIs	---	---	---	---	---	---
Berkshire	VIs	---	---	---	---	---	---
505D*:							
Berkshire	IVe	---	---	---	---	---	---
Colton	VIe	---	---	---	---	---	---
702F*:							
Killington	VIIs	---	---	---	---	---	---
Ricker	VIIs	---	---	---	---	---	---
Rock outcrop.							
703D*:							
Mundal	VIs	---	---	---	---	---	---
Cabot	VIs	---	---	---	---	---	---
705D*:							
Rawsonville	VIs	---	---	---	---	---	---
Houghtonville	VIs	---	---	---	---	---	---

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 7.--CAPABILITY CLASSES AND SUBCLASSES

(Miscellaneous areas are excluded. Absence of an entry indicates no acreage)

Class	Total acreage	Major management concerns		
		Erosion (e)	Wetness (w)	Soil problem (s)
		Acres	Acres	Acres
I	3,422	---	---	---
II	43,270	32,873	10,397	---
III	64,305	29,251	23,283	11,771
IV	24,430	16,978	3,186	4,266
V	16,281	---	16,281	---
VI	203,814	9,544	1,747	192,523
VII	232,388	8,005	---	224,383
VIII	---	---	---	---

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY

(Only the soils suitable for production of commercial trees are listed. Absence of an entry indicates that information was not available)

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
1B, 1C---------- Marlow	8A	Slight	Slight	Slight	Moderate	Eastern white pine--	66	8	Eastern white pine, white spruce, balsam fir.
						Balsam fir----------	58	8	
						Red spruce----------	48	7	
						Sugar maple---------	60	3	
						Yellow birch--------	60	3	
						Paper birch---------	65	5	
						White ash-----------	67	3	
						American beech------	60	3	
						Northern red oak----	67	3	
1D---------- Marlow	8R	Moderate	Moderate	Slight	Moderate	Eastern white pine--	66	8	Eastern white pine, white spruce, balsam fir.
						Balsam fir----------	58	8	
						Red spruce----------	48	7	
						Sugar maple---------	60	3	
						Yellow birch--------	60	3	
						Paper birch---------	65	5	
						White ash-----------	67	3	
						American beech------	60	3	
						Northern red oak----	67	3	
2C---------- Marlow	8A	Slight	Slight	Slight	Moderate	Eastern white pine--	66	8	Eastern white pine, white spruce, balsam fir.
						Balsam fir----------	58	8	
						Red spruce----------	48	7	
						Sugar maple---------	60	3	
						Yellow birch--------	60	3	
						Paper birch---------	65	5	
						White ash-----------	67	3	
						American beech------	60	3	
						Northern red oak----	67	3	
2D---------- Marlow	8R	Moderate	Moderate	Slight	Moderate	Eastern white pine--	66	8	Eastern white pine, white spruce, balsam fir.
						Balsam fir----------	58	8	
						Red spruce----------	48	7	
						Sugar maple---------	60	3	
						Yellow birch--------	60	3	
						Paper birch---------	65	5	
						White ash-----------	67	3	
						American beech------	60	3	
						Northern red oak----	67	3	
2E---------- Marlow	8R	Severe	Severe	Slight	Moderate	Eastern white pine--	66	8	Eastern white pine, white spruce, balsam fir.
						Balsam fir----------	58	8	
						Red spruce----------	48	7	
						Sugar maple---------	60	3	
						Yellow birch--------	60	3	
						Paper birch---------	65	5	
						White ash-----------	67	3	
						American beech------	60	3	
						Northern red oak----	67	3	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Productivity class*	Trees to plant
3B, 3C---------- Peru	8A	Slight	Slight	Slight	Moderate	Eastern white pine--	67	8	Eastern white pine, red pine, white spruce, yellow birch.
						Sugar maple----------	60	3	
						Red spruce----------	39	6	
						Balsam fir----------	55	8	
						White ash----------	64	3	
						Yellow birch--------	60	3	
4B, 4C---------- Peru	8A	Slight	Slight	Slight	Moderate	Eastern white pine--	67	8	Eastern white pine, red pine, white spruce, yellow birch.
						Sugar maple----------	60	3	
						Red spruce----------	39	6	
						Balsam fir----------	55	8	
						White ash----------	64	3	
						Yellow birch--------	60	3	
4D---------- Peru	8R	Moderate	Moderate	Slight	Moderate	Eastern white pine--	67	8	Eastern white pine, red pine, white spruce, yellow birch.
						Sugar maple----------	60	3	
						Red spruce----------	39	6	
						Balsam fir----------	55	8	
						White ash----------	64	3	
						Yellow birch--------	60	3	
6A---------- Cabot	3W	Slight	Moderate	Moderate	Severe	Red maple----------	60	3	Eastern white pine, white spruce.
						Sugar maple----------	56	2	
						White spruce--------	60	10	
						Red spruce----------	---	---	
						Tamarack------------	---	---	
						Hemlock-------------	---	---	
						Balsam fir----------	---	---	
						Northern whitecedar-	---	---	
						Eastern white pine--	---	---	
7C---------- Brayton	8W	Slight	Severe	Moderate	Severe	Eastern white pine--	67	8	Black spruce, red spruce, tamarack.
						Red spruce----------	45	7	
						White spruce--------	48	7	
						Black spruce--------	---	---	
						Balsam fir----------	48	6	
						Red maple----------	65	3	
						Paper birch---------	60	4	
11C**:									
Taconic--------	2D	Moderate	Moderate	Moderate	Severe	Sugar maple---------	50	2	Eastern white pine, red pine, white spruce, balsam fir, Norway spruce.
						American beech------	---	---	
						Paper birch---------	53	3	
						Eastern hemlock-----	---	---	
						Northern red oak----	50	2	
Hubbardton-----	6D	Moderate	Moderate	Severe	Severe	Eastern white pine--	50	6	
						Northern red oak----	50	2	
						Red maple----------	---	---	
						Hickory------------	---	---	
						American hornbeam---	---	---	
						Sugar maple---------	50	2	
						Eastern hemlock-----	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
12F**:									
Taconic	2R	Severe	Severe	Moderate	Severe	Sugar maple	50	2	Eastern white pine, red pine, white spruce, balsam fir, Norway spruce.
						American beech	---	---	
						Paper birch	53	3	
						Eastern hemlock	---	---	
						Northern red oak	50	2	
Hubbardton	6R	Severe	Severe	Severe	Severe	Eastern white pine	50	6	
						Northern red oak	50	2	
						Red maple	---	---	
						Hickory	---	---	
						American hornbeam	---	---	
						Sugar maple	50	2	
						Eastern hemlock	---	---	
Macomber	3R	Severe	Severe	Slight	Slight	Sugar maple	65	3	Eastern white pine, red pine, white spruce, balsam fir, Norway spruce.
						American beech	---	---	
						Paper birch	60	4	
						Eastern hemlock	---	---	
						Northern red oak	70	4	
13B, 13C Hinckley	7S	Slight	Slight	Severe	Slight	Eastern white pine	60	7	Eastern white pine.
						Northern red oak	49	2	
						Sugar maple	57	2	
13D, 13E Hinckley	7S	Moderate	Moderate	Severe	Slight	Eastern white pine	60	7	Eastern white pine.
						Northern red oak	49	2	
						Sugar maple	57	2	
14A, 14B Sudbury	7A	Slight	Slight	Slight	Slight	Eastern white pine	60	7	Eastern white pine, red pine, white spruce, Norway spruce.
						Northern red oak	45	2	
						Red spruce	47	7	
15A Walpole	3W	Slight	Severe	Severe	Severe	Red maple	75	3	Eastern white pine, white spruce, northern whitecedar, Norway spruce.
						White ash	61	3	
						Eastern hemlock	54	8	
						Eastern white pine	68	8	
18B, 18C Windsor	7S	Slight	Slight	Severe	Slight	Eastern white pine	57	7	Eastern white pine, red pine, Norway spruce.
						Northern red oak	52	2	
						Sugar maple	55	2	
18D Windsor	7S	Moderate	Moderate	Severe	Slight	Eastern white pine	57	7	Eastern white pine, red pine, Norway spruce.
						Northern red oak	52	2	
						Sugar maple	55	2	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
18E---------- Windsor	7R	Severe	Severe	Severe	Slight	Eastern white pine--	57	7	Eastern white pine, red pine, Norway spruce.
						Northern red oak----	52	2	
						Sugar maple---------	55	2	
21---------- Rippowam	3W	Slight	Severe	Severe	Severe	Red maple----------	75	3	Eastern white pine, white spruce.
						Eastern white pine--	65	8	
22---------- Saco	6W	Slight	Severe	Severe	Severe	Eastern white pine--	50	6	
						Red maple----------	50	2	
						Northern whitecedar-	45	5	
23---------- Adrian	2W	Slight	Severe	Severe	Severe	Silver maple--------	78	2	
						Red maple----------	53	2	
						White ash----------	69	4	
						Quaking aspen-------	60	4	
						Tamarack-----------	45	2	
24---------- Pinnebog	2W	Slight	Severe	Severe	Severe	Red maple----------	56	2	
						Tamarack-----------	45	2	
						Quaking aspen-------	60	4	
						Silver maple--------	82	2	
25A, 25B-------- Belgrade	3A	Slight	Slight	Slight	Slight	Northern red oak----	62	3	Eastern white pine, European larch, white spruce.
						Eastern white pine--	75	10	
						White spruce--------	65	10	
25C---------- Belgrade	3R	Moderate	Slight	Slight	Slight	Northern red oak----	62	3	Eastern white pine, European larch, white spruce.
						Eastern white pine--	75	10	
						White spruce--------	65	10	
26A---------- Raynham	3W	Slight	Severe	Moderate	Severe	Red maple----------	65	3	Eastern white pine, white spruce.
						Eastern white pine--	65	8	
						Red spruce----------	45	7	
						Elm-----------------	---	---	
						Eastern hemlock-----	---	---	
						Gray birch----------	---	---	
						Sugar maple---------	---	---	
						Balsam fir----------	---	---	
						Tamarack-----------	---	---	
30B, 30C-------- Paxton	3D	Slight	Slight	Slight	Slight	Northern red oak----	65	3	Red pine, eastern white pine, Norway spruce, European larch.
						Eastern white pine--	66	8	
						Sugar maple---------	75	3	
30D---------- Paxton	3R	Moderate	Moderate	Slight	Slight	Northern red oak----	65	3	Red pine, eastern white pine, Norway spruce, European larch.
						Eastern white pine--	66	8	
						Sugar maple---------	75	3	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
31B, 31C-------- Paxton	3D	Slight	Slight	Slight	Moderate	Northern red oak---- Eastern white pine-- Sugar maple---------	65 66 75	3 8 3	Red pine, Norway spruce, eastern white pine, European larch.
31D, 31E-------- Paxton	3R	Moderate	Moderate	Slight	Moderate	Northern red oak---- Eastern white pine-- Red pine---------- Sugar maple---------	65 66 67 75	3 8 8 3	Red pine, Norway spruce, eastern white pine, European larch.
38A---------- Tisbury	10A	Slight	Slight	Slight	Slight	Eastern white pine-- Northern red oak----	75 70	10 4	Eastern white pine.
39B**, 40C**: Galway---------	3A	Slight	Slight	Slight	Slight	Sugar maple--------- Northern red oak---- White ash----------	65 70 75	3 4 3	Eastern white pine, European larch, Norway spruce, red pine.
Nellis---------	3A	Slight	Slight	Slight	Slight	Sugar maple--------- Northern red oak---- American basswood--- Eastern white pine-- White ash----------	70 80 80 85 85	3 4 4 10 4	Eastern white pine, Austrian pine, Norway spruce, black walnut, European larch, Douglas fir.
Farmington-----	2D	Slight	Slight	Severe	Moderate	Sugar maple--------- Northern red oak---- White ash----------	50 50 55	2 2 2	Eastern white pine, red pine.
40D**: Galway---------	3R	Slight	Moderate	Slight	Slight	Sugar maple--------- Northern red oak---- White ash----------	65 70 75	3 4 3	Eastern white pine, European larch, Norway spruce, red pine, red pine.
Nellis---------	3R	Slight	Moderate	Slight	Slight	Sugar maple--------- Northern red oak---- American basswood--- Eastern white pine-- White ash----------	70 80 80 85 85	3 4 4 10 4	Eastern white pine, Austrian pine, Norway spruce, black walnut, European larch, Douglas fir.
Farmington-----	2D	Moderate	Moderate	Severe	Moderate	Sugar maple--------- Northern red oak---- White ash----------	50 50 55	2 2 6	Eastern white pine, red pine.

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
41C**:									
Farmington	2D	Moderate	Moderate	Severe	Moderate	Sugar maple	50	2	Eastern white pine, red pine.
						Northern red oak	50	2	
						White ash	55	2	
Galway	3R	Moderate	Moderate	Slight	Slight	Sugar maple	65	3	Eastern white pine, European larch, Norway spruce, red pine, red pine.
						Northern red oak	70	4	
						White ash	75	3	
Galoo	2R	Moderate	Moderate	Severe	Severe	Northern red oak	35	2	
41E**:									
Farmington	2R	Severe	Severe	Severe	Moderate	Sugar maple	50	2	Eastern white pine, red pine.
						Northern red oak	50	2	
						White ash	55	2	
41E**:									
Galway	3R	Severe	Severe	Slight	Slight	Sugar maple	65	3	Eastern white pine, European larch, Norway spruce, red pine, red pine.
						Northern red oak	70	4	
Galoo	2R	Severe	Severe	Severe	Severe	Northern red oak	35	2	
42C**:									
Macomber	3A	Slight	Slight	Slight	Slight	Sugar maple	65	3	Eastern white pine, red pine, white spruce, balsam fir, Norway spruce.
						American beech	---	---	
						Paper birch	60	4	
						Eastern hemlock	---	---	
						Northern red oak	70	4	
Taconic	2D	Slight	Slight	Moderate	Severe	Sugar maple	50	2	Eastern white pine, red pine, white spruce, balsam fir, Norway spruce.
						American beech	---	---	
						Paper birch	53	3	
						Eastern hemlock	---	---	
						Northern red oak	50	2	
42D**:									
Macomber	3R	Moderate	Moderate	Slight	Slight	Sugar maple	65	3	Eastern white pine, red pine, white spruce, balsam fir, Norway spruce.
						American beech	---	---	
						Paper birch	60	4	
						Eastern hemlock	---	---	
						Northern red oak	70	4	
Taconic	2D	Moderate	Moderate	Moderate	Severe	Sugar maple	50	2	Eastern white pine, red pine, white spruce, balsam fir, Norway spruce.
						American beech	---	---	
						Paper birch	53	3	
						Eastern hemlock	---	---	
						Northern red oak	50	2	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Productivity class*	Trees to plant
42F**:									
Macomber	3R	Severe	Severe	Slight	Slight	Sugar maple	65	3	Eastern white pine, red pine, white spruce, balsam fir, Norway spruce.
						American beech	---	---	
						Paper birch	60	4	
						Eastern hemlock	---	---	
						Northern red oak	70	4	
Taconic	2R	Severe	Severe	Moderate	Severe	Sugar maple	50	2	Eastern white pine, red pine, white spruce, balsam fir, Norway spruce.
						American beech	---	---	
						Paper birch	53	3	
						Eastern hemlock	---	---	
						Northern red oak	50	2	
43C**:									
Taconic	2D	Moderate	Moderate	Moderate	Severe	Sugar maple	50	2	Eastern white pine, red pine, white spruce, balsam fir, Norway spruce.
						American beech	---	---	
						Paper birch	53	3	
						Eastern hemlock	---	---	
						Northern red oak	50	2	
Macomber	3R	Moderate	Moderate	Slight	Slight	Sugar maple	65	3	Eastern white pine, red pine, white spruce, balsam fir, Norway spruce.
						American beech	---	---	
						Paper birch	60	4	
						Eastern hemlock	---	---	
						Northern red oak	70	4	
44B, 44C Dutchess	3A	Slight	Slight	Slight	Slight	Sugar maple	60	3	Eastern white pine, red pine.
						Northern red oak	62	3	
						Eastern white pine	66	8	
						Hickory	---	---	
						Eastern hemlock	---	---	
44D Dutchess	3R	Moderate	Moderate	Slight	Slight	Sugar maple	60	3	Eastern white pine, red pine.
						Northern red oak	62	3	
						Eastern white pine	66	8	
						Hickory	---	---	
						Eastern hemlock	---	---	
47B, 47C Dutchess	3A	Slight	Slight	Slight	Slight	Sugar maple	60	3	Eastern white pine, red pine.
						Northern red oak	62	3	
						Eastern white pine	66	8	
						Hickory	---	---	
						Eastern hemlock	---	---	
47D Dutchess	3R	Moderate	Moderate	Slight	Slight	Sugar maple	60	3	Eastern white pine, red pine.
						Northern red oak	62	3	
						Eastern white pine	66	8	
						Hickory	---	---	
						Eastern hemlock	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
47E---------- Dutchess	3R	Severe	Severe	Slight	Slight	Sugar maple--------- Northern red oak---- Eastern white pine-- Hickory---------- Eastern hemlock-----	60 62 66 --- ---	3 3 8 --- ---	Eastern white pine, red pine.
50A---------- Massena	10W	Slight	Moderate	Moderate	Moderate	Eastern white pine-- Northern red oak---- Red maple----------	75 70 75	10 4 3	Eastern white pine, white spruce, northern whitecedar.
52B**:									
Macomber-------	3A	Slight	Slight	Slight	Slight	Sugar maple--------- American beech------ Paper birch--------- Eastern hemlock----- Northern red oak----	65 --- 60 --- 70	3 --- 4 --- 4	Eastern white pine, red pine, white spruce, balsam fir, Norway spruce.
Dutchess-------	3A	Slight	Slight	Slight	Slight	Sugar maple--------- Northern red oak---- Eastern white pine-- Hickory---------- Eastern hemlock-----	60 62 66 --- ---	3 3 8 --- ---	Eastern white pine, red pine.
53---------- Elvers	2W	Slight	Severe	Severe	Severe	Silver maple-------- Eastern cottonwood-- White ash---------- Red maple----------	70 80 --- 55	2 6 --- 2	Eastern cottonwood, silver maple, white ash, white spruce.
54A---------- Ninigret	10A	Slight	Slight	Slight	Slight	Eastern white pine-- Red maple---------- Northern red oak---- Sugar maple---------	75 60 65 55	10 3 3 2	Eastern white pine, white spruce.
56B**, 56C**:									
Colton---------	3S	Slight	Slight	Severe	Slight	Sugar maple--------- Eastern white pine-- Red spruce----------	61 62 39	3 8 6	Eastern white pine, red pine, European larch.
Duxbury--------	8A	Slight	Slight	Slight	Slight	Eastern white pine-- Sugar maple--------- Red spruce---------- Eastern hemlock----- Red maple---------- Balsam fir----------	65 55 --- --- --- ---	8 2 --- --- --- ---	Eastern white pine, red pine.
56D**:									
Colton---------	3S	Moderate	Moderate	Severe	Slight	Sugar maple--------- Eastern white pine-- Red spruce----------	61 62 39	3 8 6	Eastern white pine, red pine, European larch.

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
56D**:									
Duxbury	8R	Moderate	Moderate	Slight	Slight	Eastern white pine	65	8	Eastern white pine, red pine.
						Sugar maple	55	2	
						Red spruce	---	---	
						Eastern hemlock	---	---	
						Red maple	---	---	
						Balsam fir	---	---	
56E**:									
Colton	3R	Severe	Severe	Severe	Slight	Sugar maple	61	3	Eastern white pine, red pine, European larch.
						Eastern white pine	62	8	
						Red spruce	39	6	
Duxbury	8R	Severe	Severe	Slight	Slight	Eastern white pine	65	8	Eastern white pine, red pine.
						Sugar maple	55	2	
						Red spruce	---	---	
						Eastern hemlock	---	---	
						Red maple	---	---	
						Balsam fir	---	---	
57B**:									
Duxbury	8A	Slight	Slight	Slight	Slight	Eastern white pine	65	8	Eastern white pine, red pine.
						Sugar maple	55	2	
						Eastern hemlock	---	---	
						Red spruce	---	---	
						Red maple	---	---	
						Balsam fir	---	---	
Colton	3S	Slight	Slight	Severe	Slight	Sugar maple	61	3	Eastern white pine, red pine, European larch.
						Eastern white pine	62	9	
						Red spruce	39	6	
58C**:									
Colton	3S	Slight	Slight	Severe	Slight	Sugar maple	61	3	Eastern white pine, red pine, European larch.
						Eastern white pine	62	9	
						Red spruce	39	6	
Duxbury	8A	Slight	Slight	Slight	Slight	Eastern white pine	65	8	Eastern white pine, red pine.
						Sugar maple	55	2	
						Eastern hemlock	---	---	
						Red spruce	---	---	
						Red maple	---	---	
						Balsam fir	---	---	
58D**:									
Colton	3S	Moderate	Moderate	Severe	Slight	Sugar maple	61	3	Eastern white pine, red pine, European larch.
						Eastern white pine	62	9	
						Red spruce	39	6	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
58D**:									
Duxbury	8R	Moderate	Moderate	Slight	Slight	Eastern white pine	65	8	Eastern white pine, red pine.
						Sugar maple	55	2	
						Eastern hemlock	---	---	
						Red spruce	---	---	
						Red maple	---	---	
						Balsam fir	---	---	
59A---------- Deerfield	8S	Slight	Slight	Moderate	Slight	Eastern white pine	65	8	Eastern white pine, red pine, European larch.
						Northern red oak	55	3	
61A, 61B---------- Eldridge	8A	Slight	Slight	Moderate	Slight	Eastern white pine	65	8	Eastern white pine, red pine, white spruce, black spruce, balsam fir.
						Northern red oak	60	3	
62---------- Enosburg	3W	Slight	Severe	Moderate	Severe	Red maple	60	3	Balsam fir, eastern white pine, white spruce, black spruce.
						Eastern white pine	65	8	
						Northern red oak	60	3	
						Sugar maple	50	2	
64B, 64C---------- Stockbridge	4A	Slight	Slight	Slight	Slight	Northern red oak	70	4	Eastern white pine, white spruce, Norway spruce, European larch.
						Sugar maple	60	3	
						Eastern white pine	75	10	
						American beech	---	---	
						Eastern hemlock	---	---	
64D---------- Stockbridge	4R	Moderate	Moderate	Slight	Slight	Northern red oak	70	4	Eastern white pine, white spruce, Norway spruce, European larch.
						Sugar maple	60	3	
						Eastern white pine	75	10	
						American beech	---	---	
						Eastern hemlock	---	---	
65B, 65C---------- Stockbridge	4A	Slight	Slight	Slight	Slight	Northern red oak	70	4	Eastern white pine, white spruce, Norway spruce, European larch.
						Sugar maple	60	3	
						Eastern white pine	75	10	
						American beech	---	---	
						Eastern hemlock	---	---	
65D---------- Stockbridge	4R	Moderate	Moderate	Slight	Slight	Northern red oak	70	4	Eastern white pine, white spruce, Norway spruce, European larch.
						Sugar maple	60	3	
						Eastern white pine	75	10	
						American beech	---	---	
						Eastern hemlock	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
65E--Stockbridge	4R	Severe	Severe	Slight	Slight	Northern red oak	70	4	Eastern white pine, white spruce, Norway spruce, European larch.
						Sugar maple	60	3	
						Eastern white pine	75	10	
						American beech	---	---	
						Eastern hemlock	---	---	
66B**, 66C**:									
Georgia	3A	Slight	Slight	Slight	Slight	Sugar maple	60	3	Eastern white pine, larch, Norway spruce.
						Northern red oak	70	4	
						Red maple	70	3	
						White ash	66	3	
						Eastern white pine	75	10	
						Basswood	65	3	
						Yellow birch	60	3	
						Quaking aspen	---	---	
Amenia	3A	Slight	Slight	Slight	Slight	Sugar maple	65	3	Eastern white pine, red pine, Norway spruce, European larch.
						Northern red oak	70	4	
						Eastern white pine	75	10	
						White ash	75	3	
						American basswood	---	---	
67B**, 67C**:									
Georgia	3A	Slight	Slight	Slight	Slight	Sugar maple	60	3	Eastern white pine, larch, Norway spruce.
						Northern red oak	70	4	
						Basswood	65	3	
						Eastern white pine	75	10	
Amenia	3A	Slight	Slight	Slight	Slight	Sugar maple	65	3	Eastern white pine, red pine, Norway spruce, European larch.
						Northern red oak	70	4	
						Eastern white pine	75	10	
						White ash	75	3	
						American basswood	---	---	
67D**:									
Georgia	3R	Moderate	Moderate	Slight	Slight	Sugar maple	60	3	Eastern white pine, larch, Norway spruce.
						Northern red oak	70	4	
						Basswood	65	3	
						Eastern white pine	75	10	
Amenia	3R	Moderate	Moderate	Slight	Slight	Sugar maple	65	3	Eastern white pine, red pine, Norway spruce, European larch.
						Northern red oak	70	4	
						Eastern white pine	75	10	
						White ash	75	3	
						American basswood	---	---	
68A--Massena	10W	Slight	Moderate	Moderate	Moderate	Eastern white pine	75	10	Eastern white pine, white spruce, northern whitecedar.
						Northern red oak	70	4	
						Red maple	75	3	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
71A---------- Castile	3A	Slight	Slight	Slight	Slight	Sugar maple----------	63	3	Eastern white pine, Norway spruce, white spruce.
						Northern red oak----	70	4	
						Black cherry--------	70	3	
72A---------- Fredon	3W	Slight	Severe	Severe	Severe	Northern red oak----	60	3	Yellow poplar, eastern white pine, white spruce, Norway spruce.
						Eastern white pine--	70	9	
						Red maple----------	70	3	
73---------- Scarboro	6W	Slight	Severe	Severe	Severe	Eastern white pine--	55	6	Northern whitecedar.
						Red maple----------	55	2	
						Northern white cedar	---	---	
80A, 80B-------- Kingsbury	3W	Slight	Moderate	Slight	Moderate	Sugar maple----------	60	3	Eastern white pine, Norway spruce, white spruce.
						Balsam fir----------	60	8	
						Eastern white pine--	75	10	
						White ash----------	67	3	
81---------- Livingston	2W	Slight	Severe	Severe	Severe	Red maple----------	40	2	
						American elm--------	---	---	
						Northern whitecedar-	---	---	
82B, 82C-------- Vergennes	8C	Slight	Moderate	Severe	Slight	Eastern white pine--	65	8	Eastern white pine, Norway spruce.
						Northern red oak----	58	3	
						Sugar maple----------	60	3	
82D---------- Vergennes	8R	Moderate	Severe	Severe	Slight	Eastern white pine--	65	8	Eastern white pine, Norway spruce.
						Northern red oak----	58	3	
						Sugar maple----------	60	3	
82E---------- Vergennes	8R	Severe	Severe	Severe	Slight	Eastern white pine--	65	8	Eastern white pine, Norway spruce.
						Northern red oak----	58	3	
						Sugar maple----------	60	3	
86---------- Linwood	2W	Slight	Severe	Severe	Severe	Red maple----------	56	2	
						Silver maple--------	82	2	
						Tamarack----------	---	---	
						Black ash----------	---	---	
88---------- Birdsall	2W	Slight	Severe	Severe	Severe	Red maple----------	50	2	
90B---------- Hartland	9A	Slight	Slight	Slight	Slight	Eastern white pine--	70	9	Eastern white pine, red pine, white spruce, larch.
						Sugar maple----------	60	3	
						Northern red oak----	65	3	
						White oak----------	---	---	
						Black oak----------	---	---	
						Hickory----------	---	---	
						White ash----------	---	---	
						Paper birch--------	---	---	
						Yellow birch--------	---	---	
						Gray birch----------	---	---	
						Beech----------	---	---	
						Hemlock----------	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Productivity class*	Trees to plant
90C---------- Hartland	9R	Moderate	Slight	Slight	Slight	Eastern white pine--	70	9	Eastern white pine, red pine, white spruce, larch.
						Sugar maple----------	60	3	
						Northern red oak----	65	3	
						White oak----------	---	---	
						Black oak----------	---	---	
						Hickory----------	---	---	
						White ash----------	---	---	
						Paper birch---------	---	---	
						Yellow birch--------	---	---	
						Gray birch----------	---	---	
						Beech---------------	---	---	
						Hemlock-------------	---	---	
90D---------- Hartland	9R	Severe	Moderate	Slight	Slight	Eastern white pine--	70	9	Eastern white pine, red pine, white spruce, larch.
						Sugar maple----------	60	3	
						Northern red oak----	65	3	
						White oak----------	---	---	
						Black oak----------	---	---	
						Hickory----------	---	---	
						White ash----------	---	---	
						Paper birch---------	---	---	
						Yellow birch--------	---	---	
						Gray birch----------	---	---	
						Beech---------------	---	---	
						Hemlock-------------	---	---	
97A**, 97B**, 97C**: Warwick-------	9S	Slight	Slight	Moderate	Slight	Eastern white pine--	70	9	Eastern white pine, red pine.
						Northern red oak----	55	3	
						Sugar maple----------	59	3	
						Red pine------------	70	8	
97A**, 97B**, 97C**: Quonset-------	7S	Slight	Slight	Severe	Slight	Eastern white pine--	61	7	Eastern white pine, red pine.
						Northern red oak----	47	2	
						Red pine------------	60	6	
						Sugar maple----------	52	2	
97D**: Warwick--------	9S	Moderate	Moderate	Moderate	Slight	Eastern white pine--	70	9	Eastern white pine, red pine.
						Northern red oak----	55	3	
						Sugar maple----------	59	3	
Quonset--------	7S	Moderate	Moderate	Severe	Slight	Eastern white pine--	61	7	Eastern white pine, red pine.
						Northern red oak----	47	2	
						Sugar maple----------	52	2	
98E**: Quonset--------	7R	Severe	Severe	Severe	Slight	Eastern white pine--	61	7	Eastern white pine, red pine.
						Northern red oak----	47	2	
						Sugar maple----------	52	2	
Warwick--------	9R	Severe	Severe	Moderate	Slight	Eastern white pine--	70	9	Eastern white pine, red pine.
						Northern red oak----	55	3	
						Sugar maple----------	59	3	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
99B Copake	8A	Slight	Slight	Slight	Slight	Eastern white pine Northern red oak Sugar maple	65 60 55	8 3 2	Eastern white pine, Austrian pine, European larch, Norway spruce.
104B Groton	3S	Slight	Slight	Severe	Slight	Northern red oak Eastern white pine Sugar maple	55 60 55	3 7 3	Eastern white pine, European larch.
105 Tioga	4A	Slight	Slight	Slight	Slight	Northern red oak Sugar maple Eastern white pine	75 67 ---	4 3 ---	Eastern white pine, yellow poplar, Norway spruce, black walnut, European larch.
106 Middlebury	4A	Slight	Slight	Slight	Slight	Northern red oak Sugar maple Eastern white pine	80 70 ---	4 3 ---	Eastern white pine, yellow poplar, Norway spruce, European larch, black walnut, black cherry.
108 Hamlin	4A	Slight	Slight	Slight	Slight	Northern red oak Sugar maple Eastern white pine	80 70 ---	4 3 ---	Eastern white pine, black locust, Norway spruce, black walnut, European larch.
109 Teel	3A	Slight	Slight	Slight	Slight	Sugar maple White ash	70 85	3 4	Eastern white pine, Norway spruce, black walnut, European larch.
110 Limerick	2W	Slight	Severe	Severe	Severe	Red maple Eastern white pine	40 65	2 8	Eastern white pine, white spruce, northern whitecedar.
111 Livingston	2W	Slight	Severe	Severe	Severe	Red maple American elm Northern whitecedar	40 --- ---	2 --- ---	
118C Adams	3S	Slight	Slight	Severe	Slight	Sugar maple Red maple American beech Eastern hemlock Eastern white pine	61 --- --- --- 66	3 --- --- --- 8	Eastern white pine, red pine, European larch.

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
122B, 122C--Lyme	8W	Slight	Severe	Moderate	Severe	Eastern white pine	65	8	Eastern white pine, white spruce.
						Red spruce	50	8	
						Red maple	65	3	
						Balsam fir	50	8	
123B, 123C--Sheepscot	8A	Slight	Slight	Moderate	Slight	Eastern white pine	68	8	Eastern white pine, white spruce, red spruce, European larch.
						White spruce	55	9	
						Red spruce	45	7	
						Balsam fir	55	8	
						Eastern hemlock	---	---	
						American beech	55	2	
						Paper birch	55	4	
						Sugar maple	55	2	
						Yellow birch	55	2	
						Northern whitecedar	55	6	
124B, 124C--Sunapee	3A	Slight	Slight	Slight	Slight	Sugar maple	67	3	Eastern white pine, red pine, white spruce, yellow birch.
						Eastern white pine	72	9	
						Red spruce	45	7	
						Balsam fir	55	8	
124D--Sunapee	3R	Moderate	Moderate	Slight	Slight	Sugar maple	67	3	Eastern white pine, red pine, white spruce, yellow birch.
						Eastern white pine	72	9	
						Red spruce	45	7	
						Balsam fir	55	8	
124E--Sunapee	3R	Severe	Severe	Slight	Slight	Sugar maple	67	3	Eastern white pine, red pine, white spruce, yellow birch.
						Eastern white pine	72	9	
						Red spruce	45	7	
						Balsam fir	55	8	
125B, 125C--Berkshire	9A	Slight	Slight	Slight	Slight	Eastern white pine	72	9	Eastern white pine, red pine, white spruce, balsam fir.
						Sugar maple	52	2	
						Red spruce	50	8	
						White ash	62	3	
						Yellow birch	55	2	
						Paper birch	60	4	
						Balsam fir	60	8	
						White spruce	55	9	
						Red pine	65	8	
125D--Berkshire	9R	Moderate	Moderate	Slight	Slight	Eastern white pine	72	9	Eastern white pine, red pine, white spruce, balsam fir.
						Sugar maple	52	2	
						Red spruce	50	8	
						White ash	62	3	
						Yellow birch	55	2	
						Paper birch	60	4	
						Balsam fir	60	8	
						White spruce	55	9	
						Red pine	65	8	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
125E---------- Berkshire	9R	Severe	Severe	Slight	Slight	Eastern white pine--	72	9	Eastern white pine, red pine, white spruce, balsam fir.
						Sugar maple----------	52	2	
						Red spruce----------	50	8	
						White ash----------	62	3	
						Yellow birch--------	55	2	
						Paper birch---------	60	4	
						Balsam fir----------	60	8	
						White spruce--------	55	9	
						Red pine-----------	65	8	
127C---------- Houghtonville	3A	Moderate	Moderate	Slight	Slight	Sugar maple---------	60	3	Balsam fir, white spruce, red spruce.
						American beech------	65	3	
						Yellow birch--------	54	2	
						Paper birch---------	66	5	
						Red spruce----------	50	8	
						Balsam fir----------	55	8	
127D---------- Houghtonville	3R	Severe	Moderate	Slight	Slight	Sugar maple---------	60	3	Balsam fir, white spruce, red spruce.
						American beech------	65	3	
						Yellow birch--------	54	2	
						Paper birch---------	66	5	
						Red spruce----------	50	8	
						Balsam fir----------	55	8	
127E---------- Houghtonville	3R	Severe	Severe	Slight	Slight	Sugar maple---------	60	3	Balsam fir, white spruce, red spruce.
						American beech------	65	3	
						Yellow birch--------	54	2	
						Paper birch---------	66	5	
						Red spruce----------	50	8	
						Balsam fir----------	55	8	
128C**: Rawsonville----	3A	Moderate	Moderate	Slight	Moderate	Sugar maple---------	60	3	Balsam fir, white spruce, red spruce.
						American beech------	64	3	
						Yellow birch--------	55	2	
						Paper birch---------	---	---	
						Red maple-----------	---	---	
						Red spruce----------	45	7	
						Balsam fir----------	---	---	
						Eastern hemlock-----	---	---	
Houghtonville--	3A	Moderate	Moderate	Slight	Slight	Sugar maple---------	60	3	Balsam fir, white spruce, red spruce.
						American beech------	65	3	
						Yellow birch--------	54	2	
						Paper birch---------	66	5	
						Red spruce----------	50	8	
						Balsam fir----------	55	8	
128D**: Rawsonville----	3R	Severe	Moderate	Slight	Moderate	Sugar maple---------	60	3	Balsam fir, white spruce, red spruce.
						American beech------	64	3	
						Yellow birch--------	55	2	
						Paper birch---------	---	---	
						Red maple-----------	---	---	
						Red spruce----------	45	7	
						Balsam fir----------	---	---	
						Eastern hemlock-----	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
128D**:									
Houghtonville--	3R	Severe	Moderate	Slight	Slight	Sugar maple	60	3	Balsam fir, white spruce, red spruce, Norway spruce.
						American beech	65	3	
						Yellow birch	54	2	
						Paper birch	66	5	
						Red spruce	50	8	
						Balsam fir	55	8	
128E**:									
Rawsonville----	3R	Severe	Severe	Slight	Moderate	Sugar maple	60	3	Balsam fir, white spruce, red spruce.
						American beech	64	3	
						Yellow birch	55	2	
						Paper birch	---	---	
						Red maple	---	---	
						Red spruce	45	7	
						Balsam fir	---	---	
						Eastern hemlock	---	---	
Houghtonville--	3R	Severe	Severe	Slight	Slight	Sugar maple	60	3	Balsam fir, white spruce, red spruce.
						American beech	65	3	
						Yellow birch	54	2	
						Paper birch	66	5	
						Red spruce	50	8	
						Balsam fir	55	8	
129D**:									
Killington-----	2D	Moderate	Moderate	Moderate	Severe	Sugar maple	45	2	Balsam fir.
						American beech	---	---	
						Red spruce	---	---	
						Yellow birch	---	---	
						Balsam fir	---	---	
Rawsonville----	3R	Severe	Moderate	Slight	Moderate	Sugar maple	60	3	Balsam fir, white spruce, red spruce.
						American beech	64	3	
						Yellow birch	55	2	
						Paper birch	---	---	
						Red maple	---	---	
						Red spruce	45	7	
						Balsam fir	---	---	
						Eastern hemlock	---	---	
129F**:									
Killington-----	2R	Severe	Severe	Moderate	Severe	Sugar maple	45	2	Balsam fir.
						American beech	---	---	
						Red spruce	---	---	
						Yellow birch	---	---	
						Balsam fir	---	---	
129F**:									
Rawsonville----	3R	Severe	Severe	Slight	Moderate	Sugar maple	60	3	Balsam fir, white spruce, red spruce.
						American beech	64	3	
						Yellow birch	55	2	
						Paper birch	---	---	
						Red maple	---	---	
						Red spruce	45	7	
						Balsam fir	---	---	
						Eastern hemlock	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
130B**, 130C**:									
Tunbridge	3A	Slight	Slight	Slight	Moderate	Sugar maple	60	3	Eastern white pine, white spruce, red spruce.
						Eastern white pine	50	6	
						Red spruce	50	8	
						Yellow birch	55	2	
						Paper birch	---	---	
						Balsam fir	---	---	
						White ash	65	3	
Berkshire	9A	Slight	Slight	Slight	Slight	Eastern white pine	72	9	Eastern white pine, red pine, white spruce, balsam fir.
						Sugar maple	52	2	
						Red spruce	50	8	
						White ash	62	3	
						Yellow birch	55	2	
						Paper birch	60	4	
						Balsam fir	60	8	
130D**:									
Tunbridge	3R	Moderate	Moderate	Slight	Moderate	Sugar maple	60	3	Eastern white pine, white spruce, red spruce.
						Eastern white pine	50	6	
						Red spruce	50	8	
						Yellow birch	55	2	
						Paper birch	---	---	
						Balsam fir	---	---	
						White ash	65	3	
Berkshire	9R	Moderate	Moderate	Slight	Slight	Eastern white pine	72	9	Eastern white pine, red pine, white spruce, balsam fir.
						Sugar maple	52	2	
						Red spruce	50	8	
						White ash	62	3	
						Yellow birch	55	2	
						Paper birch	60	4	
						Balsam fir	60	8	
130E**:									
Tunbridge	3R	Severe	Severe	Slight	Moderate	Sugar maple	60	3	Eastern white pine, white spruce, red spruce.
						Eastern white pine	50	6	
						Red spruce	50	8	
						Yellow birch	55	2	
						Paper birch	---	---	
						Balsam fir	---	---	
						White ash	65	3	
Berkshire	9R	Severe	Severe	Slight	Slight	Eastern white pine	72	9	Eastern white pine, red pine, white spruce, balsam fir.
						Sugar maple	52	2	
						Red spruce	50	8	
						White ash	62	3	
						Yellow birch	55	2	
						Paper birch	60	4	
						Balsam fir	60	8	
131D**:									
Lyman	2D	Moderate	Moderate	Moderate	Severe	Sugar maple	50	2	Eastern white pine, red pine, white spruce, balsam fir.
						White spruce	55	9	
						Balsam fir	60	8	
						Red spruce	40	6	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
131D**:									
Tunbridge	3R	Moderate	Moderate	Slight	Moderate	Sugar maple	60	3	Eastern white pine, white spruce, red spruce.
						Eastern white pine	50	6	
						Red spruce	50	8	
						Yellow birch	55	2	
						Paper birch	---	---	
						Balsam fir	---	---	
						White ash	65	3	
Rock outcrop.									
131E**:									
Lyman	2R	Severe	Severe	Moderate	Severe	Sugar maple	50	2	Eastern white pine, red pine, white spruce, balsam fir.
						White spruce	55	9	
						Balsam fir	60	8	
						Red spruce	40	6	
Tunbridge	3R	Severe	Severe	Slight	Moderate	Sugar maple	60	3	Eastern white pine, white spruce, red spruce.
						Eastern white pine	50	6	
						Red spruce	50	8	
						Yellow birch	55	2	
						Paper birch	---	---	
						Balsam fir	---	---	
						White ash	65	3	
Rock outcrop.									
132C**:									
Glebe	8R	Severe	Moderate	Slight	Moderate	Red spruce	50	8	
						Balsam fir	---	---	
						Paper birch	---	---	
						Yellow birch	---	---	
Stratton	5R	Severe	Moderate	Moderate	Severe	Red spruce	35	5	
						Balsam fir	---	---	
						Paper birch	---	---	
						Yellow birch	---	---	
132E**:									
Glebe	8R	Severe	Severe	Slight	Moderate	Red spruce	50	8	
						Balsam fir	---	---	
						Paper birch	---	---	
						Yellow birch	---	---	
Stratton	5R	Severe	Severe	Moderate	Severe	Red spruce	35	5	
						Balsam fir	---	---	
						Paper birch	---	---	
						Yellow birch	---	---	
134F**:									
Stratton	5R	Severe	Severe	Moderate	Severe	Red spruce	35	5	
						Balsam fir	---	---	
						Paper birch	---	---	
						Yellow birch	---	---	
Londonderry	4R	Severe	Severe	Severe	Severe	Red spruce	30	4	
						Balsam fir	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
134F**:									
Ricker	2R	Severe	Severe	Severe	Severe	Red spruce	20	2	
						Balsam fir	20	4	
						Yellow birch	---	---	
						Paper birch	---	---	
						Mountainash	---	---	
135D	3R	Severe	Moderate	Slight	Slight	Sugar maple	65	3	White spruce,
Mundal						American beech	---	---	red spruce,
						Yellow birch	---	---	balsam fir.
						Paper birch	---	---	
						Red maple	---	---	
						White ash	75	3	
						Balsam fir	55	8	
						Red spruce	50	8	
						White spruce	55	9	
						Eastern white pine	67	8	
135E	3R	Severe	Severe	Slight	Slight	Sugar maple	65	3	White spruce,
Mundal						American beech	---	---	red spruce,
						Yellow birch	---	---	balsam fir.
						Paper birch	---	---	
						Red maple	---	---	
						White ash	75	3	
						Balsam fir	55	8	
						Red spruce	50	8	
						White spruce	55	9	
						Eastern white pine	67	8	
138C	9A	Slight	Slight	Slight	Slight	Eastern white pine	72	9	Eastern white
Berkshire						Sugar maple	52	2	pine, red
						Red spruce	50	8	pine, white
						White ash	62	3	spruce, balsam
						Yellow birch	55	2	fir.
						Paper birch	60	4	
						Balsam fir	60	8	
139B, 139C	3A	Slight	Slight	Slight	Slight	Sugar maple	67	3	Eastern white
Sunapee						Eastern white pine	72	9	pine, red
						Red spruce	45	7	pine, white
						Balsam fir	55	8	spruce,
									European
									larch.
140C	2D	Slight	Slight	Severe	Severe	Sugar maple	50	2	Eastern white
Benson						Eastern white pine	55	6	pine.
						American beech	---	---	
						Yellow birch	---	---	
						Basswood	---	---	
						Northern red oak	---	---	
						White ash	---	---	
						Northern whitecedar	---	---	
						Eastern redcedar	---	---	
						Eastern hemlock	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
140D---------- Benson	2D	Moderate	Moderate	Severe	Severe	Sugar maple---------	50	2	Eastern white pine.
						Eastern white pine--	55	6	
						American beech------	---	---	
						Yellow birch--------	---	---	
						Basswood-----------	---	---	
						Northern red oak----	---	---	
						White ash-----------	---	---	
						Northern whitecedar-	---	---	
						Eastern redcedar----	---	---	
						Eastern hemlock-----	---	---	
140E---------- Benson	2R	Severe	Severe	Severe	Severe	Sugar maple---------	50	2	Eastern white pine.
						Eastern white pine--	55	6	
						American beech------	---	---	
						Yellow birch--------	---	---	
						Basswood-----------	---	---	
						Northern red oak----	---	---	
						White ash-----------	---	---	
						Northern whitecedar-	---	---	
						Eastern redcedar----	---	---	
						Eastern hemlock-----	---	---	
148B**, 148C**:									
Bomoseen-------	3A	Slight	Slight	Moderate	Moderate	Sugar maple---------	60	3	Eastern white pine.
						Northern red oak----	70	4	
						Eastern white pine--	65	8	
Pittstown------	4A	Slight	Slight	Slight	Moderate	Northern red oak----	72	4	Eastern white pine, balsam fir, white spruce, Scotch pine.
						Sugar maple---------	66	3	
						Eastern white pine--	80	10	
						Red spruce----------	50	8	
148D**:									
Bomoseen-------	3R	Moderate	Moderate	Moderate	Moderate	Sugar maple---------	60	3	Eastern white pine.
						Northern red oak----	70	4	
						Eastern white pine--	65	8	
Pittstown------	4R	Moderate	Moderate	Slight	Moderate	Northern red oak----	72	4	Eastern white pine, balsam fir, white spruce, Scotch pine.
						Sugar maple---------	66	3	
						Eastern white pine--	80	10	
						Red spruce----------	50	8	
149B**, 149C**:									
Bomoseen-------	3A	Slight	Slight	Moderate	Moderate	Sugar maple---------	60	3	Eastern white pine.
						Northern red oak----	70	4	
						Eastern white pine--	65	8	
Pittstown------	4A	Slight	Slight	Slight	Moderate	Northern red oak----	72	4	Eastern white pine, balsam fir, white spruce, Scotch pine.
						Sugar maple---------	66	3	
						Eastern white pine--	80	10	
						Red spruce----------	50	8	
149D**, 149E**:									
Bomoseen-------	3R	Moderate	Moderate	Moderate	Moderate	Sugar maple---------	60	3	Eastern white pine.
						Northern red oak----	70	4	
						Eastern white pine--	65	8	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
149D**, 149E**:									
Pittstown	4R	Moderate	Moderate	Slight	Moderate	Northern red oak	72	4	Eastern white pine, balsam fir, white spruce, Scotch pine.
						Sugar maple	66	3	
						Eastern white pine	80	10	
						Red spruce	50	8	
150A	3W	Slight	Severe	Severe	Severe	Red maple	60	3	
Peacham						Eastern white pine	---	---	
						European alder	---	---	
						Red spruce	---	---	
						Northern whitecedar	---	---	
						Black spruce	---	---	
						Tamarack	---	---	
152	2W	Slight	Severe	Severe	Severe	Red maple	50	2	Northern whitecedar.
Lyons									
161A, 161B	4A	Slight	Slight	Slight	Moderate	Northern red oak	70	4	Eastern white pine, European larch, white spruce.
Elmridge						Eastern white pine	75	10	
						Shagbark hickory	60	3	
						Red maple	---	---	
163	3W	Slight	Severe	Severe	Severe	Red maple	65	3	Eastern white pine, white spruce.
Canandaigua						Eastern white pine	65	8	
175	4A	Slight	Slight	Slight	Slight	Northern red oak	75	4	Eastern white pine, yellow poplar, Norway spruce, black walnut, European larch.
Wappinger						Sugar maple	67	3	
						Eastern white pine	---	---	
177	4A	Slight	Slight	Slight	Slight	Northern red oak	80	4	Eastern white pine, yellow poplar, Norway spruce, European larch, black walnut, black cherry.
Pawling						Sugar maple	70	3	
						Eastern white pine	---	---	
202E**:									
Rawsonville	3R	Severe	Severe	Slight	Moderate	Sugar maple	60	3	Balsam fir, white spruce, red spruce.
						American beech	64	3	
						Yellow birch	55	2	
						Paper birch	---	---	
						Red maple	---	---	
						Red spruce	45	7	
						Balsam fir	---	---	
						Eastern hemlock	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
202E**:									
Killington	2R	Severe	Severe	Moderate	Severe	Sugar maple	45	2	Balsam fir, Norway spruce.
						American beech	---	---	
						Red spruce	---	---	
						Yellow birch	---	---	
						Balsam fir	---	---	
203D**:									
Peru	8R	Moderate	Moderate	Slight	Moderate	Eastern white pine	67	8	Eastern white pine.
						Sugar maple	60	3	
						Red spruce	39	6	
						Balsam fir	55	8	
						White ash	64	3	
						Yellow birch	60	3	
Marlow	8R	Moderate	Moderate	Slight	Moderate	Eastern white pine	66	8	Eastern white pine, white spruce, red pine.
						Balsam fir	58	8	
						Red spruce	48	7	
						Sugar maple	60	3	
						Yellow birch	60	3	
						Paper birch	65	5	
						White ash	67	3	
						American beech	60	3	
						Northern red oak	67	3	
205D**:									
Tunbridge	3R	Moderate	Moderate	Slight	Moderate	Sugar maple	60	3	Eastern white pine, white spruce, red spruce.
						Eastern white pine	50	6	
						Red spruce	50	8	
						Yellow birch	55	2	
						Paper birch	---	---	
						Balsam fir	---	---	
						White ash	65	3	
Berkshire	9R	Moderate	Moderate	Slight	Slight	Eastern white pine	72	9	Eastern white pine, red pine, white spruce, balsam fir.
						Sugar maple	52	2	
						Red spruce	50	8	
						White ash	62	3	
						Yellow birch	55	2	
						Paper birch	60	4	
						Balsam fir	60	8	
Marlow	8R	Moderate	Moderate	Slight	Moderate	Eastern white pine	66	8	Eastern white pine, white spruce, red pine.
						Balsam fir	58	8	
						Red spruce	48	7	
						Sugar maple	60	3	
						Yellow birch	60	3	
						Paper birch	65	5	
						White ash	67	3	
						American beech	60	3	
						Northern red oak	67	3	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
213E**:									
Glebe	8R	Severe	Severe	Slight	Moderate	Red spruce	50	8	
						Balsam fir	---	---	
						Paper birch	---	---	
						Yellow birch	---	---	
Stratton	5R	Severe	Severe	Moderate	Severe	Red spruce	35	5	
						Balsam fir	---	---	
						Paper birch	---	---	
						Yellow birch	---	---	
221F**:									
Tunbridge	3R	Severe	Severe	Slight	Moderate	Sugar maple	60	3	Eastern white
						Eastern white pine	50	6	pine, white
						Red spruce	50	8	spruce, red
						Yellow birch	55	2	spruce.
						Paper birch	---	---	
						Balsam fir	---	---	
						White ash	65	3	
Berkshire	9R	Severe	Severe	Slight	Slight	Eastern white pine	72	9	Eastern white
						Sugar maple	52	2	pine, red
						Red spruce	50	8	pine, white
						White ash	62	3	spruce, balsam
						Yellow birch	55	2	fir.
						Paper birch	60	4	
						Balsam fir	60	8	
402D**:									
Tunbridge	3R	Moderate	Moderate	Slight	Moderate	Sugar maple	60	3	Eastern white
						Eastern white pine	50	6	pine, white
						Red spruce	50	8	spruce, red
						Yellow birch	55	2	spruce.
						Paper birch	---	---	
						Balsam fir	---	---	
						White ash	65	3	
Lyman	2D	Moderate	Moderate	Moderate	Severe	Sugar maple	50	2	Eastern white
						Balsam fir	60	8	pine, red
						Red spruce	40	6	pine, white
									spruce, balsam
									fir.
403C**:									
Brayton	8W	Slight	Severe	Moderate	Severe	Eastern white pine	67	8	Black spruce,
						Red spruce	45	7	red spruce,
						White spruce	48	7	tamarack.
						Black spruce	---	---	
						Balsam fir	48	6	
						Red maple	65	3	
						Paper birch	60	4	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Common trees	Site index	Productivity class*	
403C**:									
Cabot	3W	Slight	Moderate	Moderate	Severe	Red maple	60	3	Eastern white pine, white spruce.
						Sugar maple	56	2	
						White spruce	60	10	
						Red spruce	---	---	
						Tamarack	---	---	
						Hemlock	---	---	
						Balsam fir	---	---	
						Northern whitecedar	---	---	
						Eastern white pine	---	---	
Pinnebog	2W	Slight	Severe	Severe	Severe	Red maple	56	2	
						Tamarack	45	2	
						Quaking aspen	60	4	
						Silver maple	82	2	
405D**:									
Tunbridge	3R	Moderate	Moderate	Slight	Moderate	Sugar maple	60	3	Eastern white pine, white spruce, red spruce.
						Eastern white pine	50	6	
						Red spruce	50	8	
						Yellow birch	55	2	
						Paper birch	---	---	
						Balsam fir	---	---	
						White ash	65	3	
Berkshire	9R	Moderate	Moderate	Slight	Slight	Eastern white pine	72	9	Eastern white pine, red pine, white spruce, balsam fir.
						Sugar maple	52	2	
						Red spruce	50	8	
						White ash	62	3	
						Yellow birch	55	2	
						Paper birch	60	4	
						Balsam fir	60	8	
505D**:									
Berkshire	9R	Moderate	Moderate	Slight	Slight	Eastern white pine	72	9	Eastern white pine, red pine, white spruce, balsam fir.
						Sugar maple	52	2	
						Red spruce	50	8	
						White ash	62	3	
						Yellow birch	55	2	
						Paper birch	60	4	
						Balsam fir	60	8	
Colton	3S	Moderate	Moderate	Severe	Slight	Sugar maple	61	3	Eastern white pine, red pine, European
						Eastern white pine	62	9	
						Red spruce	39	6	
702F**:									
Killington	2R	Severe	Severe	Moderate	Severe	Sugar maple	45	2	Balsam fir.
						American beech	---	---	
						Red spruce	---	---	
						Yellow birch	---	---	
						Balsam fir	---	---	

See footnote at end of table.

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index	Productivity class*	Trees to plant
702F**:									
Ricker	2R	Severe	Severe	Severe	Severe	Red spruce	20	2	
						Balsam fir	20	4	
						Yellow birch	---	---	
						Paper birch	---	---	
						Mountainash	---	---	
Rock outcrop.									
703D**:									
Mundal	3R	Severe	Moderate	Slight	Slight	Sugar maple	65	3	White spruce, red spruce, balsam fir.
						American beech	---	---	
						Yellow birch	---	---	
						Paper birch	---	---	
						Red maple	---	---	
						White ash	75	3	
						Balsam fir	55	8	
						Red spruce	50	8	
						White spruce	55	9	
						Eastern white pine	67	8	
Cabot	3W	Moderate	Moderate	Moderate	Severe	Red maple	60	3	Eastern white pine, white spruce.
						Sugar maple	56	2	
						White spruce	60	10	
						Red spruce	---	---	
						Tamarack	---	---	
						Hemlock	---	---	
						Balsam fir	---	---	
						Northern whitecedar	---	---	
						Eastern white pine	---	---	
705D**:									
Rawsonville	3R	Severe	Moderate	Slight	Moderate	Sugar maple	60	3	Balsam fir, white spruce, red spruce.
						American beech	64	3	
						Yellow birch	55	2	
						Paper birch	---	---	
						Red maple	---	---	
						Red spruce	45	7	
						Balsam fir	---	---	
Houghtonville	3R	Severe	Moderate	Slight	Slight	Sugar maple	60	3	Balsam fir, white spruce, red spruce, Norway spruce.
						American beech	65	3	
						Yellow birch	54	2	
						Paper birch	66	5	
						Red spruce	50	8	
						Balsam fir	55	8	

* Productivity class is the yield in cubic meters per hectare per year calculated at the age of culmination of mean annual increment for fully stocked volunteer stands.

** See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 9.--RECREATIONAL DEVELOPMENT

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated)

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1B Marlow	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, small stones.	Slight	Slight.
1C Marlow	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Slight	Moderate: slope.
1D Marlow	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
2C Marlow	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Slight	Moderate: large stones, slope.
2D, 2E Marlow	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
3B Peru	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, small stones, wetness.	Moderate: wetness.	Moderate: wetness.
3C Peru	Moderate: slope, wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Severe: slope.	Moderate: wetness.	Moderate: wetness, slope.
4B Peru	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: large stones, slope, wetness.	Moderate: wetness.	Moderate: large stones, wetness.
4C Peru	Moderate: slope, wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Severe: slope.	Moderate: wetness.	Severe: large stones, wetness, slope.
4D Peru	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: wetness, slope.	Severe: slope.
6A Cabot	Severe: wetness.	Severe: wetness.	Severe: large stones, wetness.	Severe: wetness.	Severe: wetness.
7C Brayton	Severe: wetness.	Severe: wetness.	Severe: large stones, slope, small stones.	Severe: wetness.	Severe: wetness.
9*: Pits.					
Dumps.					

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
11C*:					
Taconic	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope, small stones.	Moderate: large stones, 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.	Severe: large stones, slope, thin layer.
12F*:					
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, thin layer.
Macomber	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: droughty, slope.
13B Hinckley	Moderate: small stones.	Moderate: small stones.	Severe: small stones.	Slight	Severe: droughty.
13C Hinckley	Moderate: slope, small stones.	Moderate: slope, small stones.	Severe: slope, small stones.	Slight	Severe: droughty.
13D Hinckley	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Moderate: slope.	Severe: droughty, slope.
13E Hinckley	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Severe: slope.	Severe: droughty, slope.
14A Sudbury	Moderate: wetness.	Moderate: wetness.	Moderate: wetness, small stones.	Slight	Slight.
14B Sudbury	Moderate: wetness.	Moderate: wetness.	Moderate: slope, wetness, small stones.	Slight	Slight.
15A Walpole	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
18B Windsor	Moderate: too sandy.	Moderate: too sandy.	Moderate: slope, too sandy.	Moderate: too sandy.	Moderate: droughty.
18C Windsor	Moderate: slope, too sandy.	Moderate: slope, too sandy.	Severe: slope.	Moderate: too sandy.	Moderate: droughty, slope.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
18D Windsor	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: too sandy, slope.	Severe: slope.
18E Windsor	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
21 Rippowam	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness.	Severe: wetness, flooding.
22 Saco	Severe: flooding.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness.	Severe: wetness, flooding.
23 Adrian	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.	Severe: ponding, excess humus.
24 Pinnebog	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.	Severe: ponding, excess humus.
25A Belgrade	Moderate: wetness.	Moderate: wetness.	Moderate: wetness.	Severe: erodes easily.	Moderate: wetness.
25B Belgrade	Moderate: wetness.	Moderate: wetness.	Moderate: slope, wetness.	Severe: erodes easily.	Moderate: wetness.
25C Belgrade	Moderate: slope, wetness.	Moderate: slope, wetness.	Severe: slope.	Severe: erodes easily.	Moderate: slope, wetness.
26A Raynham	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, erodes easily.	Severe: wetness.
28*: Udifluvents. Fluvaquents.					
29*: Histosols. Aquents.					
30B Paxton	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, small stones.	Slight	Slight.
30C Paxton	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Slight	Moderate: slope.
30D Paxton	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
31B Paxton	Moderate: large stones.	Moderate: large stones.	Severe: large stones.	Slight	Moderate: large stones.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
31C---------- Paxton	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: large stones, slope.	Slight----------	Moderate: large stones, slope.
31D---------- Paxton	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Moderate: slope.	Severe: slope.
31E---------- Paxton	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Severe: slope.	Severe: slope.
38A---------- Tisbury	Moderate: wetness.	Moderate: wetness.	Moderate: wetness.	Severe: erodes easily.	Moderate: wetness.
39B*:					
Galway----------	Slight----------	Slight----------	Moderate: slope.	Slight----------	Slight.
Nellis----------	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, small stones.	Slight----------	Moderate: droughty.
Farmington----------	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Slight----------	Severe: thin layer.
40C*:					
Galway----------	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight----------	Moderate: slope.
Nellis----------	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Slight----------	Moderate: slope, droughty.
Farmington----------	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Slight----------	Severe: thin layer.
40D*:					
Galway----------	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: slope.	Severe: slope.
Nellis----------	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: slope.	Severe: slope.
Farmington----------	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Moderate: slope.	Severe: slope, thin layer.
41C*:					
Farmington----------	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Moderate: slope.	Severe: slope, thin layer.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
41C*:					
Galway	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: slope.	Severe: slope.
Galoo	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Moderate: slope.	Severe: depth to rock, slope.
41E*:					
Farmington	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope.	Severe: slope, thin layer.
Galway	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.
Galoo	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope.	Severe: depth to rock, slope.
42C*:					
Macomber	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: large stones, slope, small stones.	Moderate: large stones.	Severe: droughty.
Taconic	Severe: depth to rock.	Severe: depth to rock.	Severe: large stones, slope, small stones.	Moderate: large stones.	Severe: large stones, thin layer.
42D*:					
Macomber	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: large stones, slope.	Severe: droughty, slope.
Taconic	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope, small stones.	Moderate: large stones, slope.	Severe: large stones, slope, thin layer.
42F*:					
Macomber	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: droughty, slope.
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.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
43C*:					
Taconic	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope, small stones.	Moderate: large stones, slope.	Severe: large stones, slope, thin layer.
Macomber	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: large stones, slope.	Severe: droughty, slope.
44B---- Dutchess	Slight	Slight	Moderate: slope.	Severe: erodes easily.	Moderate: large stones.
44C---- Dutchess	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: erodes easily.	Moderate: large stones, slope.
44D---- Dutchess	Severe: slope.	Severe: slope.	Severe: slope.	Severe: erodes easily.	Severe: slope.
47B---- Dutchess	Moderate: large stones.	Moderate: large stones.	Severe: large stones.	Slight	Moderate: large stones.
47C---- Dutchess	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: large stones, slope.	Slight	Moderate: large stones, slope.
47D---- Dutchess	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Moderate: slope.	Severe: slope.
47E---- Dutchess	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Severe: slope.	Severe: slope.
50A---- Massena	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
52B*:					
Macomber	Moderate: small stones.	Moderate: small stones.	Severe: small stones.	Slight	Moderate: small stones, droughty.
Dutchess	Slight	Slight	Moderate: slope.	Severe: erodes easily.	Moderate: large stones.
53---- Elvers	Severe: flooding, ponding.	Severe: ponding.	Severe: ponding, flooding.	Severe: ponding.	Severe: ponding, flooding.
54A---- Ninigret	Moderate: wetness.	Moderate: wetness.	Moderate: slope, wetness.	Moderate: wetness.	Moderate: wetness.
56B*:					
Colton	Severe: large stones.	Moderate: large stones.	Severe: large stones, small stones.	Slight	Severe: small stones, droughty.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
56B*:					
Duxbury	Moderate: large stones, small stones.	Moderate: large stones, small stones.	Severe: large stones, small stones.	Slight	Moderate: small stones, large stones.
56C*:					
Colton	Severe: large stones.	Moderate: slope, large stones.	Severe: large stones, slope, small stones.	Slight	Severe: small stones, droughty.
Duxbury	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: large stones, slope, small stones.	Slight	Moderate: small stones, large stones.
56D*:					
Colton	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: slope.	Severe: slope, small stones, droughty.
Duxbury	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: slope.	Severe: slope.
56E*:					
Colton	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope, small stones, droughty.
Duxbury	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.
57B*:					
Duxbury	Slight	Slight	Moderate: slope.	Slight	Slight.
Colton	Moderate: small stones.	Moderate: small stones.	Severe: small stones.	Slight	Severe: small stones, droughty.
58C*:					
Colton	Moderate: small stones, slope.	Moderate: small stones, slope.	Severe: slope, small stones.	Slight	Severe: small stones, droughty.
Duxbury	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope.
58D*:					
Colton	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Moderate: slope.	Severe: small stones, droughty, slope.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
58D*:					
Duxbury	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
59A	Moderate: wetness.	Moderate: wetness.	Moderate: slope, wetness.	Slight	Moderate: wetness.
Deerfield					
61A, 61B	Severe: wetness.	Moderate: wetness, percs slowly.	Severe: wetness.	Moderate: wetness.	Moderate: wetness, droughty.
Eldridge					
62	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
Enosburg					
64B	Moderate: small stones, percs slowly.	Moderate: small stones, percs slowly.	Severe: small stones.	Slight	Moderate: small stones.
Stockbridge					
64C	Moderate: slope, small stones.	Moderate: slope, small stones.	Severe: slope, small stones.	Slight	Moderate: small stones, slope.
Stockbridge					
64D	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Moderate: slope.	Severe: slope.
Stockbridge					
65B	Moderate: large stones.	Moderate: large stones.	Severe: large stones.	Slight	Moderate: large stones.
Stockbridge					
65C	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: large stones, slope.	Slight	Moderate: large stones, slope.
Stockbridge					
65D	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Moderate: slope.	Severe: slope.
Stockbridge					
65E	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Severe: slope.	Severe: slope.
Stockbridge					
66B*:					
Georgia	Moderate: wetness.	Moderate: wetness.	Moderate: slope, small stones.	Severe: erodes easily.	Moderate: large stones.
Amenia	Moderate: wetness.	Moderate: wetness.	Moderate: slope, small stones.	Moderate: wetness.	Moderate: wetness.
66C*:					
Georgia	Moderate: wetness, slope.	Moderate: wetness, slope.	Severe: slope.	Severe: erodes easily.	Moderate: large stones, slope.
Amenia	Moderate: slope, wetness.	Moderate: slope, wetness.	Severe: slope.	Moderate: wetness.	Moderate: wetness, slope.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
67B*:					
Georgia	Moderate: large stones.	Moderate: large stones.	Severe: large stones.	Moderate: wetness.	Moderate: large stones.
Amenia	Moderate: large stones.	Moderate: large stones.	Severe: large stones, small stones.	Moderate: wetness.	Moderate: small stones, large stones.
67C*:					
Georgia	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: large stones, slope.	Moderate: wetness.	Moderate: slope, large stones.
Amenia	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: large stones, slope, small stones.	Moderate: wetness.	Moderate: small stones, large stones, slope.
67D*:					
Georgia	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Moderate: wetness, slope.	Severe: slope.
Amenia	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: wetness, slope.	Severe: slope.
68A Massena	Severe: wetness.	Severe: wetness.	Severe: large stones, small stones.	Severe: wetness.	Severe: wetness.
71A Castile	Moderate: small stones, wetness.	Moderate: wetness, small stones.	Severe: small stones.	Moderate: wetness.	Moderate: small stones, wetness, droughty.
72A Fredon	Severe: small stones, wetness.	Severe: wetness.	Severe: small stones, wetness.	Severe: wetness.	Severe: wetness.
73 Scarboro	Severe: ponding, excess humus.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, excess humus.
80A, 80B Kingsbury	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.
81 Livingston	Severe: wetness, too clayey, percs slowly.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness, percs slowly.	Severe: wetness, too clayey, erodes easily.	Severe: wetness, too clayey.
82B Vergennes	Severe: wetness, percs slowly.	Severe: too clayey, percs slowly.	Severe: too clayey, wetness.	Severe: too clayey, erodes easily.	Severe: too clayey.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
82C Vergennes	Severe: wetness, percs slowly.	Severe: too clayey, percs slowly.	Severe: slope, too clayey, wetness.	Severe: too clayey, erodes easily.	Severe: too clayey.
82D Vergennes	Severe: slope, wetness, percs slowly.	Severe: slope, too clayey, percs slowly.	Severe: slope, too clayey, wetness.	Severe: too clayey, erodes easily.	Severe: slope, too clayey.
82E Vergennes	Severe: slope, wetness, percs slowly.	Severe: slope, too clayey, percs slowly.	Severe: slope, too clayey, wetness.	Severe: too clayey, slope, erodes easily.	Severe: slope, too clayey.
86 Linwood	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.	Severe: ponding, excess humus.
88 Birdsall	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: wetness, ponding.	Severe: ponding.
90B Hartland	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, percs slowly.	Severe: erodes easily.	Slight.
90C Hartland	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Severe: erodes easily.	Moderate: slope.
90D Hartland	Severe: slope.	Severe: slope.	Severe: slope.	Severe: erodes easily.	Severe: slope.
95. Udorthents					
96. Udipsamments					
97A*, 97B*: Warwick	Moderate: small stones.	Moderate: small stones.	Severe: small stones.	Slight	Severe: small stones.
Quonset	Severe: small stones.	Severe: small stones.	Severe: small stones.	Slight	Severe: small stones, droughty.
97C*: Warwick	Moderate: slope, small stones.	Moderate: slope, small stones.	Severe: slope, small stones.	Slight	Severe: slope, small stones.
Quonset	Severe: small stones.	Severe: small stones.	Severe: slope, small stones.	Slight	Severe: small stones, droughty.
97D*: Warwick	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Moderate: slope.	Severe: slope, small stones.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
97D*:					
Quonset	Severe: slope, small stones.	Severe: slope, small stones.	Severe: slope, small stones.	Moderate: slope.	Severe: small stones, droughty, slope.
98E*:					
Quonset	Severe: slope, small stones.	Severe: slope, small stones.	Severe: slope, small stones.	Severe: slope.	Severe: small stones, droughty, slope.
Warwick	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Severe: slope.	Severe: slope, small stones.
99B	Moderate: small stones.	Moderate: small stones.	Severe: small stones.	Slight	Moderate: small stones.
Copake					
104B	Moderate: small stones.	Moderate: small stones.	Severe: small stones.	Slight	Moderate: small stones, droughty.
Groton					
105	Severe: flooding.	Slight	Moderate: flooding.	Severe: erodes easily.	Moderate: flooding.
Tioga					
106	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
Middlebury					
108	Severe: flooding.	Slight	Moderate: flooding.	Slight	Moderate: flooding.
Hamlin					
109	Severe: flooding.	Moderate: wetness.	Moderate: wetness, flooding.	Moderate: wetness.	Moderate: wetness, flooding.
Teel					
110	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness.	Severe: wetness, flooding.
Limerick					
111	Severe: flooding, wetness, too clayey.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness, flooding.	Severe: wetness, too clayey, erodes easily.	Severe: wetness, flooding, too clayey.
Livingston					
118C	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Severe: droughty.
Adams					
122B	Severe: wetness.	Severe: wetness.	Severe: small stones, wetness.	Severe: wetness.	Severe: wetness.
Lyme					
122C	Severe: wetness.	Severe: wetness.	Severe: slope, small stones.	Severe: wetness.	Severe: wetness.
Lyme					
123B	Moderate: small stones, wetness.	Moderate: wetness, small stones.	Severe: small stones.	Moderate: wetness.	Severe: droughty.
Sheepscot					

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
123C---------- Sheepscot	Moderate: slope, small stones, wetness.	Moderate: slope, wetness, small stones.	Severe: slope, small stones.	Moderate: wetness.	Severe: droughty.
124B---------- Sunapee	Moderate: large stones, wetness.	Moderate: wetness, large stones.	Severe: small stones.	Moderate: wetness.	Moderate: small stones, large stones, wetness.
124C---------- Sunapee	Moderate: slope, large stones.	Moderate: slope, wetness.	Severe: slope, small stones.	Moderate: wetness.	Moderate: small stones, large stones, wetness.
124D, 124E---------- Sunapee	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Severe: slope.	Severe: slope.
125B---------- Berkshire	Moderate: large stones.	Moderate: large stones.	Severe: large stones, small stones.	Slight----------	Moderate: small stones.
125C---------- Berkshire	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: large stones, slope, small stones.	Slight----------	Moderate: small stones.
125D, 125E---------- Berkshire	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.
127C---------- Houghtonville	Severe: large stones, fragile.	Severe: large stones, fragile.	Severe: large stones, slope, fragile.	Severe: erodes easily, fragile.	Severe: large stones.
127D, 127E---------- Houghtonville	Severe: slope, large stones, fragile.	Severe: slope, large stones, fragile.	Severe: large stones, slope, fragile.	Severe: slope, erodes easily, fragile.	Severe: large stones, slope.
128C*: Rawsonville----------	Severe: large stones, fragile.	Severe: large stones, fragile.	Severe: large stones, slope, fragile.	Severe: erodes easily, fragile.	Severe: large stones.
Houghtonville--------	Severe: large stones, fragile.	Severe: large stones, fragile.	Severe: large stones, slope, fragile.	Severe: erodes easily, fragile.	Severe: large stones.
128D*, 128E*: Rawsonville----------	Severe: slope, large stones, fragile.	Severe: slope, large stones, fragile.	Severe: large stones, slope, fragile.	Severe: slope, erodes easily, fragile.	Severe: large stones, slope.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
128D*, 128E*:					
Houghtonville	Severe: slope, large stones, fragile.	Severe: slope, large stones, fragile.	Severe: large stones, slope, fragile.	Severe: slope, erodes easily, fragile.	Severe: large stones, slope.
129D*, 129F*:					
Killington	Severe: slope, small stones.	Severe: slope, small stones.	Severe: large stones, slope, small stones.	Severe: large stones, slope, small stones.	Severe: small stones, large stones, slope.
Rawsonville	Severe: slope, large stones, fragile.	Severe: slope, large stones, fragile.	Severe: large stones, slope, fragile.	Severe: slope, erodes easily, fragile.	Severe: large stones, slope.
130B*:					
Tunbridge	Moderate: small stones.	Moderate: small stones.	Severe: large stones, small stones.	Slight	Moderate: small stones, large stones, droughty.
Berkshire	Moderate: large stones.	Moderate: large stones.	Severe: large stones, small stones.	Slight	Moderate: small stones.
130C*:					
Tunbridge	Moderate: slope, small stones.	Moderate: slope, small stones.	Severe: large stones, slope, small stones.	Slight	Moderate: small stones, large stones, droughty.
Berkshire	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: large stones, slope, small stones.	Slight	Moderate: small stones.
130D*, 130E*:					
Tunbridge	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.
Berkshire	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.
131D*, 131E*:					
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.
Tunbridge	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.
Rock outcrop.					

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
132C*:					
Glebe	Severe: slope, large stones, fragile.	Severe: slope, large stones, fragile.	Severe: large stones, slope, fragile.	Severe: erodes easily, fragile.	Severe: slope.
Stratton	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope, depth to rock.	Severe: erodes easily, fragile.	Severe: slope, thin layer.
132E*:					
Glebe	Severe: slope, large stones, fragile.	Severe: slope, large stones, fragile.	Severe: large stones, slope, fragile.	Severe: slope, erodes easily, fragile.	Severe: slope.
Stratton	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope, depth to rock.	Severe: slope, erodes easily, fragile.	Severe: slope, thin layer.
134F*:					
Stratton	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope, depth to rock.	Severe: slope, erodes easily, fragile.	Severe: slope, thin layer.
Londonderry	Severe: slope, depth to rock, fragile.	Severe: slope, depth to rock, fragile.	Severe: slope, depth to rock, fragile.	Severe: slope, erodes easily, fragile.	Severe: slope, thin layer.
Ricker	Severe: slope, excess humus, depth to rock.	Severe: slope, excess humus, depth to rock.	Severe: slope, excess humus, depth to rock.	Severe: excess humus, slope, fragile.	Severe: slope, thin layer, excess humus.
135D, 135E Mundal	Severe: slope, large stones, fragile.	Severe: slope, large stones, fragile.	Severe: large stones, slope, fragile.	Severe: slope, erodes easily, fragile.	Severe: large stones, slope.
138C Berkshire	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope.
139B Sunapee	Moderate: wetness.	Moderate: wetness.	Moderate: slope, small stones.	Moderate: wetness.	Moderate: wetness.
139C Sunapee	Moderate: slope, wetness.	Moderate: slope, wetness.	Severe: slope.	Moderate: wetness.	Moderate: wetness, slope.
140C Benson	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock, slope.	Moderate: large stones.	Severe: small stones, thin layer.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
140D Benson	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Moderate: large stones, slope.	Severe: small stones, slope, thin layer.
140E Benson	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: small stones, slope, thin layer.
148B*: Bomoseen	Severe: percs slowly.	Severe: percs slowly.	Severe: small stones, percs slowly.	Moderate: wetness.	Moderate: small stones, large stones.
Pittstown	Moderate: wetness.	Moderate: wetness.	Moderate: slope, wetness, small stones.	Moderate: wetness.	Slight.
148C*: Bomoseen	Severe: percs slowly.	Severe: percs slowly.	Severe: slope, small stones, percs slowly.	Moderate: wetness.	Moderate: small stones, large stone, slope.
Pittstown	Moderate: slope, small stones.	Moderate: slope, small stones.	Severe: slope, small stones.	Moderate: wetness.	Moderate: slope, small stones.
148D*: Bomoseen	Severe: slope, percs slowly.	Severe: slope, percs slowly.	Severe: slope, small stones, percs slowly.	Moderate: wetness, slope.	Severe: slope.
Pittstown	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope, wetness.	Severe: slope.
149B*: Bomoseen	Severe: percs slowly.	Severe: percs slowly.	Severe: large stones, small stones.	Moderate: wetness.	Moderate: small stones, large stones.
Pittstown	Moderate: large stones, wetness.	Moderate: large stones, wetness.	Severe: large stones, small stones.	Moderate: wetness.	Moderate: large stones, small stones.
149C*: Bomoseen	Severe: percs slowly.	Severe: percs slowly.	Severe: large stones, slope, small stones.	Moderate: wetness.	Moderate: small stones, large stones, slope.
Pittstown	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: slope, large stones, small stones.	Moderate: wetness.	Moderate: slope, large stones.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
149D*:					
Bomoseen	Severe: slope, percs slowly.	Severe: slope, percs slowly.	Severe: large stones, slope, small stones.	Moderate: wetness, slope.	Severe: slope.
Pittstown	Severe: slope.	Severe: slope.	Severe: slope, large stones, small stones.	Moderate: slope, wetness.	Severe: slope.
149E*:					
Bomoseen	Severe: slope, percs slowly.	Severe: slope, percs slowly.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.
Pittstown	Severe: slope.	Severe: slope.	Severe: slope, large stones, small stones.	Severe: slope.	Severe: slope.
150A Peacham	Severe: ponding, percs slowly, excess humus.	Severe: ponding, excess humus, percs slowly.	Severe: excess humus, ponding, percs slowly.	Severe: ponding, excess humus.	Severe: ponding, excess humus.
152 Lyons	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.
161A Elmridge	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.
161B Elmridge	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.
163 Canandaigua	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
175 Wappinger	Severe: flooding.	Slight	Moderate: flooding, small stones.	Severe: erodes easily.	Moderate: flooding.
177 Pawling	Severe: flooding.	Moderate: flooding.	Moderate: flooding.	Slight	Moderate: flooding.
202E*:					
Rawsonville	Severe: slope, large stones, fragile.	Severe: slope, large stones, fragile.	Severe: large stones, slope, fragile.	Severe: slope, erodes easily, fragile.	Severe: large stones, slope.
Killington	Severe: slope, small stones.	Severe: slope, small stones.	Severe: large stones, slope, small stones.	Severe: large stones, slope, small stones.	Severe: small stones, large stones, slope.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
203D*:					
Peru	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: wetness, slope.	Severe: slope.
Marlow	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
205D*:					
Tunbridge	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.
Berkshire	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.
Marlow	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
213E*:					
Glebe	Severe: slope, large stones, fragile.	Severe: slope, large stones, fragile.	Severe: large stones, slope, fragile.	Severe: slope, erodes easily, fragile.	Severe: slope.
Stratton	Severe: slope, large stones.	Severe: slope, large stones.	Severe: large stones, slope, depth to rock.	Severe: slope, erodes easily, fragile.	Severe: slope, thin layer.
221F*:					
Tunbridge	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.
Berkshire	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Severe: slope.	Severe: slope.
402D*:					
Tunbridge	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: slope.	Severe: slope.
Lyman	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: large stones, slope, depth to rock.	Moderate: slope.	Severe: slope, depth to rock.
403C*:					
Brayton	Severe: wetness.	Severe: wetness.	Severe: large stones, slope, small stones.	Severe: wetness.	Severe: wetness.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
403C*:					
Cabot	Severe: wetness.	Severe: wetness.	Severe: large stones, slope, wetness.	Severe: wetness.	Severe: wetness.
Pinnebog	Severe: ponding, excess humus.	Severe: ponding, excess humus.	Severe: excess humus, ponding.	Severe: ponding, excess humus.	Severe: ponding, excess humus.
405D*:					
Tunbridge	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: slope.	Severe: slope.
Berkshire	Severe: slope.	Severe: slope.	Severe: large stones, slope, small stones.	Moderate: slope.	Severe: slope.
505D*:					
Berkshire	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
Colton	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Moderate: slope.	Severe: small stones, droughty, slope.
702F*:					
Killington	Severe: slope, small stones.	Severe: slope, small stones.	Severe: large stones, slope, small stones.	Severe: large stones, slope, small stones.	Severe: small stones, large stones, slope.
Ricker	Severe: slope, excess humus, depth to rock.	Severe: slope, excess humus, depth to rock.	Severe: slope, excess humus, depth to rock.	Severe: excess humus, slope, fragile.	Severe: slope, thin layer, excess humus.
Rock outcrop.					
703D*:					
Mundal	Severe: slope, large stones, fragile.	Severe: slope, large stones, fragile.	Severe: large stones, slope, fragile.	Severe: erodes easily, fragile.	Severe: large stones, slope.
Cabot	Severe: wetness.	Severe: wetness.	Severe: large stones, slope, wetness.	Severe: wetness.	Severe: wetness.
705D*:					
Rawsonville	Severe: slope, large stones, fragile.	Severe: slope, large stones, fragile.	Severe: large stones, slope, fragile.	Severe: erodes easily, fragile.	Severe: large stones, slope.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
705D*: Houghtonville	Severe: slope, large stones, fragile.	Severe: slope, large stones, fragile.	Severe: large stones, slope, fragile.	Severe: erodes easily, fragile.	Severe: large stones, slope.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 10.--WILDLIFE HABITAT

(See text for definitions of "good," "fair," "poor," and "very poor." Absence of an entry indicates that the soil was not rated)

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
1B---------- Marlow	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
1C---------- Marlow	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
1D, 2C---------- Marlow	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
2D---------- Marlow	Very poor.	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
2E---------- Marlow	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
3B---------- Peru	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
3C---------- Peru	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
4B---------- Peru	Poor	Fair	Good	Good	Good	---	Poor	Very poor.	Fair	Good	Very poor.
4C, 4D---------- Peru	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
6A---------- Cabot	Very poor.	Poor	Fair	Fair	Fair	---	Very poor.	Very poor.	Poor	Fair	Very poor.
7C---------- Brayton	Very poor.	Poor	Fair	Fair	Fair	---	Poor	Very poor.	Poor	Fair	Very poor.
9*: Pits.											
Dumps.											
11C*: Taconic----------	Very poor.	Very poor.	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Fair	Very poor.
Hubbardton--------	Very poor.	Very poor.	Poor	Very poor.	Very poor.	---	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.
12F*: Taconic----------	Very poor.	Very poor.	Fair	Poor	Poor.	---	Very poor.	Very poor.	Poor	Fair	Very poor.
Hubbardton--------	Very poor.	Very poor.	Poor	Very poor.	Very poor.	---	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.
Macomber----------	Very poor.	Very poor.	Fair	Fair	Fair	---	Very poor.	Very poor.	Poor	Fair	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
13B, 13C, 13D----- Hinckley	Poor	Poor	Poor	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
13E----- Hinckley	Very poor.	Poor	Poor	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
14A----- Sudbury	Fair	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor.
14B----- Sudbury	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
15A----- Walpole	Poor	Fair	Fair	Fair	Fair	---	Good	Good	Fair	Fair	Good.
18B, 18C, 18D----- Windsor	Poor	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
18E----- Windsor	Very poor.	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
21----- Rippowam	Poor	Fair	Fair	Fair	Fair	---	Good	Fair	Fair	Fair	Fair.
22----- Saco	Very poor.	Poor	Poor	Poor	Poor	---	Good	Fair	Poor	Poor	Fair.
23----- Adrian	Poor	Poor	Poor	Poor	Poor	---	Good	Good	Poor	Poor	Good.
24----- Pinnebog	Fair	Poor	Poor	Poor	Poor	---	Good	Good	Poor	Poor	Good.
25A----- Belgrade	Good	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor.
25B, 25C----- Belgrade	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
26A----- Raynham	Poor	Poor	Fair	Fair	Fair	---	Good	Poor	Poor	Fair	Fair.
28*: Udifluvents.											
Fluvaquents.											
29*: Histosols.											
Aquents.											
30B----- Paxton	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
30C----- Paxton	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
30D----- Paxton	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
31B---------- Paxton	Very poor.	Poor	Good	Good	Good	---	Poor	Very poor.	Poor	Good	Very poor.
31C, 31D, 31E------ Paxton	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
38A---------- Tisbury	Good	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor.
39B*: Galway----------	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
Nellis----------	Good	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
Farmington--------	Poor	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
40C*: Galway----------	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
Nellis----------	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
Farmington--------	Poor	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
40D*: Galway----------	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Nellis----------	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Farmington--------	Poor	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
41C*: Farmington--------	Poor	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
Galway----------	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Galoo----------	Very poor.	Very poor.	Poor	Poor	Poor	---	Very poor.	Very poor.	Very poor.	Poor	Very poor.
41E*: Farmington--------	Very poor.	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
Galway----------	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Galoo----------	Very poor.	Very poor.	Poor	Poor	Poor	---	Very poor.	Very poor.	Very poor.	Poor	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
42C*, 42D*, 42F*: Macomber	Very poor.	Very poor.	Fair	Fair	Fair	---	Very poor.	Very poor.	Poor	Fair	Very poor.
Taconic	Very poor.	Very poor.	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Fair	Very poor.
43C*: Taconic	Very poor.	Very poor.	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Fair	Very poor.
Macomber	Very poor.	Very poor.	Fair	Fair	Fair	---	Very poor.	Very poor.	Poor	Fair	Very poor.
44B---- Dutchess	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
44C---- Dutchess	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
44D---- Dutchess	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
47B---- Dutchess	Very poor.	Poor	Good	Good	Good	---	Poor	Very poor.	Poor	Fair	Very poor.
47C, 47D, 47E---- Dutchess	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Fair	Very poor.
50A---- Massena	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
52B*: Macomber	Fair	Good	Good	Fair	Fair	---	Poor	Very poor.	Good	Fair	Very poor.
Dutchess	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
53---- Elvers	Good	Good	Good	Good	Poor	---	Good	Good	Good	Good	Good.
54A---- Ninigret	Good	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor.
56B*: Colton	Very poor.	Poor	Poor	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
Duxbury	Very poor.	Poor	Good	Good	Good	---	Poor	Very poor.	Poor	Good	Very poor.
56C*, 56D*, 56E*: Colton	Very poor.	Poor	Poor	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
Duxbury	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
57B*:											
Duxbury	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
Colton	Poor	Fair	Fair	Poor	Poor	---	Very poor.	Very poor.	Fair	Poor	Very poor.
58C*:											
Colton	Poor	Fair	Fair	Poor	Poor	---	Very poor.	Very poor.	Fair	Poor	Very poor.
Duxbury	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
58D*:											
Colton	Poor	Fair	Fair	Poor	Poor	---	Very poor.	Very poor.	Fair	Poor	Very poor.
Duxbury	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
59A Deerfield	Poor	Fair	Fair	Poor	Poor	---	Poor	Poor	Fair	Poor	Poor.
61A Eldridge	Poor	Fair	Good	Good	Good	---	Poor	Poor	Fair	Good	Poor.
61B Eldridge	Poor	Fair	Good	Good	Good	---	Poor	Very poor.	Fair	Good	Very poor.
62 Enosburg	Poor	Fair	Fair	Fair	Fair	---	Fair	Fair	Fair	Fair	Fair.
64B Stockbridge	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
64C Stockbridge	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
64D Stockbridge	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
65B Stockbridge	Very poor.	Poor	Good	Good	Good	---	Poor	Very poor.	Poor	Good	Very poor.
65C, 65D, 65E Stockbridge	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
66B*:											
Georgia	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
Amenia	Good	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
66C*:											
Georgia	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
66C*:											
Amenia	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
67B*:											
Georgia	Very poor.	Poor	Good	Good	Good	---	Poor	Very poor.	Poor	Good	Very poor.
Amenia	Very poor.	Poor	Good	Good	Good	---	Poor	Very poor.	Poor	Good	Very poor.
67C*, 67D*:											
Georgia	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Amenia	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
68A Massena	Very poor.	Poor	Good	Good	Good	---	Poor	Very poor.	Poor	Good	Very poor.
71A Castile	Fair	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor.
72A Fredon	Poor	Fair	Fair	Fair	Fair	---	Good	Good	Fair	Fair	Good.
73 Scarboro	Very poor.	Poor	Poor	Poor	Poor	---	Good	Fair	Poor	Poor	Fair.
80A Kingsbury	Fair	Fair	Fair	Good	Good	---	Poor	Fair	Fair	Good	Poor.
80B Kingsbury	Fair	Fair	Fair	Good	Good	---	Poor	Very poor.	Fair	Good	Poor.
81 Livingston	Very poor.	Poor	Poor	Poor	Poor	---	Poor	Fair	Poor	Poor	Poor.
82B Vergennes	Fair	Fair	Poor	Good	Good	---	Poor	Very poor.	Fair	Fair	Very poor.
82C Vergennes	Fair	Fair	Poor	Good	Good	---	Very poor.	Very poor.	Fair	Fair	Very poor.
82D Vergennes	Poor	Fair	Poor	Good	Good	---	Very poor.	Very poor.	Poor	Fair	Very poor.
82E Vergennes	Very poor.	Poor	Poor	Good	Good	---	Very poor.	Very poor.	Poor	Fair	Very poor.
86 Linwood	Poor	Poor	Poor	Poor	Poor	---	Good	Good	Poor	Poor	Good.
88 Birdsall	Very poor.	Poor	Poor	Poor	Poor	Poor	Good	Fair	Poor	Poor	Fair.
90B Hartland	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
90C---------- Hartland	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
90D---------- Hartland	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
95. Udorthents											
96. Udipsamments											
97A*, 97B*, 97C*:											
Warwick----------	Fair	Fair	Fair	Fair	Fair	---	Very poor.	Very poor.	Fair	Fair	Very poor.
Quonset----------	Poor	Poor	Poor	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
97D*:											
Warwick----------	Poor	Fair	Fair	Fair	Fair	---	Very poor.	Very poor.	Fair	Fair	Very poor.
Quonset----------	Poor	Poor	Poor	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
98E*:											
Quonset----------	Very poor.	Poor	Poor	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
Warwick----------	Very poor.	Poor	Fair	Fair	Fair	---	Very poor.	Very poor.	Poor	Fair	Very poor.
99B---------- Copake	Good	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
104B---------- Groton	Poor	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
105---------- Tioga	Good	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
106---------- Middlebury	Good	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor.
108---------- Hamlin	Good	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
109---------- Teel	Good	Good	Good	Good	Good	---	Poor	Fair	Good	Good	Poor.
110---------- Limerick	Poor	Fair	Fair	Fair	Fair	---	Good	Good	Fair	Fair	Good.
111---------- Livingston	Very poor.	Poor	Poor	Poor	Poor	---	Poor	Fair	Poor	Poor	Poor.
118C---------- Adams	Poor	Fair	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
122B---------- Lyme	Very poor.	Poor	Fair	Fair	Fair	---	Poor	Very poor.	Poor	Fair	Very poor.
122C---------- Lyme	Very poor.	Very poor.	Fair	Fair	Fair	---	Very poor.	Very poor.	Poor	Fair	Very poor.
123B---------- Sheepscot	Fair	Good	Good	Fair	Fair	---	Poor	Very poor.	Good	Fair	Very poor.
123C---------- Sheepscot	Fair	Good	Good	Fair	Fair	---	Very poor.	Very poor.	Good	Fair	Very poor.
124B---------- Sunapee	Very poor.	Poor	Good	Good	Good	---	Poor	Poor	Poor	Good	Poor.
124C, 124D, 124E--- Sunapee	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
125B---------- Berkshire	Very poor.	Poor	Good	Good	Good	---	Poor	Very poor.	Poor	Good	Very poor.
125C, 125D, 125E--- Berkshire	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
127C, 127D, 127E--- Houghtonville	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
128C*, 128D*, 128E*:											
Rawsonville------	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Houghtonville----	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
129D*, 129F*:											
Killington--------	Very poor.	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
Rawsonville-------	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
130B*:											
Tunbridge---------	Very poor.	Poor	Good	Good	Good	---	Poor	Very poor.	Poor	Good	Very poor.
Berkshire---------	Very poor.	Poor	Good	Good	Good	---	Poor	Very poor.	Poor	Good	Very poor.
130C*, 130D*:											
Tunbridge---------	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Berkshire---------	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
130E*:											
Tunbridge---------	Very poor.	Very poor.	Good	Good	Good	---	Very poor.	Very poor.	Poor	Fair	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
130E*:											
Berkshire	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
131D*:											
Lyman	Very poor.	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
Tunbridge	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Rock outcrop.											
131E*:											
Lyman	Very poor.	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
Tunbridge	Very poor.	Very poor.	Good	Good	Good	---	Very poor.	Very poor.	Poor	Fair	Very poor.
Rock outcrop.											
132C*, 132E*:											
Glebe	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Stratton	Very poor.	Poor	Fair	Fair	Fair	---	Very poor.	Very poor.	Poor	Fair	Very poor.
134F*:											
Stratton	Very poor.	Poor	Fair	Fair	Fair	---	Very poor.	Very poor.	Poor	Fair	Very poor.
Londonderry	Very poor.	Very poor.	Poor	Poor	Poor	---	Very poor.	Very poor.	Very poor.	Poor	Very poor.
Ricker	Very poor.	Very poor.	Poor	Poor	Poor	---	Very poor.	Very poor.	Very poor.	Poor	Very poor.
135D, 135E--- Mundal	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
138C--- Berkshire	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
139B--- Sunapee	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
139C--- Sunapee	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
140C, 140D--- Benson	Poor	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
140E--- Benson	Very poor.	Very poor.	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
148B*:											
Bomoseen	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
148B*:											
Pittstown	Fair	Good	Good	Fair	Fair	---	Poor	Very poor.	Good	Fair	Very poor.
148C*:											
Bomoseen	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.
Pittstown	Fair	Good	Good	Fair	Fair	---	Very poor.	Very poor.	Good	Fair	Very poor.
148D*:											
Bomoseen	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
Pittstown	Poor	Fair	Good	Fair	Fair	---	Very poor.	Very poor.	Fair	Fair	Very poor.
149B*:											
Bomoseen	Very poor.	Poor	Good	Good	Good	---	Poor	Very poor.	Poor	Good	Very poor.
Pittstown	Very poor.	Poor	Good	Fair	Fair	---	Poor	Very poor.	Poor	Fair	Very poor.
149C*, 149D*, 149E*:											
Bomoseen	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Pittstown	Very poor.	Poor	Good	Fair	Fair	---	Very poor.	Very poor.	Poor	Fair	Very poor.
150A---------- Peacham	Very poor.	Poor	Poor	Poor	Poor	---	Poor	Very poor.	Poor	Poor	Very poor.
152---------- Lyons	Very poor.	Poor	Poor	Poor	Poor	---	Good	Good	Poor	Poor	Good.
161A---------- Elmridge	Good	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor.
161B---------- Elmridge	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
163---------- Canandaigua	Very poor.	Poor	Poor	Poor	Poor	---	Good	Good	Very poor.	Poor	Good.
175---------- Wappinger	Good	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.
177---------- Pawling	Good	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor.
202E*:											
Rawsonville	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Killington	Very poor.	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
203D*:											
Peru	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
Marlow	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
205D*:											
Tunbridge	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Berkshire	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Marlow	Very poor.	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
213E*:											
Glebe	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Stratton	Very poor.	Poor	Fair	Fair	Fair	---	Very poor.	Very poor.	Poor	Fair	Very poor.
221F*:											
Tunbridge	Very poor.	Very poor.	Good	Good	Good	---	Very poor.	Very poor.	Poor	Fair	Very poor.
Berkshire	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
402D*:											
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.
403C*:											
Brayton	Very poor.	Poor	Fair	Fair	Fair	---	Poor	Very poor.	Poor	Fair	Very poor.
Cabot	Very poor.	Poor	Fair	Fair	Fair	---	Very poor.	Very poor.	Poor	Fair	Very poor.
Pinnebog	Fair	Poor	Poor	Poor	Poor	---	Good	Good	Poor	Poor	Good.
405D*:											
Tunbridge	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Berkshire	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
505D*:											
Berkshire	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
Colton	Poor	Fair	Fair	Poor	Poor	---	Very poor.	Very poor.	Fair	Poor	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
702F*:											
Killington	Very poor.	Poor	Fair	Poor	Poor	---	Very poor.	Very poor.	Poor	Poor	Very poor.
Ricker	Very poor.	Very poor.	Poor	Poor	Poor	---	Very poor.	Very poor.	Very poor.	Poor	Very poor.
Rock outcrop.											
703D*:											
Mundal	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.
Cabot	Very poor.	Poor	Fair	Fair	Fair	---	Very poor.	Very poor.	Poor	Fair	Very poor.
705D*:											
Rawsonville	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.
Houghtonville	Very poor.	Poor	Good	Good	Good	---	Very poor.	Very poor.	Poor	Good	Very poor.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 11.--BUILDING SITE DEVELOPMENT

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1B Marlow	Moderate: dense layer. wetness.	Slight	Moderate: wetness.	Moderate: slope.	Moderate: frost action.	Slight.
1C Marlow	Moderate: dense layer, slope, wetess.	Moderate: slope.	Moderate: wetness, slope.	Severe: slope.	Moderate: frost action.	Moderate: slope.
1D Marlow	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
2C Marlow	Moderate: dense layer, wetness, slope.	Moderate: slope.	Moderate: wetness, slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: large stones, slope.
2D, 2E Marlow	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
3B Peru	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Severe: frost action.	Moderate: wetness.
3C Peru	Severe: wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Severe: frost action.	Moderate: wetness, slope.
4B Peru	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Severe: frost action.	Moderate: large stones, wetness.
4C Peru	Severe: wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Severe: frost action.	Moderate: large stones, wetness, slope.
4D Peru	Severe: wetness, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Severe: slope, frost action.	Severe: slope.
6A Cabot	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: wetness.
7C Brayton	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, slope.	Severe: wetness, frost action.	Severe: wetness.
9*:						
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.
Dumps	Variable	Variable	Variable	Variable	Variable	Variable.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
11C*:						
Taconic	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: large stones, slope, thin layer.
Hubbardton	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: large stones, slope, thin layer.
12F*:						
Taconic	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: large stones, slope, thin layer.
Hubbardton	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: large stones, slope, thin layer.
Macomber	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: droughty, slope.
13B Hinckley	Severe: cutbanks cave.	Slight	Slight	Moderate: slope.	Slight	Severe: droughty.
13C Hinckley	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Severe: droughty.
13D, 13E Hinckley	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: droughty, slope.
14A Sudbury	Severe: wetness, cutbanks cave.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness, frost action.	Slight.
14B Sudbury	Severe: wetness, cutbanks cave.	Moderate: wetness.	Severe: wetness.	Moderate: slope, wetness.	Moderate: wetness, frost action.	Slight.
15A Walpole	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: wetness.
18B Windsor	Severe: cutbanks cave.	Slight	Slight	Moderate: slope.	Slight	Moderate: droughty.
18C Windsor	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: droughty, slope.
18D, 18E Windsor	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
21--Rippowam	Severe: cutbanks cave, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: wetness, flooding, frost action.	Severe: wetness, flooding.
22--Saco	Severe: cutbanks cave, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: wetness, flooding, frost action.	Severe: wetness, flooding.
23--Adrian	Severe: cutbanks cave, excess humus, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, frost action.	Severe: ponding, excess humus.
24--Pinnebog	Severe: excess humus, ponding.	Severe: ponding, low strength, subsides.	Severe: ponding, low strength, subsides.	Severe: ponding, low strength, subsides.	Severe: ponding, frost action, subsides.	Severe: ponding, excess humus.
25A--Belgrade	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Severe: frost action.	Moderate: wetness.
25B--Belgrade	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Severe: frost action.	Moderate: wetness.
25C--Belgrade	Severe: cutbanks cave, wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Severe: frost action.	Moderate: slope, wetness.
26A--Raynham	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: wetness.
28*: Udifluvents. Fluvaquents.						
29*: Histosols. Aquents.						
30B--Paxton	Moderate: dense layer, wetness.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness, slope.	Moderate: wetness, frost action.	Slight.
30C--Paxton	Moderate: dense layer, wetness, slope.	Moderate: wetness, slope.	Moderate: wetness, slope.	Severe: slope.	Moderate: wetness, slope, frost action.	Moderate: slope.
30D--Paxton	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
31B--Paxton	Moderate: dense layer, wetness.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness, slope.	Moderate: wetness, frost action.	Moderate: large stones.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
31C---------- Paxton	Moderate: dense layer, wetness, slope.	Moderate: wetness, slope.	Moderate: wetness, slope.	Severe: slope.	Moderate: wetness, slope, frost action.	Moderate: large stones, slope.
31D, 31E---------- Paxton	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
38A---------- Tisbury	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Severe: frost action.	Moderate: wetness.
39B*:						
Galway----------	Severe: depth to rock.	Moderate: depth to rock.	Severe: depth to rock.	Moderate: slope, depth to rock.	Moderate: depth to rock.	Slight.
Nellis----------	Moderate: dense layer.	Slight---------	Slight---------	Moderate: slope.	Moderate: frost action.	Moderate: droughty.
Farmington-------	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: thin layer.
40C*:						
Galway----------	Severe: depth to rock.	Moderate: slope, depth to rock.	Severe: depth to rock.	Severe: slope.	Moderate: depth to rock, slope.	Moderate: slope.
Nellis----------	Moderate: dense layer, slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: slope, droughty.
Farmington-------	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock.	Severe: thin layer.
40D*:						
Galway----------	Severe: depth to rock, slope.	Severe: slope.	Severe: slope, depth to rock,	Severe: slope.	Severe: slope.	Severe: slope.
Nellis----------	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Farmington-------	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, thin layer.
41C*, 41E*:						
Farmington-------	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, thin layer.
Galway----------	Severe: depth to rock, slope.	Severe: slope.	Severe: slope, depth to rock,	Severe: slope.	Severe: slope.	Severe: slope.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
41C*, 41E*:						
Galoo	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.
42C*:						
Macomber	Severe: depth to rock.	Moderate: slope, depth to rock.	Severe: depth to rock.	Severe: slope.	Moderate: depth to rock, slope, frost action.	Severe: droughty.
Taconic	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock.	Severe: large stones, thin layer.
42D*, 42F*:						
Macomber	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: droughty, slope.
Taconic	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: large stones, slope, thin layer.
43C*:						
Taconic	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: large stones, slope, thin layer.
Macomber	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: droughty, slope.
44B--- Dutchess	Slight---	Slight---	Slight---	Moderate: slope.	Moderate: frost action.	Moderate: large stones.
44C--- Dutchess	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: large stones, slope.
44D--- Dutchess	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
47B--- Dutchess	Moderate: large stones.	Moderate: large stones.	Moderate: large stones.	Moderate: slope, large stones.	Moderate: frost action, large stones.	Moderate: small stones, large stones.
47C--- Dutchess	Moderate: large stones, slope.	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: slope.	Moderate: slope, frost action, large stones.	Moderate: small stones, large stones, slope.
47D, 47E--- Dutchess	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
50A--- Massena	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: frost action.	Moderate: wetness, droughty.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
52B*:						
Macomber	Severe: depth to rock.	Moderate: depth to rock.	Severe: depth to rock.	Moderate: slope, depth to rock.	Moderate: depth to rock, frost action.	Moderate: small stones, droughty.
Dutchess	Slight	Slight	Slight	Moderate: slope.	Moderate: frost action.	Moderate: large stones.
53 Elvers	Severe: excess humus, ponding.	Severe: flooding, ponding.	Severe: flooding, ponding, low strength.	Severe: flooding, ponding.	Severe: ponding, flooding, frost action.	Severe: ponding, flooding.
54A Ninigret	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Severe: frost action.	Moderate: wetness.
56B*:						
Colton	Severe: cutbanks cave.	Moderate: large stones.	Moderate: large stones.	Moderate: slope, large stones.	Moderate: large stones.	Severe: small stones, droughty.
Duxbury	Severe: cutbanks cave.	Slight	Slight	Moderate: slope.	Slight	Moderate: small stones, large stones.
56C*:						
Colton	Severe: cutbanks cave.	Moderate: slope, large stones.	Moderate: slope, large stones.	Severe: slope.	Moderate: slope, large stones.	Severe: small stones, droughty.
Duxbury	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: small stones, large stones.
56D*, 56E*:						
Colton	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, small stones, droughty.
Duxbury	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
57B*:						
Duxbury	Severe: cutbanks cave.	Slight	Slight	Moderate: slope.	Slight	Slight.
Colton	Severe: cutbanks cave.	Slight	Slight	Moderate: slope.	Slight	Severe: small stones, droughty.
58C*:						
Colton	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Severe: small stones, droughty.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
58C*:						
Duxbury	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: slope.
58D*:						
Colton	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: small stones, droughty, slope.
Duxbury	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
59A---------- Deerfield	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness, frost action.	Moderate: wetness, droughty.
61A---------- Eldridge	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Moderate: wetness, frost action.	Moderate: wetness, droughty.
61B---------- Eldridge	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Moderate: wetness, frost action.	Moderate: wetness, droughty.
62---------- Enosburg	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: wetness.
64B---------- Stockbridge	Slight	Slight	Slight	Moderate: slope.	Moderate: frost action.	Moderate: small stones.
64C---------- Stockbridge	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: small stones, slope.
64D---------- Stockbridge	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
65B---------- Stockbridge	Slight	Slight	Slight	Moderate: slope.	Moderate: frost action.	Moderate: large stones.
65C---------- Stockbridge	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: large stones, slope.
65D, 65E---------- Stockbridge	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
66B*:						
Georgia	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Severe: frost action.	Moderate: large stones, wetness.
Amenia	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Severe: frost action.	Moderate: wetness.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
66C*:						
Georgia	Severe: wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Severe: frost action.	Moderate: large stones, slope, wetness.
Amenia	Severe: wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Severe: frost action.	Moderate: wetness, slope.
67B*:						
Georgia	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Severe: frost action.	Moderate: large stones, wetness.
Amenia	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Severe: frost action.	Moderate: small stones, large stones, wetness.
67C*:						
Georgia	Severe: wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Severe: frost action.	Moderate: slope, large stones, wetness.
Amenia	Severe: wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Severe: frost action.	Moderate: large stones, wetness, slope.
67D*:						
Georgia	Severe: wetness, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Severe: slope, frost action.	Severe: slope.
Amenia	Severe: wetness, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Severe: slope, frost action.	Severe: slope.
68A Massena	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: frost action.	Moderate: small stones, large stones, wetness.
71A Castile	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Severe: frost action.	Moderate: small stones, wetness, droughty.
72A Fredon	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: wetness.
73 Scarboro	Severe: cutbanks cave, excess humus, ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding, excess humus.
80A, 80B Kingsbury	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, wetness, frost action.	Severe: wetness.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
81---------- Livingston	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: low strength, wetness, frost action.	Severe: wetness.
82B---------- Vergennes	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: low strength.	Severe: too clayey.
82C---------- Vergennes	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, slope.	Severe: low strength.	Severe: too clayey.
82D, 82E---------- Vergennes	Severe: wetness, slope.	Severe: wetness, slope.	Severe: wetness, slope.	Severe: wetness, slope.	Severe: low strength, slope.	Severe: slope, too clayey.
86---------- Linwood	Severe: excess humus, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding.	Severe: subsides, ponding, low strength.	Severe: subsides, ponding, frost action.	Severe: ponding, excess humus.
88---------- Birdsall	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding.
90B---------- Hartland	Slight---------	Slight---------	Slight---------	Moderate: slope.	Severe: frost action.	Slight.
90C---------- Hartland	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: frost action.	Moderate: slope.
90D---------- Hartland	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, frost action.	Severe: slope.
95. Udorthents						
96. Udipsamments						
97A*:						
Warwick----------	Severe: cutbanks cave.	Slight---------	Slight---------	Slight---------	Slight---------	Severe: small stones.
Quonset----------	Severe: cutbanks cave.	Slight---------	Slight---------	Slight---------	Slight---------	Severe: small stones, droughty.
97B*:						
Warwick----------	Severe: cutbanks cave.	Slight---------	Slight---------	Moderate: slope.	Slight---------	Severe: small stones.
Quonset----------	Severe: cutbanks cave.	Slight---------	Slight---------	Moderate: slope.	Slight---------	Severe: small stones, droughty.
97C*:						
Warwick----------	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Severe: small stones.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
97C*:						
Quonset	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Severe: small stones, droughty.
97D*:						
Warwick	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, small stones.
Quonset	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: small stones, droughty, slope.
98E*:						
Quonset	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: small stones, droughty, slope.
Warwick	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, small stones.
99B---------- Copake	Severe: cutbanks cave.	Slight---------	Slight---------	Moderate: slope.	Moderate: frost action.	Moderate: small stones.
104B---------- Groton	Severe: cutbanks cave.	Slight---------	Slight---------	Moderate: slope.	Slight---------	Moderate: small stones, droughty.
105---------- Tioga	Severe: cutbanks cave.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Moderate: flooding.
106---------- Middlebury	Severe: cutbanks cave, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: wetness, flooding, frost action.	Severe: wetness.
108---------- Hamlin	Moderate: wetness, flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding, frost action.	Moderate: flooding.
109---------- Teel	Severe: cutbanks cave, wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: flooding, frost action.	Moderate: wetness, flooding.
110---------- Limerick	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: wetness, flooding, frost action.	Severe: wetness, flooding.
111---------- Livingston	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding.
118C---------- Adams	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Severe: droughty.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
122B---------- Lyme	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: wetness.
122C---------- Lyme	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, slope.	Severe: wetness, frost action.	Severe: wetness.
123B---------- Sheepscot	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Moderate: wetness.	Severe: droughty.
123C---------- Sheepscot	Severe: cutbanks cave, wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Moderate: wetness, slope.	Severe: droughty.
124B---------- Sunapee	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Moderate: wetness, frost action.	Moderate: small stones, large stones, wetness.
124C---------- Sunapee	Severe: cutbanks cave, wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Moderate: wetness, slope, frost action.	Moderate: small stones, large stones, wetness.
124D, 124E-------- Sunapee	Severe: cutbanks cave, wetness, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Severe: slope.	Severe: slope.
125B---------- Berkshire	Slight---------	Slight---------	Slight---------	Moderate: slope.	Moderate: frost action.	Moderate: small stones, large stones.
125C---------- Berkshire	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: small stones, large stones.
125D, 125E-------- Berkshire	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
127C---------- Houghtonville	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: frost action.	Severe: large stones.
127D, 127E-------- Houghtonville	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, frost action.	Severe: large stones, slope.
128C*:						
Rawsonville------	Severe: depth to rock, cutbanks cave.	Moderate: slope, depth to rock.	Severe: depth to rock.	Severe: slope.	Severe: frost action.	Severe: large stones.
Houghtonville----	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: frost action.	Severe: large stones.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
128D*, 128E*:						
Rawsonville	Severe: depth to rock, cutbanks cave, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope, frost action.	Severe: large stones, slope.
Houghtonville	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, frost action.	Severe: large stones, slope.
129D*, 129F*:						
Killington	Severe: depth to rock, large stones, slope.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, large stones.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, frost action.	Severe: small stones, large stones, slope.
Rawsonville	Severe: depth to rock, cutbanks cave, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope, frost action.	Severe: large stones, slope.
130B*:						
Tunbridge	Severe: depth to rock.	Moderate: depth to rock.	Severe: depth to rock.	Moderate: slope, depth to rock.	Moderate: depth to rock, frost action.	Moderate: small stones, large stones, droughty.
Berkshire	Slight	Slight	Slight	Moderate: slope.	Moderate: frost action.	Moderate: small stones, large stones.
130C*:						
Tunbridge	Severe: depth to rock.	Moderate: slope, depth to rock.	Severe: depth to rock.	Severe: slope.	Moderate: depth to rock, slope, frost action.	Moderate: small stones, large stones, droughty.
Berkshire	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: small stones, large stones.
130D*, 130E*:						
Tunbridge	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.
Berkshire	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
131D*, 131E*:						
Lyman	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: slope, depth to rock.
Tunbridge	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
131D*, 131E*:						
Rock outcrop	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock, slope.
132C*, 132E*:						
Glebe	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope, frost action.	Severe: slope.
Stratton	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope, frost action.	Severe: slope, thin layer.
134F*:						
Stratton	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope, frost action.	Severe: slope, thin layer.
Londonderry	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, thin layer.
Ricker	Severe: depth to rock, excess humus, slope.	Severe: low strength, slope, depth to rock.	Severe: depth to rock, slope.	Severe: low strength, slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, thin layer, excess humus.
135D, 135E	Severe: cutbanks cave, wetness, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Severe: slope, frost action.	Severe: large stones, slope.
Mundal						
138C	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope, frost action.	Moderate: small stones, large stones, slope.
Berkshire						
139B	Severe: cutbanks cave, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Moderate: wetness, frost action.	Moderate: wetness.
Sunapee						
139C	Severe: cutbanks cave, wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Moderate: wetness, slope, frost action.	Moderate: wetness, slope.
Sunapee						
140C	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock.	Severe: small stones, thin layer.
Benson						
140D, 140E	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: small stones, slope, thin layer.
Benson						

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
148B*:						
Bomoseen	Severe: wetness.	Moderate: wetness, large stones.	Severe: wetness.	Moderate: wetness, slope, large stones.	Moderate: wetness, frost action.	Moderate: small stones, large stones.
Pittstown	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: slope, wetness.	Moderate: wetness, frost action.	Slight.
148C*:						
Bomoseen	Severe: wetness.	Moderate: wetness, slope, large stones.	Severe: wetness.	Severe: slope.	Moderate: wetness, slope, frost action.	Moderate: small stones, large stones, slope.
Pittstown	Severe: wetness.	Moderate: slope, wetness.	Severe: wetness.	Severe: slope.	Moderate: wetness, slope, frost action.	Moderate: slope, small stones.
148D*:						
Bomoseen	Severe: wetness, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Severe: slope.	Severe: slope.
Pittstown	Severe: slope, wetness.	Severe: slope.	Severe: slope, wetness.	Severe: slope.	Severe: slope.	Severe: slope.
149B*:						
Bomoseen	Severe: wetness.	Moderate: wetness, large stones.	Severe: wetness.	Moderate: wetness, slope, large stones.	Moderate: wetness, frost action.	Moderate: small stones, large stones.
Pittstown	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Moderate: wetness, frost action.	Moderate: large stones, small stones.
149C*:						
Bomoseen	Severe: wetness.	Moderate: wetness, slope, large stones.	Severe: wetness.	Severe: slope.	Moderate: wetness, slope, frost action.	Moderate: small stones, large stones, slope.
Pittstown	Severe: wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Moderate: wetness, slope, frost action.	Moderate: slope, large stones.
149D*, 149E*:						
Bomoseen	Severe: wetness, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Severe: slope.	Severe: slope.
Pittstown	Severe: wetness, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Severe: slope.	Severe: slope.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
150A---------- Peacham	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding.	Severe: ponding, frost action.	Severe: ponding, excess humus.
152---------- Lyons	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: wetness.
161A---------- Elmridge	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Severe: frost action.	Moderate: wetness.
161B---------- Elmridge	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Severe: frost action.	Moderate: wetness.
163---------- Canandaigua	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: wetness.
175---------- Wappinger	Severe: cutbanks cave.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Moderate: flooding.
177---------- Pawling	Severe: wetness.	Severe: flooding, frost action.	Severe: flooding, wetness.	Severe: flooding, frost action.	Severe: frost action, flooding.	Moderate: flooding.
202E*:						
Rawsonville------	Severe: depth to rock, cutbanks cave, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope, frost action.	Severe: large stones, slope.
Killington-------	Severe: depth to rock, large stones, slope.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, large stones.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, frost action.	Severe: small stones, large stones, slope.
203D*:						
Peru----------	Severe: wetness, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Severe: slope, frost action.	Severe: slope.
Marlow----------	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
205D*:						
Tunbridge--------	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.
Berkshire--------	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Marlow----------	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
213E*:						
Glebe----------	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope, frost action.	Severe: slope.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
213E*:						
Stratton	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope, frost action.	Severe: slope, thin layer.
221F*:						
Tunbridge	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.
Berkshire	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
402D*:						
Tunbridge	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.
Lyman	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: slope, depth to rock.
403C*:						
Brayton	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: wetness.
Cabot	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, frost action.	Severe: wetness.
Pinnebog	Severe: excess humus, ponding.	Severe: ponding, low strength, subsides.	Severe: ponding, low strength, subsides.	Severe: ponding, low strength, subsides.	Severe: ponding, frost action, subsides.	Severe: ponding, excess humus.
405D*:						
Tunbridge	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.
Berkshire	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
505D*:						
Berkshire	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Colton	Severe: cutbanks cave, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: small stones, droughty, slope.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
702F*:						
Killington	Severe: depth to rock, large stones, slope.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, large stones.	Severe: slope, depth to rock, large stones.	Severe: depth to rock, slope, frost action.	Severe: small stones, large stones, slope.
Ricker	Severe: depth to rock, excess humus, slope.	Severe: low strength, slope, depth to rock.	Severe: depth to rock, slope.	Severe: low strength, slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, thin layer, excess humus.
Rock outcrop	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock, slope.
703D*:						
Mundal	Severe: cutbanks cave, wetness, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Severe: slope, frost action.	Severe: large stones, slope.
Cabot	Severe: wetness, slope.	Severe: wetness, slope.	Severe: wetness, slope.	Severe: wetness, slope.	Severe: wetness, frost action, slope.	Severe: wetness, slope.
705D*:						
Rawsonville	Severe: depth to rock, cutbanks cave, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope, frost action.	Severe: large stones, slope.
Houghtonville	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope, frost action.	Severe: large stones, slope.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 12.--SANITARY FACILITIES

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "good," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1B Marlow	Severe: percs slowly.	Moderate: seepage, slope.	Slight	Slight	Fair: small stones, wetness.
1C Marlow	Severe: percs slowly.	Severe: slope.	Moderate: slope.	Moderate: wetness, slope.	Fair: small stones, slope, wetness.
1D Marlow	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
2C Marlow	Severe: percs slowly.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: small stones, slope.
2D, 2E Marlow	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
3B Peru	Severe: wetness, percs slowly.	Moderate: seepage, slope.	Severe: wetness.	Moderate: wetness.	Fair: small stones, wetness.
3C Peru	Severe: wetness, percs slowly.	Severe: slope.	Severe: wetness.	Moderate: wetness, slope.	Fair: small stones, slope, wetness.
4B Peru	Severe: wetness, percs slowly.	Moderate: seepage, slope.	Severe: wetness.	Moderate: wetness.	Fair: small stones, wetness.
4C Peru	Severe: wetness, percs slowly.	Severe: slope.	Severe: wetness.	Moderate: wetness, slope.	Fair: small stones, wetness, slope.
4D Peru	Severe: wetness, percs slowly, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Poor: slope.
6A Cabot	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
7C Brayton	Severe: wetness, percs slowly.	Severe: slope, wetness.	Severe: wetness.	Severe: wetness.	Poor: small stones, wetness.
9*: Pits.					

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
9*: Dumps.					
11C*: Taconic	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, small stones, slope.
Hubbardton	Severe: depth to rock, slope.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, slope.	Poor: area reclaim, slope.
12F*: Taconic	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, small stones, slope.
Hubbardton	Severe: depth to rock, slope.	Severe: depth to rock, slope, large stones.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, slope.	Poor: area reclaim, slope.
Macomber	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: area reclaim, small stones, slope.
13B Hinckley	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
13C Hinckley	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
13D, 13E Hinckley	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, too sandy, slope.	Severe: seepage, slope.	Poor: seepage, too sandy, slope.
14A, 14B Sudbury	Severe: wetness, poor filter.	Severe: wetness, seepage.	Severe: wetness, seepage, too sandy.	Severe: wetness, seepage.	Poor: seepage, too sandy, small stones.
15A Walpole	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, small stones.
18B Windsor	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
18C---------- Windsor	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
18D, 18E---------- Windsor	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, slope.
21---------- Rippowam	Severe: flooding, wetness, poor filter.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Poor: seepage, too sandy, wetness.
22---------- Saco	Severe: flooding, wetness.	Severe: seepage, flooding, wetness.	Severe: flooding, wetness, seepage.	Severe: flooding, wetness.	Poor: wetness.
23---------- Adrian	Severe: subsides, ponding, percs slowly.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, too sandy.	Severe: seepage, ponding.	Poor: seepage, too sandy, ponding.
24---------- Pinnebog	Severe: ponding, percs slowly, subsides.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, excess humus.	Severe: seepage, ponding.	Poor: ponding, excess humus.
25A, 25B---------- Belgrade	Severe: wetness, percs slowly.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: wetness.	Fair: wetness, thin layer.
25C---------- Belgrade	Severe: wetness, percs slowly.	Severe: seepage, wetness, slope.	Severe: seepage, wetness.	Severe: wetness.	Fair: slope, wetness, thin layer.
26A---------- Raynham	Severe: percs slowly, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
28*: Udifluvents.					
Fluvaquents.					
29*: Histosols.					
Aquents.					
30B---------- Paxton	Severe: percs slowly.	Moderate: slope.	Moderate: wetness.	Moderate: wetness.	Fair: small stones, wetness.
30C---------- Paxton	Severe: percs slowly.	Severe: slope.	Moderate: wetness, slope.	Moderate: wetness, slope.	Fair: small stones, slope, wetness.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
30D---------- Paxton	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
31B---------- Paxton	Severe: percs slowly.	Moderate: slope.	Moderate: wetness.	Moderate: wetness.	Fair: small stones, wetness.
31C---------- Paxton	Severe: percs slowly.	Severe: slope.	Moderate: wetness, slope.	Moderate: wetness, slope.	Fair: small stones, slope, wetness.
31D, 31E---------- Paxton	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
38A---------- Tisbury	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, small stones.
39B*:					
Galway----------	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Poor: area reclaim, small stones.
Nellis----------	Severe: percs slowly.	Moderate: seepage, slope.	Slight----------	Slight----------	Poor: small stones.
Farmington---------	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Poor: area reclaim.
40C*:					
Galway----------	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: area reclaim, small stones.
Nellis----------	Severe: percs slowly.	Severe: slope.	Moderate: slope.	Moderate: slope.	Poor: small stones.
Farmington---------	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: area reclaim.
40D*:					
Galway----------	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: area reclaim, small stones, slope.
Nellis----------	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: small stones, slope.
Farmington---------	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: area reclaim, slope.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
41C*, 41E*:					
Farmington	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: area reclaim, slope.
Galway	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: area reclaim, small stones, slope.
Galoo	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: depth to rock, slope, thin layer.
42C*:					
Macomber	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: area reclaim, small stones.
Taconic	Severe: depth to rock.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage.	Severe: depth to rock, seepage.	Poor: area reclaim, small stones.
42D*, 42F*:					
Macomber	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: area reclaim, small stones, slope.
Taconic	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, small stones, slope.
43C*:					
Taconic	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, small stones, slope.
Macomber	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: area reclaim, small stones, slope.
44B	Moderate: large stones.	Moderate: seepage, slope, large stones.	Moderate: large stones.	Slight	Poor: small stones.
Dutchess					
44C	Moderate: slope, large stones.	Severe: slope.	Moderate: slope, large stones.	Moderate: slope.	Poor: small stones.
Dutchess					
44D	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: small stones, slope.
Dutchess					

See footnote at end of table.

TABLE 10.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
47B Dutchess	Moderate: large stones.	Moderate: seepage, slope, large stones.	Moderate: large stones.	Slight	Poor: small stones.
47C Dutchess	Moderate: slope, large stones.	Severe: slope.	Moderate: slope, large stones.	Moderate: slope.	Poor: small stones.
47D, 47E Dutchess	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: small stones, slope.
50A Massena	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness, small stones.
52B*: Macomber	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Poor: area reclaim, small stones.
Dutchess	Moderate: large stones.	Moderate: seepage, slope, large stones.	Moderate: large stones.	Slight	Poor: small stones.
53 Elvers	Severe: flooding, ponding.	Severe: seepage, flooding, excess humus.	Severe: flooding, seepage, ponding.	Severe: flooding, seepage, ponding.	Poor: ponding, thin layer.
54A Ninigret	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, small stones.
56B*: Colton	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
Duxbury	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
56C*: Colton	Severe: poor filter.	Severe: slope, seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
Duxbury	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
56D*, 56E*:					
Colton	Severe: poor filter, slope.	Severe: slope, seepage.	Severe: seepage, slope, too sandy.	Severe: slope, seepage.	Poor: seepage, too sandy, small stones.
Duxbury	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, small stones.
57B*:					
Duxbury	Severe: poor filter.	Severe: seepage.	Severe: seepage.	Severe: seepage.	Poor: thin layer, too sandy.
Colton	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
58C*:					
Colton	Severe: poor filter.	Severe: slope, seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
Duxbury	Severe: poor filter.	Severe: slope, seepage.	Severe: seepage.	Severe: seepage.	Poor: thin layer, too sandy.
58D*:					
Colton	Severe: poor filter, slope.	Severe: slope, seepage.	Severe: slope, seepage, too sandy.	Severe: slope, seepage.	Poor: seepage, too sandy, small stones.
Duxbury	Severe: slope, poor filter.	Severe: slope, seepage.	Severe: slope, seepage.	Severe: slope, seepage.	Poor: slope, thin layer, too sandy.
59A--- Deerfield	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: too sandy, seepage.
61A, 61B--- Eldridge	Severe: wetness, percs slowly, poor filter.	Severe: seepage, wetness.	Severe: wetness, too clayey.	Severe: seepage, wetness.	Poor: too clayey, wetness.
62--- Enosburg	Severe: wetness, percs slowly, poor filter.	Severe: wetness, seepage.	Severe: wetness.	Severe: seepage, wetness.	Poor: wetness.
64B--- Stockbridge	Severe: percs slowly.	Moderate: slope.	Slight---	Slight---	Fair: small stones.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
64C---------- Stockbridge	Severe: percs slowly.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: small stones, slope.
64D---------- Stockbridge	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
65B---------- Stockbridge	Severe: percs slowly.	Moderate: slope.	Slight----------	Slight----------	Fair: small stones.
65C---------- Stockbridge	Severe: percs slowly.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: small stones, slope.
65D, 65E---------- Stockbridge	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
66B*: Georgia----------	Severe: percs slowly, wetness.	Moderate: slope.	Severe: wetness.	Moderate: wetness.	Fair: small stones.
Amenia----------	Severe: wetness, percs slowly.	Moderate: seepage, slope.	Severe: wetness.	Moderate: wetness.	Fair: small stones, wetness.
66C*: Georgia----------	Severe: percs slowly, wetness.	Severe: slope, wetness.	Severe: wetness.	Moderate: wetness, slope.	Fair: small stones.
Amenia----------	Severe: wetness, percs slowly.	Severe: slope.	Severe: wetness.	Moderate: wetness, slope.	Fair: small stones, slope, wetness.
67B*: Georgia----------	Severe: wetness, percs slowly.	Moderate: slope.	Severe: wetness.	Moderate: wetness.	Poor: small stones.
Amenia----------	Severe: wetness, percs slowly.	Moderate: seepage, slope.	Severe: wetness.	Moderate: wetness.	Fair: small stones, wetness.
67C*: Georgia----------	Severe: wetness, percs slowly.	Severe: slope.	Severe: wetness.	Moderate: wetness, slope.	Poor: small stones.
Amenia----------	Severe: wetness, percs slowly.	Severe: slope.	Severe: wetness.	Moderate: wetness, slope.	Fair: small stones, slope, wetness.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
67D*:					
Georgia	Severe: wetness, percs slowly, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Poor: small stones, slope.
Amenia	Severe: wetness, percs slowly, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Poor: slope.
68A Massena	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: small stones, wetness.
71A Castile	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, small stones.
72A Fredon	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, small stones.
73 Scarboro	Severe: ponding, poor filter.	Severe: excess humus, ponding.	Severe: seepage, ponding, too sandy.	Severe: seepage, ponding.	Poor: seepage, too sandy, small stones.
80A Kingsbury	Severe: wetness, percs slowly.	Slight	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
80B Kingsbury	Severe: wetness, percs slowly.	Moderate: slope.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
81 Livingston	Severe: wetness, percs slowly.	Slight	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
82B Vergennes	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack.
82C Vergennes	Severe: wetness, percs slowly.	Severe: slope, wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack.
82D, 82E Vergennes	Severe: wetness, percs slowly, slope.	Severe: slope, wetness.	Severe: wetness, slope, too clayey.	Severe: wetness, slope.	Poor: too clayey, hard to pack, slope.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
86--Linwood	Severe: ponding, subsides.	Severe: seepage, excess humus, ponding.	Severe: ponding.	Severe: seepage, ponding.	Poor: ponding.
88--Birdsall	Severe: ponding, percs slowly.	Slight	Severe: ponding.	Severe: ponding.	Poor: ponding.
90B--Hartland	Severe: percs slowly.	Moderate: slope, seepage.	Slight	Slight	Good.
90C--Hartland	Severe: percs slowly.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: slope.
90D--Hartland	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
95. Udorthents					
96. Udipsamments					
97A*, 97B*:					
Warwick	Severe: poor filter.	Severe: seepage.	Severe: seepage.	Severe: seepage.	Poor: seepage, small stones.
Quonset	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
97C*:					
Warwick	Severe: poor filter.	Severe: slope, seepage.	Severe: seepage.	Severe: seepage.	Poor: seepage, small stones.
Quonset	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
97D*:					
Warwick	Severe: slope, poor filter.	Severe: slope, seepage.	Severe: slope, seepage.	Severe: slope, seepage.	Poor: seepage, slope, small stones.
Quonset	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, slope.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
98E*:					
Quonset	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, slope.
Warwick	Severe: slope, poor filter.	Severe: slope, seepage.	Severe: slope, seepage.	Severe: slope, seepage.	Poor: seepage, slope, small stones.
99B---------- Copake	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
104B---------- Groton	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
105---------- Tioga	Severe: flooding, wetness, poor filter.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Poor: thin layer.
106---------- Middlebury	Severe: flooding, wetness, poor filter.	Severe: flooding, wetness, seepage.	Severe: flooding, wetness, seepage.	Severe: flooding, wetness.	Poor: wetness.
108---------- Hamlin	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Fair: wetness.
109---------- Teel	Severe: flooding, wetness.	Severe: seepage, flooding, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, wetness.	Fair: wetness, thin layer.
110---------- Limerick	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
111---------- Livingston	Severe: flooding, wetness, percs slowly.	Severe: flooding.	Severe: flooding, wetness, too clayey.	Severe: flooding, wetness.	Poor: too clayey, hard to pack, wetness.
118C---------- Adams	Severe: poor filter.	Severe: slope, seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
122B---------- Lyme	Severe: wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Poor: wetness.
122C---------- Lyme	Severe: wetness.	Severe: seepage, slope, wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Poor: wetness.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
123B---------- Sheepscot	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, small stones.
123C---------- Sheepscot	Severe: wetness, poor filter.	Severe: seepage, slope, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy, small stones.
124B---------- Sunapee	Severe: wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Fair: small stones, wetness.
124C---------- Sunapee	Severe: wetness.	Severe: seepage, wetness, slope.	Severe: seepage, wetness.	Severe: seepage, wetness.	Fair: small stones, slope, wetness.
124D, 124E---------- Sunapee	Severe: wetness, slope.	Severe: seepage, wetness, slope.	Severe: seepage, wetness, slope.	Severe: seepage, wetness, slope.	Poor: slope.
125B---------- Berkshire	Moderate: percs slowly.	Severe: seepage.	Severe: seepage.	Severe: seepage.	Fair: small stones.
125C---------- Berkshire	Moderate: percs slowly, slope.	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Fair: small stones, slope.
125D, 125E---------- Berkshire	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
127C---------- Houghtonville	Moderate: slope.	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Fair: small stones, slope.
127D, 127E---------- Houghtonville	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
128C*:					
Rawsonville--------	Severe: depth to rock.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage.	Severe: depth to rock, seepage.	Poor: area reclaim, small stones.
Houghtonville------	Moderate: slope.	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Fair: small stones, slope.
128D*, 128E*:					
Rawsonville--------	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, small stones, slope.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
128D*, 128E*:					
Houghtonville	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
129D*, 129F*:					
Killington	Severe: depth to rock, slope, large stones.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, slope.	Poor: depth to rock, seepage, small stones.
Rawsonville	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, small stones, slope.
130B*:					
Tunbridge	Severe: depth to rock.	Severe: seepage, depth to rock.	Severe: depth to rock, seepage.	Severe: depth to rock, seepage.	Poor: area reclaim.
Berkshire	Moderate: percs slowly.	Severe: seepage.	Severe: seepage.	Severe: seepage.	Fair: small stones.
130C*:					
Tunbridge	Severe: depth to rock.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage.	Severe: depth to rock, seepage.	Poor: area reclaim.
Berkshire	Moderate: percs slowly, slope.	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Fair: small stones, slope.
130D*, 130E*:					
Tunbridge	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, slope.
Berkshire	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
131D*, 131E*:					
Lyman	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock, seepage, slope.	Poor: depth to rock, slope.
Tunbridge	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, slope.
Rock outcrop.					

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
132C*, 132E*:					
Glebe	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, slope.
Stratton	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, seepage, small stones.
134F*:					
Stratton	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, seepage, small stones.
Londonderry	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: area reclaim, slope.
Ricker	Severe: depth to rock, slope.	Severe: depth to rock, slope, excess humus.	Severe: depth to rock, slope, excess humus.	Severe: slope, depth to rock.	Poor: area reclaim, slope, excess humus.
135D, 135E Mundal	Severe: wetness, percs slowly, slope.	Severe: slope, wetness.	Severe: wetness, slope.	Severe: slope.	Poor: small stones, slope.
138C Berkshire	Moderate: slope.	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Fair: small stones, slope.
139B Sunapee	Severe: wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Fair: wetness.
139C Sunapee	Severe: wetness.	Severe: seepage, slope, wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Fair: slope, wetness.
140C Benson	Severe: depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Poor: area reclaim, small stones.
140D, 140E Benson	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: area reclaim, small stones, slope.
148B*:					
Bomoseen	Severe: wetness, percs slowly.	Moderate: seepage, slope, large stones.	Severe: wetness.	Moderate: wetness.	Poor: small stones.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
148B*:					
Pittstown	Severe: wetness, percs slowly.	Moderate: slope.	Severe: wetness.	Moderate: wetness.	Fair: small stones.
148C*:					
Bomoseen	Severe: wetness, percs slowly.	Severe: slope.	Severe: wetness.	Moderate: wetness, slope.	Poor: small stones.
Pittstown	Severe: wetness, percs slowly.	Severe: slope.	Severe: wetness.	Moderate: wetness, slope.	Fair: slope, small stones.
148D*:					
Bomoseen	Severe: wetness, percs slowly, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Poor: small stones, slope.
Pittstown	Severe: slope, wetness, percs slowly.	Severe: slope.	Severe: slope, wetness.	Severe: slope.	Poor: slope.
149B*:					
Bomoseen	Severe: wetness, percs slowly.	Moderate: seepage, slope, large stones.	Severe: wetness.	Moderate: wetness.	Poor: small stones.
Pittstown	Severe: percs slowly, wetness.	Moderate: slope.	Severe: wetness.	Moderate: wetness.	Fair: small stones.
149C*:					
Bomoseen	Severe: wetness, percs slowly.	Severe: slope.	Severe: wetness.	Moderate: wetness, slope.	Poor: small stones.
Pittstown	Severe: percs slowly, wetness.	Severe: slope.	Severe: wetness.	Moderate: wetness, slope.	Fair: slope, small stones.
149D*, 149E*:					
Bomoseen	Severe: wetness, percs slowly, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Poor: small stones, slope.
Pittstown	Severe: slope, percs slowly, wetness.	Severe: slope.	Severe: slope, wetness.	Severe: slope.	Poor: slope.
150A Peacham	Severe: ponding, percs slowly.	Severe: excess humus, ponding.	Severe: ponding.	Severe: ponding.	Poor: ponding.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
152---------- Lyons	Severe: wetness, percs slowly.	Slight----------	Severe: wetness.	Severe: wetness.	Poor: wetness.
161A---------- Elmridge	Severe: wetness, percs slowly.	Slight----------	Severe: wetness, too clayey.	Severe: seepage.	Poor: too clayey.
161B---------- Elmridge	Severe: wetness, percs slowly.	Moderate: slope.	Severe: wetness, too clayey.	Severe: seepage.	Poor: too clayey.
163---------- Canandaigua	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
175---------- Wappinger	Severe: flooding, wetness, poor filter.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Poor: thin layer.
177---------- Pawling	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness, seepage.	Severe: flooding, wetness, seepage.	Good.
202E*:					
Rawsonville--------	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, small stones, slope.
Killington---------	Severe: depth to rock, slope, large stones.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, slope.	Poor: depth to rock, seepage, small stones.
203D*:					
Peru----------	Severe: wetness, percs slowly, slope.	Severe: slope.	Severe: wetness, slope.	Severe: slope.	Poor: slope.
Marlow----------	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
205D*:					
Tunbridge----------	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, slope.
Berkshire----------	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
Marlow----------	Severe: percs slowly, slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
213E*:					
Glebe	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, slope.
Stratton	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, seepage, small stones.
221F*:					
Tunbridge	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, slope.
Berkshire	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
402D*:					
Tunbridge	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, slope.
Lyman	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock, seepage, slope.	Poor: depth to rock, slope.
403C*:					
Brayton	Severe: wetness, percs slowly.	Severe: slope, wetness.	Severe: wetness.	Severe: wetness.	Poor: small stones, wetness.
Cabot	Severe: wetness, percs slowly.	Severe: slope, wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
Pinnebog	Severe: ponding, subsides.	Severe: seepage, excess humus, ponding.	Severe: seepage, ponding, excess humus.	Severe: seepage, ponding.	Poor: ponding, excess humus.
405D*:					
Tunbridge	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, slope.
Berkshire	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
505D*:					
Berkshire	Severe: slope.	Severe: seepage, slope.	Severe: seepage.	Severe: slope, seepage.	Poor: slope.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
505D*:					
Colton	Severe: poor filter, slope.	Severe: slope, seepage.	Severe: slope, seepage, too sandy.	Severe: slope, seepage.	Poor: seepage, too sandy, small stones.
702F*:					
Killington	Severe: depth to rock, slope, large stones.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, slope.	Poor: depth to rock, seepage, small stones.
Ricker	Severe: depth to rock, slope.	Severe: depth to rock, slope, excess humus.	Severe: depth to rock, slope, excess humus.	Severe: slope, depth to rock.	Poor: area reclaim, slope, excess humus.
Rock outcrop.					
703D*:					
Mundal	Severe: wetness, percs slowly, slope.	Severe: slope, wetness.	Severe: wetness, slope.	Severe: slope.	Poor: small stones, slope.
Cabot	Severe: wetness, percs slowly.	Severe: slope, wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
705D*:					
Rawsonville	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: area reclaim, small stones, slope.
Houghtonville	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 13.--CONSTRUCTION MATERIALS

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "good," "fair," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
1B, 1C Marlow	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
1D Marlow	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
2C Marlow	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
2D, 2E Marlow	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
3B, 3C, 4B, 4C Peru	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
4D Peru	Fair: wetness, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
6A Cabot	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: large stones, area reclaim, wetness.
7C Brayton	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, wetness.
9*: Pits	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock.
Dumps	Variable	Variable	Variable	Variable.
11C*: Taconic	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
Hubbardton	Poor: area reclaim, large stones.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, large stones, slope.
12F*: Taconic	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
12F*:				
Hubbardton	Poor: area reclaim, large stones, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, large stones, slope.
Macomber	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
13B, 13C Hinckley	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim.
13D Hinckley	Fair: slope.	Probable	Probable	Poor: too sandy, small stones, slope.
13E Hinckley	Poor: slope.	Probable	Probable	Poor: too sandy, small stones, slope.
14A, 14B Sudbury	Fair: wetness.	Probable	Probable	Poor: small stones, too sandy, area reclaim.
15A Walpole	Poor: wetness.	Probable	Probable	Poor: small stones, area reclaim, wetness.
18B, 18C Windsor	Good	Probable	Improbable: too sandy.	Poor: too sandy.
18D Windsor	Fair: slope.	Probable	Improbable: too sandy.	Poor: too sandy, slope.
18E Windsor	Poor: slope.	Probable	Improbable: too sandy.	Poor: too sandy, slope.
21 Rippowam	Poor: wetness.	Probable	Improbable: too sandy.	Poor: wetness.
22 Saco	Poor: wetness.	Probable	Improbable: too sandy.	Poor: wetness.
23 Adrian	Poor: wetness.	Probable	Improbable: too sandy.	Poor: excess humus, wetness.
24 Pinnebog	Poor: wetness, low strength.	Improbable: excess humus.	Improbable: excess humus.	Poor: excess humus, wetness.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
25A, 25B---------- Belgrade	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, area reclaim.
25C---------- Belgrade	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, area reclaim, slope.
26A---------- Raynham	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
28*: Udifluvents.				
Fluvaquents.				
29*: Histosols.				
Aquents.				
30B---------- Paxton	Good----------	Improbable: excess fines.	Improbable: excess fines.	Fair: area reclaim, small stones.
30C---------- Paxton	Good----------	Improbable: excess fines.	Improbable: excess fines.	Fair: area reclaim, small stones, slope.
30D---------- Paxton	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
31B---------- Paxton	Good----------	Improbable: excess fines.	Improbable: excess fines.	Fair: area reclaim, small stones.
31C---------- Paxton	Good----------	Improbable: excess fines.	Improbable: excess fines.	Fair: area reclaim, small stones, slope.
31D---------- Paxton	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
31E---------- Paxton	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
38A---------- Tisbury	Fair: wetness.	Probable----------	Probable----------	Poor: area reclaim.
39B*, 40C*: Galway----------	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
Nellis----------	Good----------	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
39B*, 40C*:				
Farmington	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones.
40D*:				
Galway	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Nellis	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Farmington	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
41C*:				
Farmington	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
Galway	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Galoo	Poor: area reclaim, depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
41E*:				
Farmington	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
Galway	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Galoo	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
42C*:				
Macomber	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
Taconic	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
42D*:				
Macomber	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Taconic	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
42F*:				
Macomber	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Taconic	Poor: area reclaim, slope.	Improbable. excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
43C*:				
Taconic	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
Macomber	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
44B, 44C Dutchess	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
44D Dutchess	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
47B, 47C Dutchess	Fair: large stones.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
47D Dutchess	Fair: large stones, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
47E Dutchess	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
50A Massena	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
52B*:				
Macomber	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
52B*:				
Dutchess	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
53				
Elvers	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
54A				
Ninigret	Fair: wetness.	Probable	Probable	Poor: small stones, area reclaim.
56B*, 56C*:				
Colton	Fair: large stones.	Probable	Probable	Poor: small stones, area reclaim.
Duxbury	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim.
56D*:				
Colton	Fair: large stones, slope.	Probable	Probable	Poor: small stones, area reclaim, slope.
Duxbury	Fair: slope.	Probable	Probable	Poor: too sandy, small stones, area reclaim.
56E*:				
Colton	Poor: slope.	Probable	Probable	Poor: small stones, area reclaim, slope.
Duxbury	Poor: slope.	Probable	Probable	Poor: too sandy, small stones, area reclaim.
57B*:				
Duxbury	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim.
Colton	Good	Probable	Probable	Poor: small stones, too sandy.
58C*:				
Colton	Good	Probable	Probable	Poor: small stones, too sandy.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
58C*:				
Duxbury	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim.
58D*:				
Colton	Fair: slope.	Probable	Probable	Poor: slope, small stones, too sandy.
Duxbury	Fair: slope.	Probable	Probable	Poor: too sandy, small stones, area reclaim.
59A Deerfield	Fair: wetness.	Probable	Improbable: excess fines.	Poor: too sandy.
61A, 61B Eldridge	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer.
62 Enosburg	Poor: wetness, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
64B Stockbridge	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones.
64C Stockbridge	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones, slope.
64D Stockbridge	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
65B Stockbridge	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones.
65C Stockbridge	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones, slope.
65D Stockbridge	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
65E Stockbridge	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
66B*, 66C*, 67B*, 67C*:				
Georgia	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
Amenia	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
67D*:				
Georgia	Fair: wetness, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Amenia	Fair: wetness, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
68A Massena	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
71A Castile	Fair: wetness.	Probable	Probable	Poor: small stones, area reclaim.
72A Fredon	Poor: wetness.	Probable	Probable	Poor: small stones, area reclaim, wetness.
73 Scarboro	Poor: wetness.	Probable	Improbable: too sandy.	Poor: too sandy, small stones, area reclaim.
80A, 80B Kingsbury	Poor: low strength, wetness, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.
81 Livingston	Poor: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.
82B, 82C Vergennes	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
82D Vergennes	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
82E Vergennes	Poor: low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
86 Linwood	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: excess humus, wetness.
88 Birdsall	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
90B Hartland	Fair: low strength.	Improbable: excess fines.	Improbable: excess fines.	Good.
90C Hartland	Fair: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: slope.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
90D Hartland	Fair: slope, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
95. Udorthents				
96. Udipsamments				
97A*, 97B*, 97C*:				
Warwick	Good	Probable	Probable	Poor: small stones, area reclaim.
Quonset	Good	Probable	Probable	Poor: small stones, area reclaim.
97D*:				
Warwick	Fair: slope.	Probable	Probable	Poor: small stones, area reclaim, slope.
Quonset	Fair: slope.	Probable	Probable	Poor: small stones, area reclaim, slope.
98E*:				
Quonset	Poor: slope.	Probable	Probable	Poor: small stones, area reclaim, slope.
Warwick	Poor: slope.	Probable	Probable	Poor: small stones, area reclaim, slope.
99B Copake	Good	Probable	Probable	Poor: small stones, area reclaim.
104B Groton	Good	Probable	Probable	Poor: small stones, area reclaim.
105 Tioga	Good	Probable	Probable	Poor: small stones, area reclaim.
106 Middlebury	Poor: wetness.	Probable	Probable	Poor: small stones, area reclaim, wetness.
108 Hamlin	Fair: low strength.	Improbable: excess fines.	Improbable: excess fines.	Good.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
109--Teel	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: area reclaim.
110--Limerick	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
111--Livingston	Poor: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.
118C--Adams	Good	Probable	Improbable: too sandy.	Poor: too sandy.
122B, 122C--Lyme	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, wetness.
123B, 123C--Sheepscot	Fair: wetness.	Probable	Probable	Poor: too sandy, small stones, area reclaim.
124B, 124C--Sunapee	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
124D, 124E--Sunapee	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
125B, 125C--Berkshire	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
125D, 125E--Berkshire	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
127C--Houghtonville	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
127D, 127E--Houghtonville	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
128C*:				
Rawsonville	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
Houghtonville	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
128D*, 128E*:				
Rawsonville	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Houghtonville	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
129D*, 129F*:				
Killington	Poor: depth to rock, large stones, slope.	Improbable: small stones, large stones.	Improbable: large stones.	Poor: depth to rock, small stones, slope.
Rawsonville	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
130B*, 130C*:				
Tunbridge	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
Berkshire	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
130D*, 130E*:				
Tunbridge	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Berkshire	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
131D*, 131E*:				
Lyman	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.
Tunbridge	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Rock outcrop	Poor: depth to rock, slope.	Improbable: thin layer.	Improbable: thin layer.	Poor: depth to rock, slope.
132C*:				
Glebe	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Stratton	Poor: area reclaim, large stones.	Improbable: small stones, large stones.	Improbable: large stones.	Poor: area reclaim, large stones, slope.
132E*:				
Glebe	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Stratton	Poor: area reclaim, large stones, slope.	Improbable: small stones, large stones.	Improbable: large stones.	Poor: area reclaim, large stones, slope.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
134F*:				
Stratton	Poor: area reclaim, large stones, slope.	Improbable: small stones, large stones.	Improbable: large stones.	Poor: area reclaim, large stones, slope.
Londonderry	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, slope.
Ricker	Poor: area reclaim, thin layer, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, slope, excess humus.
135D, 135E Mundal	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
138C Berkshire	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
139B, 139C Sunapee	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
140C Benson	Poor: area reclaim, thin layer.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones.
140D Benson	Poor: area reclaim, thin layer.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
140E Benson	Poor: area reclaim, slope, thin layer.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, small stones, slope.
148B*, 148C*:				
Bomoseen	Fair: large stones, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
Pittstown	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
148D*:				
Bomoseen	Fair: large stones, wetness, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Pittstown	Fair: slope, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
149B*, 149C*:				
Bomoseen	Fair: large stones, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
Pittstown	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim.
149D*:				
Bomoseen	Fair: large stones, wetness, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Pittstown	Fair: wetness, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
149E*:				
Bomoseen	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Pittstown	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
150A Peacham	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, excess humus, small stones.
152 Lyons	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, wetness.
161A, 161B Elmridge	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: thin layer.
163 Canandaigua	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
175 Wappinger	Good	Probable	Probable	Poor: area reclaim.
177 Pawling	Poor: frost action.	Probable	Probable	Good.
202E*:				
Rawsonville	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
202E*:				
Killington	Poor: depth to rock, large stones, slope.	Improbable: small stones, large stones.	Improbable: large stones.	Poor: depth to rock, small stones, slope.
203D*:				
Peru	Fair: wetness, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Marlow	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
205D*:				
Tunbridge	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Berkshire	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Marlow	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
213E*:				
Glebe	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Stratton	Poor: area reclaim, large stones, slope.	Improbable: small stones, large stones.	Improbable: large stones.	Poor: area reclaim, large stones, slope.
221F*:				
Tunbridge	Poor: area reclaim, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Berkshire	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
402D*:				
Tunbridge	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Lyman	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, slope.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
403C*:				
Brayton	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, wetness.
Cabot	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: large stones, area reclaim, wetness.
Pinnebog	Poor: wetness, low strength.	Improbable: excess humus.	Improbable: excess humus.	Poor: excess humus, wetness.
405D*:				
Tunbridge	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Berkshire	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
505D*:				
Berkshire	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Colton	Fair: slope.	Probable	Probable	Poor: slope, small stones, too sandy.
702F*:				
Killington	Poor: depth to rock, large stones, slope.	Improbable: small stones, large stones.	Improbable: large stones.	Poor: depth to rock, small stones, slope.
Ricker	Poor: area reclaim, thin layer, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: area reclaim, slope, excess humus.
Rock outcrop	Poor: depth to rock, slope.	Improbable: thin layer.	Improbable: thin layer.	Poor: depth to rock, slope.
703D*:				
Mundal	Fair: wetness, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, slope.
Cabot	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: large stones, area reclaim, wetness.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
705D*:				
Rawsonville	Poor: area reclaim.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
Houghtonville	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 14.--WATER MANAGEMENT

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not evaluated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
1B---------- Marlow	Moderate: slope.	Severe: piping.	Severe: no water.	Deep to water	Percs slowly---	Rooting depth, percs slowly.
1C, 1D, 2C, 2D, 2E---------- Marlow	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, percs slowly.	Slope, rooting depth, percs slowly.
3B---------- Peru	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Percs slowly, frost action, slope.	Wetness, soil blowing.	Rooting depth, percs slowly.
3C---------- Peru	Severe: slope.	Severe: piping.	Severe: no water.	Percs slowly, frost action, slope.	Slope, wetness, soil blowing.	Slope, rooting depth, percs slowly.
4B---------- Peru	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Percs slowly, frost action, slope.	Wetness, percs slowly.	Rooting depth, percs slowly.
4C, 4D---------- Peru	Severe: slope.	Severe: piping.	Severe: no water.	Percs slowly, frost action, slope.	Slope, wetness, percs slowly.	Slope, rooting depth, percs slowly.
6A---------- Cabot	Moderate: slope.	Severe: piping, wetness.	Severe: no water.	Percs slowly, large stones, frost action.	Large stones, wetness, rooting depth.	Large stones, wetness, rooting depth.
7C---------- Brayton	Severe: slope.	Severe: piping, wetness.	Severe: no water.	Percs slowly, frost action, slope.	Slope, wetness, percs slowly.	Wetness, slope.
9*:						
Pits----------	Severe: depth to rock, slope.	Slight---------	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, depth to rock.
Dumps----------	Variable-------	Variable-------	Variable-------	Variable-------	Variable-------	Variable.
11C*:						
Taconic----------	Severe: depth to rock, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Hubbardton-------	Severe: depth to rock, slope.	Severe: large stones.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
12F*:						
Taconic----------	Severe: depth to rock, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Terraces and diversions	Grassed waterways
12F*:						
Hubbardton	Severe: depth to rock, slope.	Severe: large stones.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope. droughty.
Macomber	Severe: slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
13B---------- Hinckley	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Large stones, too sandy.	Large stones, droughty.
13C, 13D, 13E----- Hinckley	Severe: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, too sandy.	Large stones, slope, droughty.
14A---------- Sudbury	Severe: seepage.	Severe: seepage, wetness.	Severe: cutbanks cave.	Cutbanks cave	Too sandy, wetness.	Favorable.
14B---------- Sudbury	Severe: seepage.	Severe: seepage, wetness.	Severe: cutbanks cave.	Slope, cutbanks cave.	Too sandy, wetness.	Favorable.
15A---------- Walpole	Severe: seepage.	Severe: seepage, wetness.	Severe: cutbanks cave.	Frost action, cutbanks cave.	Wetness, too sandy.	Wetness.
18B---------- Windsor	Severe: seepage.	Severe: seepage, piping.	Severe: no water.	Deep to water	Too sandy------	Droughty.
18C, 18D, 18E----- Windsor	Severe: seepage, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, too sandy.	Slope, droughty.
21---------- Rippowam	Severe: seepage.	Severe: seepage, piping, wetness.	Severe: cutbanks cave.	Flooding, frost action, cutbanks cave.	Wetness, too sandy, poor outlets.	Wetness.
22---------- Saco	Moderate: seepage.	Severe: piping, wetness.	Severe: cutbanks cave.	Flooding, frost action, poor outlets.	Wetness, poor outlets.	Wetness.
23---------- Adrian	Severe: seepage.	Severe: seepage, piping, ponding.	Severe: slow refill, cutbanks cave.	Ponding, subsides, frost action.	Ponding, too sandy, soil blowing.	Wetness, rooting depth.
24---------- Pinnebog	Severe: seepage.	Severe: excess humus, ponding.	Severe: slow refill.	Ponding, subsides, frost action.	Ponding, soil blowing.	Wetness.
25A---------- Belgrade	Severe: seepage.	Severe: piping, wetness.	Severe: slow refill, cutbanks cave.	Frost action, cutbanks cave.	Erodes easily, wetness.	Erodes easily.
25B---------- Belgrade	Severe: seepage.	Severe: piping, wetness.	Severe: slow refill, cutbanks cave.	Frost action, slope, cutbanks cave.	Erodes easily, wetness.	Erodes easily.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
25C---------- Belgrade	Severe: seepage, slope.	Severe: piping, wetness.	Severe: slow refill, cutbanks cave.	Frost action, slope, cutbanks cave.	Slope, erodes easily, wetness.	Slope, erodes easily.
26A---------- Raynham	Moderate: seepage.	Severe: piping, wetness.	Severe: slow refill.	Percs slowly, frost action.	Erodes easily, wetness.	Wetness, erodes easily.
28*: Udifluvents.						
Fluvaquents.						
29*: Histosols.						
Aquents.						
30B---------- Paxton	Moderate: slope.	Severe: piping.	Severe: no water.	Deep to water	Percs slowly---	Rooting depth, percs slowly.
30C, 30D---------- Paxton	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, percs slowly.	Slope, rooting depth, percs slowly.
31B---------- Paxton	Moderate: slope.	Severe: piping.	Severe: no water.	Deep to water	Percs slowly---	Rooting depth, percs slowly.
31C, 31D, 31E----- Paxton	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, percs slowly.	Slope, rooting depth, percs slowly.
38A---------- Tisbury	Severe: seepage.	Severe: seepage, wetness.	Moderate: cutbanks cave, deep to water.	Frost action, cutbanks cave.	Erodes easily, wetness, too sandy.	Erodes easily.
39B*: Galway----------	Moderate: seepage, depth to rock, slope.	Severe: piping.	Severe: no water.	Deep to water	Depth to rock	Depth to rock, droughty.
Nellis----------	Moderate: seepage, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Favorable------	Rooting depth, droughty.
Farmington-------	Severe: depth to rock.	Severe: piping.	Severe: no water.	Deep to water	Depth to rock	Droughty, depth to rock.
40C*: Galway----------	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, depth to rock, droughty.
Nellis----------	Severe: slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope----------	Slope, rooting depth, droughty.
Farmington-------	Severe: depth to rock, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, droughty, depth to rock.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
40D*:						
Galway	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, droughty, depth to rock.
Nellis	Severe: slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope	Slope, droughty, rooting depth.
Farmington	Severe: depth to rock, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, droughty, depth to rock.
41C*, 41E*:						
Farmington	Severe: depth to rock, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, droughty, depth to rock.
Galway	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, droughty, depth to rock.
Galoo	Severe: depth to rock, slope.	Severe: thin layer.	Severe: no water.	Deep to water	Depth to rock, slope.	Depth to rock, slope.
42C*, 42D*, 42F*:						
Macomber	Severe: slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Taconic	Severe: depth to rock, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
43C*:						
Taconic	Severe: depth to rock, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Macomber	Severe: slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
44B---------- Dutchess	Moderate: seepage, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Large stones, erodes easily.	Large stones, erodes easily.
44C, 44D---------- Dutchess	Severe: slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, large stones, erodes easily.	Large stones, slope, erodes easily.
47B---------- Dutchess	Moderate: seepage, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Large stones, erodes easily.	Large stones, erodes easily.
47C, 47D, 47E----- Dutchess	Severe: slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, large stones, erodes easily.	Large stones, slope, erodes easily.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
50A---------- Massena	Moderate: slope.	Severe: piping, wetness.	Severe: slow refill.	Percs slowly, frost action, slope.	Wetness--------	Wetness, droughty.
52B*:						
Macomber----------	Moderate: seepage, depth to rock, slope.	Severe: seepage.	Severe: no water.	Deep to water	Depth to rock	Droughty, depth to rock.
Dutchess----------	Moderate: seepage, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Large stones, erodes easily.	Large stones, erodes easily.
53---------- Elvers	Severe: seepage.	Severe: piping, ponding.	Moderate: slow refill.	Ponding, flooding, frost action.	Erodes easily, ponding.	Wetness, erodes easily.
54A---------- Ninigret	Severe: seepage.	Severe: seepage, wetness.	Severe: cutbanks cave.	Frost action, cutbanks cave.	Erodes easily, wetness.	Erodes easily.
56B*:						
Colton----------	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Large stones, too sandy.	Large stones, droughty.
Duxbury----------	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Erodes easily, too sandy.	Erodes easily.
56C*, 56D*, 56E*:						
Colton----------	Severe: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, too sandy.	Large stones, slope, droughty.
Duxbury----------	Severe: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, erodes easily, too sandy.	Slope, erodes easily.
57B*:						
Duxbury----------	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Erodes easily, too sandy.	Erodes easily.
Colton----------	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Large stones, too sandy.	Large stones, droughty.
58C*, 58D*:						
Colton----------	Severe: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, too sandy.	Large stones, slope, droughty.
Duxbury----------	Severe: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, erodes easily, too sandy.	Slope, erodes easily.
59A---------- Deerfield	Severe: seepage.	Severe: seepage.	Severe: cutbanks cave.	Cutbanks cave	Wetness, too sandy.	Droughty.
61A---------- Eldridge	Severe: seepage.	Severe: piping, wetness.	Severe: slow refill, cutbanks cave.	Cutbanks cave	Erodes easily, wetness.	Wetness, erodes easily.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
61B---------- Eldridge	Severe: seepage.	Severe: piping, wetness.	Severe: slow refill, cutbanks cave.	Slope, cutbanks cave.	Erodes easily, wetness.	Wetness, erodes easily.
62---------- Enosburg	Severe: seepage.	Severe: piping, wetness.	Severe: slow refill, cutbanks cave.	Cutbanks cave	Erodes easily, wetness.	Wetness, erodes easily.
64B---------- Stockbridge	Moderate: slope.	Severe: piping.	Severe: no water.	Deep to water	Erodes easily, percs slowly.	Erodes easily, percs slowly.
64C, 64D---------- Stockbridge	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, erodes easily, percs slowly.	Slope, erodes easily, percs slowly.
65B---------- Stockbridge	Moderate: slope.	Severe: piping.	Severe: no water.	Deep to water	Erodes easily, percs slowly.	Erodes easily, percs slowly.
65C, 65D, 65E----- Stockbridge	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, erodes easily, percs slowly.	Slope, erodes easily, percs slowly.
66B*:						
Georgia----------	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Percs slowly, frost action, slope.	Large stones, erodes easily.	Large stones, erodes easily.
Amenia----------	Moderate: seepage, slope.	Moderate: seepage, piping, wetness.	Severe: no water.	Percs slowly, frost action, slope.	Wetness, percs slowly.	Percs slowly.
66C*:						
Georgia----------	Severe: slope.	Severe: piping.	Severe: no water.	Percs slowly, frost action, slope.	Slope, large stones, erodes easily.	Large stones, slope, erodes easily.
Amenia----------	Severe: slope.	Moderate: seepage, piping, wetness.	Severe: no water.	Percs slowly, frost action, slope.	Slope, wetness, percs slowly.	Slope, percs slowly.
67B*:						
Georgia----------	Moderate: slope, seepage.	Severe: piping.	Severe: no water.	Percs slowly, frost action, slope.	Large stones, wetness.	Large stones, percs slowly.
Amenia----------	Moderate: seepage, slope.	Moderate: seepage, piping, wetness.	Severe: no water.	Percs slowly, frost action, slope.	Wetness, percs slowly.	Percs slowly.
67C*, 67D*:						
Georgia----------	Severe: slope.	Severe: piping.	Severe: no water.	Percs slowly, frost action, slope.	Slope, large stones, wetness.	Large stones, slope, percs slowly.
Amenia----------	Severe: slope.	Moderate: seepage, piping, wetness.	Severe: no water.	Percs slowly, frost action, slope.	Slope, wetness, percs slowly.	Slope, percs slowly.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
68A---------- Massena	Moderate: slope.	Severe: piping, wetness.	Severe: slow refill.	Percs slowly, frost action, slope.	Wetness, percs slowly.	Wetness, droughty.
71A---------- Castile	Severe: seepage.	Severe: seepage, wetness.	Severe: cutbanks cave.	Frost action, cutbanks cave.	Wetness, too sandy.	Droughty.
72A---------- Fredon	Severe: seepage.	Severe: seepage, wetness.	Severe: cutbanks cave.	Frost action---	Wetness, too sandy.	Wetness.
73---------- Scarboro	Severe: seepage.	Severe: seepage, piping, ponding.	Severe: cutbanks cave.	Ponding, frost action, cutbanks cave.	Ponding, too sandy.	Wetness, droughty.
80A---------- Kingsbury	Slight---------	Severe: hard to pack, wetness.	Severe: no water.	Percs slowly, frost action.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
80B---------- Kingsbury	Moderate: slope.	Severe: hard to pack, wetness.	Severe: no water.	Percs slowly, frost action, slope.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
81---------- Livingston	Slight---------	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly, frost action.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, droughty.
82B---------- Vergennes	Moderate: slope.	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly, slope.	Erodes easily, wetness.	Wetness, erodes easily.
82C, 82D, 82E----- Vergennes	Severe: slope.	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly, slope.	Slope, erodes easily, wetness.	Wetness, slope, erodes easily.
86---------- Linwood	Severe: seepage.	Severe: piping, ponding.	Severe: slow refill.	Ponding, subsides, frost action.	Large stones, ponding.	Large stones, wetness, rooting depth.
88---------- Birdsall	Slight---------	Severe: piping, ponding.	Severe: slow refill, cutbanks cave.	Percs slowly, frost action.	Erodes easily, ponding, percs slowly.	Wetness, erodes easily, percs slowly.
90B---------- Hartland	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Erodes easily	Erodes easily.
90C, 90D---------- Hartland	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, erodes easily.	Slope, erodes easily.
95. Udorthents						
96. Udipsamments						
97A*, 97B*: Warwick----------	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Large stones, too sandy.	Large stones, droughty.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
97A*, 97B*:						
Quonset	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Too sandy	Droughty.
97C*, 97D*:						
Warwick	Severe: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, too sandy.	Large stones, slope, droughty.
Quonset	Severe: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, too sandy.	Slope, droughty.
98E*:						
Quonset	Severe: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, too sandy.	Slope, droughty.
Warwick	Severe: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, too sandy.	Large stones, slope, droughty.
99B---------- Copake	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Too sandy	Favorable.
104B---------- Groton	Severe: seepage.	Severe: seepage.	Severe: no water.	Deep to water	Too sandy	Droughty.
105---------- Tioga	Severe: seepage.	Severe: piping.	Severe: cutbanks cave.	Deep to water	Erodes easily	Erodes easily, droughty.
106---------- Middlebury	Moderate: seepage.	Severe: piping, wetness.	Severe: cutbanks cave.	Flooding, frost action, cutbanks cave.	Wetness	Wetness.
108---------- Hamlin	Moderate: seepage.	Severe: piping.	Moderate: deep to water, slow refill.	Deep to water	Erodes easily	Erodes easily.
109---------- Teel	Severe: seepage.	Severe: piping, wetness.	Severe: cutbanks cave.	Flooding, frost action.	Erodes easily, wetness.	Erodes easily.
110---------- Limerick	Moderate: seepage.	Severe: piping, wetness.	Moderate: slow refill.	Flooding, frost action.	Erodes easily, wetness.	Wetness, erodes easily.
111---------- Livingston	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly, flooding, frost action.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, droughty.
118C---------- Adams	Severe: seepage, slope.	Severe: seepage, piping.	Severe: no water.	Deep to water	Slope, too sandy, soil blowing.	Slope, droughty.
122B---------- Lyme	Severe: seepage.	Severe: piping, wetness.	Moderate: slow refill.	Frost action, slope.	Wetness	Wetness.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
122C---Lyme	Severe: seepage, slope.	Severe: piping, wetness.	Moderate: slow refill.	Frost action, slope.	Slope, wetness.	Wetness, slope.
123B---Sheepscot	Severe: seepage.	Severe: seepage, wetness.	Severe: cutbanks cave.	Large stones, slope, cutbanks cave.	Large stones, wetness.	Large stones, droughty.
123C---Sheepscot	Severe: seepage, slope.	Severe: seepage, wetness.	Severe: cutbanks cave.	Large stones, slope, cutbanks cave.	Slope, large stones, wetness.	Large stones, slope, droughty.
124B---Sunapee	Severe: seepage.	Severe: piping, wetness.	Severe: cutbanks cave.	Slope, cutbanks cave.	Wetness, too sandy.	Favorable.
124C, 124D, 124E--Sunapee	Severe: seepage, slope.	Severe: piping, wetness.	Severe: cutbanks cave.	Slope, cutbanks cave.	Slope, wetness, too sandy.	Slope.
125B---Berkshire	Severe: seepage.	Severe: piping.	Severe: no water.	Deep to water	Large stones---	Large stones, droughty.
125C, 125D, 125E--Berkshire	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones.	Large stones, slope, droughty.
127C, 127D, 127E--Houghtonville	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, erodes easily.	Slope, erodes easily, rooting depth.
128C*, 128D*, 128E*:						
Rawsonville	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.
Houghtonville---	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, erodes easily.	Slope, erodes easily, rooting depth.
129D*, 129F*:						
Killington	Severe: depth to rock, slope.	Severe: seepage, piping, large stones.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Rawsonville	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.
130B*:						
Tunbridge	Severe: seepage.	Severe: piping.	Severe: no water.	Deep to water	Large stones, depth to rock.	Large stones, droughty.
Berkshire	Severe: seepage.	Severe: piping.	Severe: no water.	Deep to water	Large stones---	Large stones, droughty.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
130C*, 130D*, 130E*:						
Tunbridge	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Berkshire	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones.	Large stones, slope, droughty.
131D*, 131E*:						
Lyman	Severe: depth to rock, slope.	Severe: thin layer, piping.	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, droughty, depth to rock.
Tunbridge	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Rock outcrop	Severe: depth to rock, slope.	Severe: thin layer.	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, depth to rock.
132C*, 132E*:						
Glebe	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, erodes easily.
Stratton	Severe: depth to rock, slope.	Severe: seepage, piping, large stones.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, erodes easily.
134F*:						
Stratton	Severe: depth to rock, slope.	Severe: seepage, piping, large stones.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, erodes easily.
Londonderry	Severe: depth to rock, slope.	Severe: thin layer.	Severe: no water.	Deep to water	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.
Ricker	Severe: depth to rock, slope.	Severe: thin layer.	Severe: deep to water.	Depth to rock, slope.	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.
135D, 135E-------- Mundal	Severe: slope.	Severe: seepage, piping.	Severe: no water.	Percs slowly, frost action, slope.	Slope, large stones, erodes easily.	Large stones, slope, erodes easily.
138C Berkshire	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones, soil blowing.	Large stones, slope.
139B Sunapee	Severe: seepage.	Severe: piping, wetness.	Severe: cutbanks cave.	Slope, cutbanks cave.	Wetness, too sandy.	Favorable.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
139C---------- Sunapee	Severe: seepage, slope.	Severe: piping, wetness.	Severe: cutbanks cave.	Slope, cutbanks cave.	Slope, wetness, too sandy.	Slope.
140C, 140D, 140E-- Benson	Severe: depth to rock, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
148B*:						
Bomoseen---------	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Percs slowly, large stones, slope.	Large stones, erodes easily, wetness.	Large stones, erodes easily.
Pittstown--------	Moderate: slope.	Severe: piping.	Severe: no water.	Percs slowly, slope.	Percs slowly, wetness.	Percs slowly, rooting depth.
148C*, 148D*:						
Bomoseen---------	Severe: slope.	Severe: piping.	Severe: no water.	Percs slowly, large stones, slope.	Slope, large stones, erodes easily.	Large stones, slope, erodes easily.
Pittstown--------	Severe: slope.	Severe: piping.	Severe: no water.	Percs slowly, slope.	Slope, percs slowly, wetness.	Slope, percs slowly, rooting depth.
149B*:						
Bomoseen---------	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Percs slowly, large stones, slope.	Large stones, erodes easily, wetness.	Large stones, erodes easily.
Pittstown--------	Moderate: slope.	Severe: piping.	Severe: no water.	Percs slowly, slope.	Large stones, percs slowly, wetness.	Large stones, rooting depth.
149C*, 149D*, 149E*:						
Bomoseen--------	Severe: slope.	Severe: piping.	Severe: no water.	Percs slowly, large stones, slope.	Slope, large stones, erodes easily.	Large stones, slope, erodes easily.
Pittstown-------	Severe: slope.	Severe: piping.	Severe: no water.	Percs slowly, slope.	Slope, large stones, percs slowly.	Large stones, slope, rooting depth.
150A---------- Peacham	Moderate: slope.	Severe: piping, ponding.	Severe: slow refill.	Ponding, percs slowly, frost action.	Ponding, rooting depth, percs slowly.	Wetness, rooting depth, percs slowly.
152---------- Lyons	Slight---------	Severe: wetness.	Severe: slow refill.	Percs slowly, frost action.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, rooting depth.
161A---------- Elmridge	Slight---------	Moderate: piping, hard to pack, wetness.	Severe: no water.	Percs slowly, frost action.	Erodes easily, wetness, percs slowly.	Erodes easily, percs slowly.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
161B---------- Elmridge	Moderate: slope.	Moderate: piping, hard to pack, wetness.	Severe: no water.	Percs slowly, frost action, slope.	Erodes easily, wetness, percs slowly.	Erodes easily, percs slowly.
163---------- Canandaigua	Slight---------	Severe: piping, wetness.	Severe: slow refill.	Frost action---	Erodes easily, wetness.	Wetness, erodes easily.
175---------- Wappinger	Severe: seepage.	Severe: piping.	Severe: cutbanks cave.	Deep to water	Not needed-----	Not needed.
177---------- Pawling	Severe: seepage.	Severe: seepage, wetness.	Severe: cutbanks cave.	Flooding, wetness, poor outlets.	Not needed-----	Not needed.
202E*:						
Rawsonville------	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.
Killington-------	Severe: depth to rock, slope.	Severe: seepage, piping, large stones.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
203D*:						
Peru----------	Severe: slope.	Severe: piping.	Severe: no water.	Percs slowly, frost action, slope.	Slope, wetness, percs slowly.	Slope, rooting depth, percs slowly.
Marlow----------	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, percs slowly.	Slope, rooting depth, percs slowly.
205D*:						
Tunbridge--------	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Berkshire--------	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones.	Large stones, slope, droughty.
Marlow----------	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, percs slowly.	Slope, rooting depth, percs slowly.
213E*:						
Glebe----------	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, erodes easily.
Stratton---------	Severe: depth to rock, slope.	Severe: seepage, piping, large stones.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, erodes easily.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
221F*:						
Tunbridge	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Berkshire	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones.	Large stones, slope, droughty.
402D*:						
Tunbridge	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Lyman	Severe: depth to rock, slope.	Severe: thin layer, piping.	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, droughty, depth to rock.
403C*:						
Brayton	Moderate: seepage, slope.	Severe: piping, wetness.	Severe: no water.	Percs slowly, frost action, slope.	Wetness, percs slowly.	Wetness.
Cabot	Moderate: slope.	Severe: piping, wetness.	Severe: no water.	Percs slowly, large stones, frost action.	Large stones, wetness, rooting depth.	Large stones, wetness, rooting depth.
Pinnebog	Severe: seepage.	Severe: excess humus, ponding.	Severe: slow refill.	Ponding, subsides, frost action.	Ponding, soil blowing.	Wetness.
405D*:						
Tunbridge	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Berkshire	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones.	Large stones, slope, droughty.
505D*:						
Berkshire	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, large stones, soil blowing.	Large stones, slope.
Colton	Severe: seepage, slope.	Severe: seepage.	Severe: no water.	Deep to water	Slope, large stones, too sandy.	Large stones, slope, droughty.
702F*:						
Killington	Severe: depth to rock, slope.	Severe: seepage, piping, large stones.	Severe: no water.	Deep to water	Slope, large stones, depth to rock.	Large stones, slope, droughty.
Ricker	Severe: depth to rock, slope.	Severe: thin layer.	Severe: deep to water.	Depth to rock, slope.	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
702F*:						
Rock outcrop-----	Severe: depth to rock, slope.	Severe: thin layer.	Severe: no water.	Deep to water	Slope, depth to rock.	Slope, depth to rock.
703D*:						
Mundal-----------	Severe: slope.	Severe: seepage, piping.	Severe: no water.	Percs slowly, frost action, slope.	Slope, large stones, erodes easily.	Large stones, slope, erodes easily.
Cabot-----------	Severe: slope.	Severe: piping, wetness.	Severe: no water.	Percs slowly, large stones, frost action.	Slope, large stones, wetness.	Large stones, wetness, slope.
705D*:						
Rawsonville------	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.
Houghtonville----	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, erodes easily.	Slope, erodes easily, rooting depth.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 15.--ENGINEERING INDEX PROPERTIES

(The symbol < means less than; > means more than. Absence of an entry indicates that data were not estimated)

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
1B---------- Marlow	0-8	Fine sandy loam	SM, ML, CL-ML, SC	A-2, A-4	0-10	90-100	75-90	50-90	30-80	<30	NP-10
	8-23	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	75-95	60-90	40-85	20-65	<30	NP-10
	23-60	Fine sandy loam, loam, gravelly fine sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	70-90	60-85	35-80	20-60	<30	NP-10
1C---------- Marlow	0-7	Fine sandy loam	SM, ML, CL-ML, SC	A-2, A-4	0-10	90-100	75-90	50-90	30-80	<30	NP-10
	7-23	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	75-95	60-90	40-85	20-65	<30	NP-10
	23-60	Fine sandy loam, loam, gravelly fine sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	70-90	60-85	35-80	20-60	<30	NP-10
1D---------- Marlow	0-6	Fine sandy loam	SM, ML, CL-ML, SC	A-2, A-4	0-10	90-100	75-90	50-90	30-80	<30	NP-10
	6-23	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	75-95	60-90	40-85	20-65	<30	NP-10
	23-60	Fine sandy loam, loam, gravelly fine sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	70-90	60-85	35-80	20-60	<30	NP-10
2C, 2D, 2E------- Marlow	0-4	Fine sandy loam	SM, ML, CL-ML, SC	A-2, A-4	5-15	90-100	75-90	50-90	30-80	<30	NP-10
	4-23	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	75-95	60-90	40-85	20-65	<30	NP-10
	23-60	Fine sandy loam, loam, gravelly fine sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	70-90	60-85	35-80	20-60	<30	NP-10
3B, 3C---------- Peru	0-5	Gravelly fine sandy loam.	SM, ML, CL-ML	A-2, A-4	0-10	60-80	55-75	40-75	25-70	<30	NP-10
	5-17	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	75-95	60-90	40-85	20-65	<30	NP-10
	17-60	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	70-95	55-95	35-80	20-60	<30	NP-10
4B---------- Peru	0-4	Gravelly fine sandy loam.	SM, ML, CL-ML, SC	A-2, A-4	5-15	90-100	75-90	50-90	30-80	<30	NP-10
	4-17	Fine sandy loam, loam, gravelly fine sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	75-95	60-90	40-85	20-65	<30	NP-10
	17-60	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	70-95	55-95	35-80	20-60	<30	NP-10

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
4C---------- Peru	0-3	Gravelly fine sandy loam.	SM, ML, CL-ML, SC	A-2, A-4	5-15	90-100	75-90	50-90	30-80	<30	NP-10
	3-17	Fine sandy loam, loam, gravelly fine sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	75-95	60-90	40-85	20-65	<30	NP-10
	17-60	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	70-95	55-95	35-80	20-60	<30	NP-10
4D---------- Peru	0-2	Gravelly fine sandy loam.	SM, ML, CL-ML, SC	A-2, A-4	5-15	90-100	75-90	50-90	30-80	<30	NP-10
	2-17	Fine sandy loam, loam, gravelly fine sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	75-95	60-90	40-85	20-65	<30	NP-10
	17-60	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	70-95	55-95	35-80	20-60	<30	NP-10
6A---------- Cabot	0-6	Gravelly fine sandy loam.	ML, SM, CL-ML, SM-SC	A-4, A-2	5-20	80-95	75-95	50-90	30-75	<25	NP-5
	6-12	Loam, fine sandy loam, gravelly sandy loam.	ML, SM, CL-ML, SM-SC	A-4, A-2	0-30	80-95	65-95	50-85	30-70	<25	NP-5
	12-60	Loam, gravelly fine sandy loam, very gravelly sandy loam.	ML, SM, CL-ML, SM-SC	A-4, A-2	0-35	80-95	65-95	45-85	25-70	<25	NP-5
7C---------- Brayton	0-7	Loam----------	SM, ML, GM, SC	A-1, A-2, A-4	10-25	65-95	55-90	35-90	20-80	<30	NP-10
	7-15	Fine sandy loam, gravelly sandy loam, silt loam.	SM, ML, GM, SC	A-1, A-2, A-4	0-10	65-95	55-90	35-90	20-80	<30	NP-10
	15-60	Gravelly sandy loam, gravelly fine sandy loam, loam.	SM, ML, GM, SC	A-1, A-2, A-4	0-10	65-95	55-90	35-85	20-70	<30	NP-10
9*: Pits.											
Dumps.											
11C*: Taconic---------	0-3	Channery silt loam.	SM, ML, CL-ML, CL	A-2, A-4, A-6	5-40	55-80	50-75	40-75	30-70	15-35	3-15
	3-18	Channery loam, very channery loam, very channery silt loam.	GM, GC, SM, GM-GC	A-1, A-2, A-4, A-6	5-15	30-60	25-55	20-55	15-50	15-30	3-15
	18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
11C*:											
Hubbardton------	0-3	Very flaggy silt loam.	SM, GM, GM-GC, SM-SC	A-1, A-2, A-4	30-55	60-75	55-70	40-70	20-65	25-37	4-10
	3-5	Very channery silt loam, very flaggy silt loam.	SM, GM, GM-GC, SM-SC	A-1, A-2, A-4	30-55	60-75	55-70	40-70	20-65	25-35	4-10
	5	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
12F*:											
Taconic---------	0-3	Channery silt loam.	SM, ML, CL-ML, CL	A-2, A-4, A-6	5-40	55-80	50-75	40-75	30-70	15-35	3-15
	3-18	Channery loam, very channery loam, very channery silt loam.	GM, GC, SM, GM-GC	A-1, A-2, A-4, A-6	5-15	30-60	25-55	20-55	15-50	15-30	3-15
	18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Hubbardton------	0-3	Very flaggy silt loam.	SM, GM, GM-GC, SM-SC	A-1, A-2, A-4	30-55	60-75	55-70	40-70	20-65	25-37	4-10
	3-5	Very channery silt loam, very flaggy silt loam.	SM, GM, GM-GC, SM-SC	A-1, A-2, A-4	30-55	60-75	55-70	40-70	20-65	25-35	4-10
	5	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Macomber---------	0-5	Channery silt loam.	SM, ML, CL-ML, CL	A-4, A-6	5-30	55-80	50-75	40-75	30-70	15-35	3-15
	5-36	Channery loam, very channery loam, very channery silt loam.	GM, GM-GC, GC	A-1, A-2, A-4, A-6	5-15	30-55	25-50	20-50	15-45	15-35	3-15
	36	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
13B, 13C--------- Hinckley	0-6	Gravelly loamy fine sand.	SM, SP-SM, GM, GP-GM	A-1, A-2	0-10	60-85	50-75	25-60	10-35	---	NP
	6-23	Gravelly loamy fine sand, loamy fine sand, very gravelly loamy coarse sand.	SM, GM, GP-GM, SP-SM	A-1, A-2, A-3	0-20	50-95	30-85	15-70	2-30	---	NP
	23-60	Stratified very gravelly loamy fine sand to cobbly coarse sand.	SP, SP-SM, GP, GP-GM	A-1	5-25	50-65	30-50	10-40	0-20	---	NP

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
13D--Hinckley	0-5	Gravelly loamy fine sand.	SM, SP-SM, GM, GP-GM	A-1, A-2	0-10	60-85	50-75	25-60	10-35	---	NP
	5-23	Gravelly loamy fine sand, loamy fine sand, very gravelly loamy coarse sand.	SM, GM, GP-GM, SP-SM	A-1, A-2, A-3	0-20	50-95	30-85	15-70	2-30	---	NP
	23-60	Stratified very gravelly loamy fine sand to cobbly coarse sand.	SP, SP-SM, GP, GP-GM	A-1	5-25	50-65	30-50	10-40	0-20	---	NP
13E--Hinckley	0-4	Gravelly loamy fine sand.	SM, SP-SM, GM, GP-GM	A-1, A-2	0-10	60-85	50-75	25-60	10-35	---	NP
	4-23	Gravelly loamy fine sand, loamy fine sand, very gravelly loamy coarse sand.	SM, GM, GP-GM, SP-SM	A-1, A-2, A-3	0-20	50-95	30-85	15-70	2-30	---	NP
	23-60	Stratified very gravelly loamy fine sand to cobbly coarse sand.	SP, SP-SM, GP, GP-GM	A-1	5-25	50-65	30-50	10-40	0-20	---	NP
14A, 14B--Sudbury	0-3	Fine sandy loam	SM, ML	A-2, A-4, A-1	0-5	85-100	70-100	40-90	20-55	---	NP
	3-27	Sandy loam, fine sandy loam, gravelly sandy loam.	SM	A-2, A-4, A-1	0-5	85-100	60-100	40-80	20-50	---	NP
	27-60	Stratified sand and gravel.	SP, SP-SM, GP, GP-GM	A-1	10-40	35-70	25-65	15-45	0-10	---	NP
15A--Walpole	0-9	Fine sandy loam	SM, ML	A-2, A-4	0-5	90-100	75-100	55-90	25-60	<25	NP-3
	9-20	Sandy loam, fine sandy loam, gravelly sandy loam.	SM	A-2, A-4	0-5	85-100	60-100	40-85	20-50	---	NP
	20-60	Stratified loamy fine sand to very gravelly coarse sand.	SP, SM, GP, GM	A-1, A-2, A-3	0-20	55-100	50-100	25-80	2-30	---	NP
18B, 18C, 18D, 18E--Windsor	0-2	Loamy sand-------	SM	A-1, A-2	0	95-100	80-100	45-90	20-35	---	NP
	2-24	Loamy sand, loamy fine sand, sand.	SM	A-1, A-2	0	95-100	80-100	45-90	15-30	---	NP
	24-60	Sand, fine sand, loamy sand.	SM, SP, SP-SM	A-1, A-2, A-3	0	90-100	75-100	40-90	2-30	---	NP
21--Rippowam	0-5	Fine sandy loam	SM, ML	A-2, A-4	0	95-100	80-100	55-95	30-75	<25	NP-4
	5-25	Fine sandy loam, sandy loam.	SM	A-2, A-4	0	95-100	80-100	55-85	30-50	<20	NP-2
	25-60	Stratified loamy fine sand to very gravelly coarse sand.	SP, SP-SM, SM	A-1, A-2, A-3	0-10	70-100	45-100	25-75	0-25	---	NP

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
22----------	0-11	Mucky silt loam	OL, ML	A-4, A-7	0	100	100	95-100	70-95	<50	5-20
Saco	11-22	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	70-95	<40	NP-10
	22-60	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	90-100	70-95	<40	NP-10
23----------	0-19	Muck----------	PT	A-8	---	---	---	---	---	---	---
Adrian	19-60	Sand, fine sand, loamy sand.	SP, SM	A-2, A-3, A-1	0	80-100	60-100	30-80	0-35	---	NP
24----------	0-35	Muck----------	PT	A-8	0	---	---	---	---	---	---
Pinnebog	35-60	Mucky peat-------	PT	A-8	0	---	---	---	---	---	---
25A, 25B, 25C----	0-8	Silt loam--------	ML	A-4	0	100	95-100	90-100	60-95	<35	NP-8
Belgrade	8-32	Silt loam, very fine sandy loam, loamy very fine sand.	ML	A-4	0	100	95-100	85-100	50-90	<35	NP-8
	32-60	Silt loam, loamy very fine sand, sand and gravel.	ML, SM	A-1, A-2, A-4	0	75-100	55-100	35-100	15-90	<35	NP-8
26A----------	0-9	Silt loam--------	ML, CL-ML	A-4	0	100	95-100	80-100	55-95	<25	NP-5
Raynham	9-22	Silt loam, silt, very fine sandy loam.	ML, CL-ML	A-4	0	100	95-100	80-100	55-95	<25	NP-5
	22-60	Silt loam, silt, very fine sandy loam.	ML, CL-ML	A-4	0	100	95-100	80-100	70-95	<25	NP-5
28*:											
Udifluvents.											
Fluvaquents.											
29*:											
Histosols.											
Aquents.											
30B----------	0-12	Fine sandy loam	SM, ML, GM	A-2, A-4	0-10	85-95	75-90	50-80	20-65	<40	NP-10
Paxton	12-26	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, GM	A-2, A-4	0-15	65-95	60-90	45-80	25-65	<30	NP-7
	26-60	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, GM	A-1, A-2, A-4	0-15	65-95	60-90	40-75	20-60	<30	NP-7
30C----------	0-10	Fine sandy loam	SM, ML, GM	A-2, A-4	0-10	85-95	75-90	50-80	20-65	<40	NP-10
Paxton	10-26	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, GM	A-2, A-4	0-15	65-95	60-90	45-80	25-65	<30	NP-7
	26-60	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, GM	A-1, A-2, A-4	0-15	65-95	60-90	40-75	20-60	<30	NP-7

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
30D---------- Paxton	0-9	Fine sandy loam	SM, ML, GM	A-2, A-4	0-10	85-95	75-90	50-80	20-65	<40	NP-10
	9-26	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, GM	A-2, A-4	0-15	65-95	60-90	45-80	25-65	<30	NP-7
	26-60	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, GM	A-1, A-2, A-4	0-15	65-95	60-90	40-75	20-60	<30	NP-7
31B, 31C, 31D---- Paxton	0-9	Fine sandy loam	SM, ML, GM	A-2, A-4	5-20	65-95	60-90	40-80	25-65	<40	NP-10
	9-26	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, GM	A-2, A-4	0-15	65-95	60-90	45-80	25-65	<30	NP-7
	26-60	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, GM	A-1, A-2, A-4	0-15	65-95	60-90	40-75	20-60	<30	NP-7
31E---------- Paxton	0-7	Fine sandy loam	SM, ML, GM	A-2, A-4	5-20	65-95	60-90	40-80	25-65	<40	NP-10
	7-26	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, GM	A-2, A-4	0-15	65-95	60-90	45-80	25-65	<30	NP-7
	26-60	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, GM	A-1, A-2, A-4	0-15	65-95	60-90	40-75	20-60	<30	NP-7
38A---------- Tisbury	0-12	Silt loam--------	ML	A-4	0	95-100	90-100	85-100	70-95	<35	NP-7
	12-22	Silt loam, very fine sandy loam.	ML	A-4	0	95-100	90-100	85-100	65-95	<35	NP-5
	22-60	Extremely gravelly coarse sand, very gravelly coarse sand, sand.	SP, GP, SM, GM	A-1, A-3	0-35	30-100	20-100	15-70	0-25	---	NP
39B*:											
Galway----------	0-8	Silt loam--------	ML, SM	A-6, A-7	0-5	80-100	75-100	65-100	45-90	35-45	10-15
	8-24	Fine sandy loam, silt loam, gravelly fine sandy loam.	ML, GM, GM-GC, CL-ML	A-2, A-4, A-1, A-6	0-5	60-95	50-95	35-90	20-75	20-40	3-15
	24	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Nellis----------	0-8	Silt loam--------	ML, SM	A-4	0-5	80-100	75-95	50-95	35-85	30-35	1-5
	8-21	Loam, silt loam, gravelly fine sandy loam.	ML, GM, SM, CL-ML	A-2, A-4, A-1	0-5	55-95	50-90	35-90	20-80	20-25	1-5
	21-60	Sandy loam, gravelly fine sandy loam, very gravelly fine sandy loam.	GM, SM, GM-GC, SM-SC	A-2, A-4, A-1	0-5	40-95	35-90	20-85	10-70	<25	NP-5
Farmington------	0-8	Silt loam--------	ML, CL, SM, SC	A-2, A-4, A-6	0-5	80-95	75-90	50-85	30-80	20-35	3-15
	8-12	Silt loam, loam, gravelly fine sandy loam.	ML, CL, GM, GC	A-2, A-4, A-6, A-1	0-5	60-95	55-90	35-85	20-80	20-35	3-15
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
40C*:											
Galway	0-3	Silt loam	ML, SM	A-6, A-7	0-5	80-100	75-100	65-100	45-90	35-45	10-15
	3-24	Fine sandy loam, silt loam, gravelly fine sandy loam.	ML, GM, GM-GC, CL-ML	A-2, A-4, A-1, A-6	0-5	60-95	50-95	35-90	20-75	20-40	3-15
	24	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Nellis	0-8	Silt loam	ML, SM	A-4	0-5	80-100	75-95	50-95	35-85	30-35	1-5
	8-21	Loam, silt loam, gravelly fine sandy loam.	ML, GM, SM, CL-ML	A-2, A-4, A-1	0-5	55-95	50-90	35-90	20-80	20-25	1-5
	21-60	Sandy loam, gravelly fine sandy loam, very gravelly fine sandy loam.	GM, SM, GM-GC, SM-SC	A-2, A-4, A-1	0-5	40-95	35-90	20-85	10-70	<25	NP-5
Farmington	0-3	Silt loam	ML, CL, SM, SC	A-2, A-4, A-6	0-5	80-95	75-90	50-85	30-80	20-35	3-15
	3-12	Silt loam, loam, gravelly fine sandy loam.	ML, CL, GM, GC	A-2, A-4, A-6, A-1	0-5	60-95	55-90	35-85	20-80	20-35	3-15
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
40D*:											
Galway	0-3	Silt loam	ML, GM, SM	A-2, A-6, A-7	5-15	55-80	50-75	45-75	30-65	35-45	10-15
	3-24	Fine sandy loam, silt loam, gravelly fine sandy loam.	ML, GM, GM-GC, CL-ML	A-2, A-4, A-1, A-6	0-5	60-95	50-95	35-90	20-75	20-40	3-15
	24	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Nellis	0-2	Silt loam	ML, SM, GM	A-2, A-4, A-1	5-15	55-80	50-75	35-70	20-65	30-35	1-5
	2-21	Loam, silt loam, gravelly fine sandy loam.	ML, GM, SM, CL-ML	A-2, A-4, A-1	0-5	55-95	50-90	35-90	20-80	20-25	1-5
	21-60	Sandy loam, gravelly fine sandy loam, very gravelly fine sandy loam.	GM-GC, GM, SM, SM-SC	A-1, A-2, A-4	0-5	40-95	35-90	20-85	10-70	<25	NP-5
Farmington	0-3	Silt loam	ML, CL, SM, SC	A-2, A-4, A-6, A-1	5-15	45-95	50-90	35-85	20-65	20-35	3-15
	3-12	Silt loam, loam, gravelly fine sandy loam.	ML, CL, GM, GC	A-2, A-4, A-6, A-1	0-5	60-95	55-90	35-85	20-80	20-35	3-15
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
41C*, 41E*:											
Farmington	0-3	Silt loam	ML, CL, SM, SC	A-2, A-4, A-6, A-1	5-15	55-95	50-90	35-85	20-65	20-35	3-15
	3-12	Silt loam, loam, gravelly fine sandy loam.	ML, CL, GM, GC	A-2, A-4, A-6, A-1	0-5	60-95	55-90	35-85	20-80	20-35	3-15
	12	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Galway	0-3	Silt loam	ML, GM, SM	A-2, A-6, A-7	5-15	55-80	50-75	45-75	30-65	35-45	10-15
	3-24	Fine sandy loam, silt loam, gravelly fine sandy loam.	ML, GM, GM-GC, CL-ML	A-2, A-4, A-1, A-6	0-5	60-95	50-95	35-90	20-75	20-40	3-15
	24	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Galoo	0-3	Silt loam	CL, ML, SM, CL-ML	A-4, A-6, A-2	5-15	80-100	75-95	50-95	30-85	15-30	3-15
	3	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
42C*, 42D*:											
Macomber	0-6	Channery silt loam.	SM, ML, CL-ML, CL	A-4, A-6	5-30	55-80	50-75	40-75	30-70	15-35	3-15
	6-36	Channery loam, very channery loam, very channery silt loam.	GM, GM-GC, GC	A-1, A-2, A-4, A-6	5-15	30-55	25-50	20-50	15-45	15-35	3-15
	36	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Taconic	0-3	Channery silt loam.	SM, ML, CL-ML, CL	A-2, A-4, A-6	5-40	55-80	50-75	40-75	30-70	15-35	3-15
	3-18	Channery loam, very channery loam, very channery silt loam.	GM, GC, SM, GM-GC	A-1, A-2, A-4, A-6	5-15	30-60	25-55	20-55	15-50	15-30	3-15
	18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
42F*:											
Macomber	0-5	Channery silt loam.	SM, ML, CL-ML, CL	A-4, A-6	5-30	55-80	50-75	40-75	30-70	15-35	3-15
	5-36	Channery loam, very channery loam, very channery silt loam.	GM, GM-GC, GC	A-1, A-2, A-4, A-6	5-15	30-55	25-50	20-50	15-45	15-35	3-15
	36	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
42F*:											
Taconic	0-3	Channery silt loam.	SM, ML, CL-ML, CL	A-2, A-4, A-6	5-40	55-80	50-75	40-75	30-70	15-35	3-15
	3-18	Channery loam, very channery loam, very channery silt loam.	GM, GC, SM, GM-GC	A-1, A-2, A-4, A-6	5-15	30-60	25-55	20-55	15-50	15-30	3-15
	18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
43C*:											
Taconic	0-3	Channery silt loam.	SM, ML, CL-ML, CL	A-2, A-4, A-6	5-40	55-80	50-75	40-75	30-70	15-35	3-15
	3-18	Channery loam, very channery loam, very channery silt loam.	GM, GC, SM, GM-GC	A-1, A-2, A-4, A-6	5-15	30-60	25-55	20-55	15-50	15-30	3-15
	18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Macomber	0-6	Channery silt loam.	SM, ML, CL-ML, CL	A-4, A-6	5-30	55-80	50-75	40-75	30-70	15-35	3-15
	6-36	Channery loam, very channery loam, very channery silt loam.	GM, GM-GC, GC	A-1, A-2, A-4, A-6	5-15	30-55	25-50	20-50	15-45	15-35	3-15
	36	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
44B, 44C	0-5	Silt loam	ML	A-4	0-15	95-100	90-95	80-95	55-85	<33	NP-4
Dutchess	5-26	Silt loam, channery silt loam, gravelly loam.	ML, SM, GM	A-4	5-30	70-100	65-95	55-95	40-85	<33	NP-4
	26-60	Channery silt loam, very channery fine sandy loam, very gravelly sandy loam.	ML, SM, GM	A-4, A-2-4, A-1-B	5-30	55-80	50-75	30-75	15-65	<25	NP-4
44D	0-4	Silt loam	ML	A-4	0-15	95-100	90-95	80-95	55-85	<33	NP-4
Dutchess	4-26	Silt loam, channery silt loam, gravelly loam.	ML, SM, GM	A-4	5-30	70-100	65-95	55-95	40-85	<33	NP-4
	26-60	Channery silt loam, very channery fine sandy loam, very gravelly sandy loam.	ML, SM, GM	A-4, A-2-4, A-1-B	5-30	55-80	50-75	30-75	15-65	<25	NP-4

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
47B, 47C, 47D, 47E----------	0-4	Silt loam--------	ML, SM	A-4	1-20	85-100	60-95	50-95	40-85	<33	NP-4
Dutchess	4-26	Silt loam, channery silt loam, gravelly loam.	ML, SM, GM	A-4	5-30	70-100	65-95	55-95	40-85	<33	NP-4
	26-60	Channery silt loam, very channery fine sandy loam, very gravelly sandy loam.	ML, SM, GM	A-4, A-2-4, A-1-B	5-30	55-80	50-75	30-75	15-65	<25	NP-4
50A----------	0-9	Silt loam--------	CL, SC	A-6, A-7	0	80-95	75-90	65-90	45-80	35-45	12-20
Massena	9-26	Gravelly fine sandy loam, channery loam, loam.	GC, CL, CL-ML, SM-SC	A-4, A-6, A-2, A-1	0-5	55-95	50-90	35-85	15-65	15-25	5-15
	26-60	Gravelly fine sandy loam, channery loam, very gravelly sandy loam.	GC, CL, SC, CL-ML	A-4, A-6, A-2, A-1	0-5	40-95	35-90	20-85	10-65	15-25	5-15
52B*:											
Macomber--------	0-6	Channery silt loam.	GM, SM, ML, CL-ML	A-2, A-4, A-6	0-15	55-80	50-75	40-75	30-70	15-35	3-15
	6-36	Very channery silt loam, very channery loam.	GM, GM-GC, GC	A-1, A-2, A-4	5-15	30-55	25-50	20-50	15-45	15-30	3-15
	36	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Dutchess--------	0-4	Silt loam--------	ML	A-4	0-15	95-100	90-95	80-95	55-85	<33	NP-4
	4-26	Silt loam, channery silt loam, gravelly loam.	ML, SM, GM	A-4	5-30	70-100	65-95	55-95	40-85	<33	NP-4
	26-60	Channery silt loam, very channery fine sandy loam, very gravelly sandy loam.	ML, SM, GM	A-4, A-2-4, A-1-B	5-30	55-80	50-75	30-75	15-65	<25	NP-4
53----------	0-17	Silt loam--------	ML, CL, CL-ML	A-4	0	100	100	90-100	85-100	20-28	3-9
Elvers	17-60	Muck----------	PT	A-8	0	---	---	---	---	---	---
54A----------	0-9	Fine sandy loam	SM, ML	A-4	0-2	90-100	75-100	60-95	40-85	<35	NP-7
Ninigret	9-20	Fine sandy loam, very fine sandy loam, silt loam.	SM, ML	A-2, A-4	0-2	90-100	75-100	60-95	30-80	<25	NP-4
	20-60	Stratified loamy fine sand to very gravelly coarse sand.	SP, SM, GP, GM	A-1, A-2, A-3	0-25	45-100	30-100	15-80	2-30	---	NP

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
56B*, 56C*, 56D*, 56E*:											
Colton	0-6	Very gravelly fine sandy loam, very gravelly sandy loam.	GM, SM, GP-GM, SP-SM	A-1, A-2, A-4	15-25	35-80	30-75	20-65	10-40	---	NP
	6-32	Gravelly loamy sand, extremely gravelly sand, extremely gravelly loamy sand.	SM, GM, SP, GP	A-1	5-20	30-80	25-75	20-50	2-20	---	NP
	32-60	Very gravelly sand, very cobbly sand, extremely gravelly sand.	GP, SP, GW, SW	A-1	10-45	20-55	15-50	10-30	0-5	---	NP
Duxbury	0-1	Fine sandy loam	SM, ML	A-4, A-2	5-15	85-100	65-100	40-85	30-55	---	NP
	1-18	Silt loam, fine sandy loam, gravelly fine sandy loam.	SM, ML, MH	A-4, A-5, A-2	0	85-100	70-100	40-85	30-55	<52	NP-10
	18-60	Loamy sand, very gravelly loamy sand, very gravelly coarse sand.	GP, GW, GM, SP	A-1	0-25	40-90	30-85	15-50	0-15	---	NP
57B*:											
Duxbury	0-6	Fine sandy loam	SM, ML	A-4, A-2	0	85-100	80-100	70-95	40-65	---	NP
	6-18	Silt loam, fine sandy loam, gravelly fine sandy loam.	SM, ML, MH	A-4, A-5, A-2	0	85-100	70-100	40-85	30-55	<52	NP-10
	18-60	Loamy sand, very gravelly loamy sand, very gravelly coarse sand.	GP, GW, GM, SP	A-1	0-25	40-90	30-85	15-50	0-15	---	NP
Colton	0-6	Very gravelly fine sandy loam.	GM	A-1, A-2	10-20	35-55	30-50	20-40	15-30	<10	NP-2
	6-32	Gravelly loamy fine sand, extremely gravelly sand, cobbly coarse sand.	SM, GM, SP, GP	A-1	5-20	30-80	25-75	20-50	2-20	---	NP
	32-60	Very gravelly loamy sand, very cobbly sand, extremely gravelly coarse sand.	GP, SP, GW, SW	A-1	10-45	20-55	15-50	10-30	0-5	---	NP

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
58C*:											
Colton	0-6	Very gravelly fine sandy loam.	GM	A-1, A-2	10-20	35-55	30-50	20-40	15-30	<10	NP-2
	6-32	Gravelly loamy sand, extremely gravelly sand, extremely gravelly loamy sand.	SM, GM, SP, GP	A-1	5-20	30-80	25-75	20-50	2-20	---	NP
	32-60	Very gravelly loamy sand, very cobbly sand, extremely gravelly sand.	GP, SP, GW, SW	A-1	10-45	20-55	15-50	10-30	0-5	---	NP
Duxbury	0-5	Fine sandy loam	SM, ML	A-4, A-2	0	85-100	80-100	70-95	40-65	---	NP
	5-18	Silt loam, fine sandy loam, gravelly fine sandy loam.	SM, ML, MH	A-4, A-5, A-2	0	85-100	70-100	40-85	30-55	<52	NP-10
	18-60	Loamy sand, very gravelly loamy sand, very gravelly coarse sand.	GP, GW, GM, SP	A-1	0-25	40-90	30-85	15-50	0-15	---	NP
58D*:											
Colton	0-6	Very gravelly fine sandy loam.	GM	A-1, A-2	10-20	35-55	30-50	20-40	15-30	<10	NP-2
	6-32	Gravelly loamy sand, extremely gravelly sand, extremely gravelly loamy sand.	SM, GM, SP, GP	A-1	5-20	30-80	25-75	20-50	2-20	---	NP
	32-60	Very gravelly loamy sand, very cobbly sand, extremely gravelly sand.	GP, SP, GW, SW	A-1	10-45	20-55	15-50	10-30	0-5	---	NP
Duxbury	0-4	Fine sandy loam	SM, ML	A-4, A-2	0	85-100	80-100	70-95	40-65	---	NP
	4-18	Silt loam, fine sandy loam, gravelly fine sandy loam.	SM, ML, MH	A-4, A-5, A-2	0	85-100	70-100	40-85	30-55	<52	NP-10
	18-60	Loamy sand, very gravelly loamy sand, very gravelly coarse sand.	GP, GW, GM, SP	A-1	0-25	40-90	30-85	15-50	0-15	---	NP
59A--- Deerfield	0-11	Loamy sand---	SP-SM, SM	A-1, A-2, A-3, A-4	0	95-100	80-100	40-75	5-40	---	NP
	11-32	Loamy sand, sand, coarse sand.	SM, SP-SM	A-1, A-2, A-3	0	95-100	80-100	40-75	5-30	---	NP
	32-60	Sand, fine sand, coarse sand.	SP, SM	A-1, A-2, A-3	0	95-100	65-100	30-75	3-30	---	NP

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
61A, 61B--------- Eldridge	0-10	Fine sandy loam	SM, ML	A-4, A-2-4	0-5	100	95-100	50-85	15-55	---	NP
	10-30	Loamy fine sand, loamy coarse sand, sand.	SM, SP-SM	A-2-4, A-3, A-4	0-5	100	95-100	50-85	5-45	---	NP
	30-60	Stratified fine sand to clay.	SM, CL-ML, ML, SM-SC	A-4	0	95-100	90-100	70-100	35-90	<25	NP-5
62--------------- Enosburg	0-6	Loamy fine sand	SM	A-2-4, A-4, A-1-B	0-1	100	95-100	45-85	15-45	---	NP
	6-27	Sand, gravelly coarse sand, loamy fine sand.	SM	A-2-4, A-1, A-4	0-1	100	95-100	45-85	15-45	---	NP
	27-60	Silt, very fine sandy loam, silty clay loam.	ML, CL, CL-ML	A-4, A-6	0	100	100	85-100	50-100	<40	NP-16
64B, 64C, 64D---- Stockbridge	0-6	Gravelly silt loam.	ML, CL-ML, SM	A-4	0-10	70-80	60-75	45-65	35-55	20-40	3-12
	6-28	Loam, gravelly silt loam, gravelly loam.	ML, CL-ML	A-4	0-10	70-95	65-90	60-85	50-75	20-40	3-12
	28-60	Gravelly loam, silt loam, very gravelly fine sandy loam.	ML, CL-ML, SM, GM	A-2, A-4	0-10	50-90	35-85	30-80	25-75	15-40	NP-12
65B, 65C, 65D, 65E---------- Stockbridge	0-6	Gravelly silt loam.	ML, CL-ML, SM	A-4	5-15	70-95	60-90	45-85	35-75	20-40	3-12
	6-28	Loam, gravelly silt loam, gravelly loam.	ML, CL-ML	A-4	0-10	70-95	65-90	60-85	50-75	20-40	3-12
	28-60	Gravelly loam, silt loam, very gravelly fine sandy loam.	ML, CL-ML, SM, GM	A-2, A-4	0-10	50-90	35-85	30-80	25-75	15-40	NP-12
66B*: Georgia--------- Amenia----------	0-10	Loam----------	ML, CL, CL-ML	A-4	0-10	90-100	85-100	70-100	50-90	<30	NP-10
	10-30	Gravelly loam, silt loam, very gravelly fine sandy loam.	ML, SM, CL, SC	A-4, A-2	0-20	50-100	45-100	30-95	20-80	<25	NP-10
	30-60	Gravelly loam, very gravelly fine sandy loam, silt loam.	ML, SM, CL, SC	A-4, A-2	0-20	50-100	45-100	30-95	20-80	<25	NP-10
	0-8	Loam----------	ML, CL-ML, SM, SC	A-4	0-5	80-100	75-95	60-95	35-85	<30	NP-10
	8-24	Silt loam, gravelly loam, gravelly fine sandy loam.	ML, GM, GC, CL	A-2, A-4	0-5	55-95	50-90	40-85	25-70	<30	NP-10
	24-60	Gravelly fine sandy loam, fine sandy loam.	GM, GC, SM, SC	A-2, A-4	0-15	55-80	50-75	40-65	25-50	<30	NP-10

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
66C*:											
Georgia	0-9	Loam	ML, CL, CL-ML	A-4	0-10	90-100	85-100	70-100	50-90	<30	NP-10
	9-30	Gravelly loam, silt loam, very gravelly fine sandy loam.	ML, SM, CL, SC	A-4, A-2	0-20	50-100	45-100	30-95	20-80	<25	NP-10
	30-60	Gravelly loam, very gravelly fine sandy loam, silt loam.	ML, SM, CL, SC	A-4, A-2	0-20	50-100	45-100	30-95	20-80	<25	NP-10
Amenia	0-8	Loam	ML, CL-ML, SM, SC	A-4	0-5	80-100	75-95	60-95	35-85	<30	NP-10
	8-24	Silt loam, gravelly loam, gravelly fine sandy loam.	ML, GM, GC, CL	A-2, A-4	0-5	55-95	50-90	40-85	25-70	<30	NP-10
	24-60	Gravelly fine sandy loam, fine sandy loam.	GM, GC, SM, SC	A-2, A-4	0-15	55-80	50-75	40-65	25-50	<30	NP-10
67B*:											
Georgia	0-10	Loam	ML, CL, CL-ML	A-4	5-25	85-95	80-90	70-90	50-80	<30	NP-10
	10-30	Gravelly loam, silt loam, very gravelly fine sandy loam.	ML, SM, SC	A-4, A-2	0-20	50-100	45-100	30-95	20-90	<25	NP-10
	30-60	Gravelly loam, very gravelly fine sandy loam, silt loam.	ML, SM, CL, SC	A-4, A-2	0-20	50-100	45-100	30-95	20-80	<25	NP-10
Amenia	0-8	Loam	ML, SM, CL-ML, SC	A-2, A-4, A-1	5-10	55-80	50-75	35-70	20-65	<30	NP-10
	8-24	Silt loam, gravelly loam, gravelly fine sandy loam.	ML, GM, GC, CL	A-2, A-4	0-5	55-95	50-90	40-85	25-70	<30	NP-10
	24-60	Gravelly fine sandy loam, fine sandy loam.	GM, GC, SM, SC	A-2, A-4	0-15	55-80	50-75	40-65	25-50	<30	NP-10
67C*:											
Georgia	0-9	Loam	ML, CL, CL-ML	A-4	5-25	85-95	80-90	70-90	50-80	<30	NP-10
	9-30	Gravelly loam, silt loam, very gravelly fine sandy loam.	ML, SM, SC	A-4, A-2	0-20	50-100	45-100	30-95	20-90	<25	NP-10
	30-60	Gravelly loam, very gravelly fine sandy loam, silt loam.	ML, SM, CL, SC	A-4, A-2	0-20	50-100	45-100	30-95	20-80	<25	NP-10

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
67C*:											
Amenia	0-8	Loam	ML, SM, CL-ML, SC	A-2, A-4, A-1	5-10	55-80	50-75	35-70	20-65	<30	NP-10
	8-24	Silt loam, gravelly loam, gravelly fine sandy loam.	ML, GM, GC, CL	A-2, A-4	0-5	55-95	50-90	40-85	25-70	<30	NP-10
	24-60	Gravelly fine sandy loam, fine sandy loam.	GM, GC, SM, SC	A-2, A-4	0-15	55-80	50-75	40-65	25-50	<30	NP-10
67D*:											
Georgia	0-8	Loam	ML, CL, CL-ML	A-4	5-25	85-95	80-90	70-90	50-80	<30	NP-10
	8-30	Gravelly loam, silt loam, very gravelly fine sandy loam.	ML, SM, SC	A-4, A-2	0-20	50-100	45-100	30-95	20-90	<25	NP-10
	30-60	Gravelly loam, very gravelly fine sandy loam, silt loam.	ML, SM, CL, SC	A-4, A-2	0-20	50-100	45-100	30-95	20-80	<25	NP-10
Amenia	0-8	Loam	ML, SM, CL-ML, SC	A-2, A-4, A-1	5-10	55-80	50-75	35-70	20-65	<30	NP-10
	8-24	Silt loam, gravelly loam, gravelly fine sandy loam.	ML, GM, GC, CL	A-2, A-4	0-5	55-95	50-90	40-85	25-70	<30	NP-10
	24-60	Gravelly fine sandy loam, fine sandy loam.	GM, GC, SM, SC	A-2, A-4	0-15	55-80	50-75	40-65	25-50	<30	NP-10
68A Massena	0-9	Silt loam	GC, SC, CL	A-6, A-7, A-2	5-10	55-75	50-70	40-65	30-60	35-45	12-20
	9-26	Gravelly fine sandy loam, gravelly sandy loam, channery loam.	GC, SM-SC, CL, CL-ML	A-4, A-6, A-2, A-1	0-5	55-95	50-90	35-85	15-65	15-25	5-15
	26-60	Channery loam, gravelly loam, very gravelly sandy loam.	GC, CL, SC, CL-ML	A-4, A-6, A-2, A-1	0-5	40-95	35-90	20-85	10-65	15-25	5-15
71A Castile	0-8	Gravelly fine sandy loam.	GM, SM, GM-GC, SM-SC	A-2, A-4, A-1	0-5	55-85	50-75	30-60	15-40	<30	NP-10
	8-26	Very gravelly loam, very gravelly fine sandy loam, gravelly silt loam.	GM, SM, ML, GM-GC	A-1, A-2, A-4, A-3	5-10	40-75	35-70	15-65	5-60	<30	NP-10
	26-60	Very gravelly sand, very gravelly loam, extremely gravelly loamy sand.	GW, GP, GW-GM, SW-SM	A-1, A-2, A-4	5-10	30-85	25-70	10-45	0-40	---	NP

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
72A---------- Fredon	0-8	Gravelly loam----	GM, GC	A-1, A-2	0-5	60-80	50-70	35-50	15-30	10-20	NP-10
	8-24	Gravelly loam, silt loam, gravelly fine sandy loam.	SM, GC, ML, CL	A-2, A-4, A-1	0-2	60-100	50-95	30-85	15-70	20-30	NP-10
	24-60	Stratified very gravelly sand to loamy fine sand.	GP, GM, GW, GW-GM	A-1, A-2	0-5	30-90	25-85	10-60	0-35	---	NP
73---------- Scarboro	0-9	Muck----------	PT	A-8	---	---	---	---	---	---	---
	9-16	Loamy sand, fine sand, sand.	SM, SP-SM	A-1, A-2, A-3	0	95-100	85-100	45-80	5-35	---	NP
	16-60	Stratified loamy fine sand to gravelly coarse sand.	SP, SM, SP-SM	A-1, A-2, A-3	0	70-100	35-100	15-80	0-35	---	NP
80A, 80B---------- Kingsbury	0-9	Silty clay loam	ML, MH	A-7	0	100	100	90-100	80-95	40-55	11-20
	9-20	Clay----------	MH, CH	A-7	0	100	100	90-100	90-100	50-65	21-35
	20-60	Clay----------	MH, CH	A-7	0	100	100	90-100	90-100	50-65	21-35
81---------- Livingston	0-7	Silty clay loam	MH, ML	A-7	0	100	100	90-100	85-100	40-85	10-40
	7-33	Clay----------	MH	A-7	0	100	100	100	95-100	50-85	20-40
	33-44	Clay----------	MH	A-7	0	100	100	100	95-100	50-85	20-40
	44-60	Clay----------	MH	A-7	0	100	100	100	95-100	50-85	20-40
82B---------- Vergennes	0-9	Clay----------	MH, CH	A-7	0	100	100	90-100	85-100	40-80	20-40
	9-11	Clay----------	MH, CH	A-7	0	100	100	95-100	75-100	50-80	20-45
	11-18	Clay----------	MH, CH	A-7	0	100	100	95-100	95-100	50-80	20-45
	18-60	Clay----------	MH, CH	A-7	0	100	100	95-100	95-100	50-80	20-45
82C---------- Vergennes	0-8	Clay----------	MH, CH	A-7	0	100	100	90-100	85-100	40-80	20-40
	8-11	Clay----------	MH, CH	A-7	0	100	100	95-100	75-100	50-80	20-45
	11-18	Clay----------	MH, CH	A-7	0	100	100	95-100	95-100	50-80	20-45
	18-60	Clay----------	MH, CH	A-7	0	100	100	95-100	95-100	50-80	20-45
82D, 82E---------- Vergennes	0-6	Clay----------	MH, CH	A-7	0	100	100	90-100	85-100	40-80	20-40
	6-11	Clay----------	MH, CH	A-7	0	100	100	95-100	75-100	50-80	20-45
	11-18	Clay----------	MH, CH	A-7	0	100	100	95-100	95-100	50-80	20-45
	18-60	Clay----------	MH, CH	A-7	0	100	100	95-100	95-100	50-80	20-45
86---------- Linwood	0-36	Muck----------	PT	A-8	0-20	---	---	---	---	---	---
	36-60	Silt loam, sandy loam, silty clay loam.	CL, ML, SM-SC, SC	A-4, A-6, A-2, A-1	0-10	90-100	75-100	45-100	20-95	15-40	NP-20
88---------- Birdsall	0-6	Muck----------	PT	A-8	0	---	---	---	---	---	---
	6-28	Silt loam, very fine sandy loam.	ML, CL-ML	A-4	0	100	95-100	90-100	70-90	<30	NP-7
	28-60	Silt loam, very fine sandy loam, silty clay loam.	ML, CL-ML	A-4	0	100	95-100	90-100	70-90	<30	NP-7
90B, 90C, 90D---- Hartland	0-6	Silt loam--------	ML, CL-ML	A-4	0	100	95-100	80-100	65-95	<25	NP-5
	6-17	Silt loam, very fine sandy loam, silt.	ML, CL-ML	A-4	0	100	95-100	80-100	65-95	<25	NP-5
	17-60	Stratified silt loam to very fine sandy loam.	ML, CL-ML	A-4	0	100	95-100	80-100	65-95	<25	NP-5

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 3 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
95. Udorthents											
96. Udipsamments											
97A*, 97B*, 97C*, 97D*:											
Warwick	0-6	Channery fine sandy loam.	GM, GW-GM, SP-SM, SM	A-1, A-2, A-4	0-15	40-75	35-70	20-65	10-50	<37	NP-8
	6-27	Channery fine sandy loam, very channery fine sandy loam, very channery sandy loam.	GM, GW-GM, SP-SM, SM	A-1, A-2, A-4	0-15	40-75	35-70	20-60	10-40	<37	NP-8
	27-60	Stratified loamy sand to gravel.	SW, GW, SW-SM, GW-GM	A-1, A-2	5-20	50-65	25-50	15-35	0-15	---	NP
Quonset	0-7	Very gravelly loamy sand.	GP-GM, GM, SP-SM, SM	A-1, A-2, A-3, A-4	0-5	40-75	35-70	20-60	5-40	---	NP
	7-20	Channery loamy sand, very gravelly loamy sand, very channery loamy coarse sand.	GP-GM, GM, SP-SM, SM	A-1, A-2	0-5	45-75	40-75	20-50	5-20	---	NP
	20-60	Stratified very channery coarse sand to very channery sand.	GP, GP-GM, SP, SP-SM	A-1, A-2	0-5	20-70	10-60	5-45	0-10	---	NP
98E*:											
Quonset	0-7	Very gravelly loamy sand.	GP-GM, GM, SP-SM, SM	A-1, A-2, A-3, A-4	0-5	40-75	35-70	20-60	5-40	---	NP
	7-20	Very channery loamy sand, very gravelly loamy sand, very channery loamy coarse sand.	GP-GM, GM, SP-SM, SM	A-1, A-2	0-5	45-75	40-75	20-50	5-20	---	NP
	20-60	Stratified very channery coarse sand to very channery sand.	GP, GP-GM, SP, SP-SM	A-1, A-2	0-5	20-70	10-60	5-45	0-10	---	NP
Warwick	0-6	Channery fine sandy loam.	GM, GW-GM, SP-SM, SM	A-1, A-2, A-4	0-15	40-75	35-70	20-65	10-50	<37	NP-8
	6-27	Channery fine sandy loam, very channery sandy loam, very fine channery sandy loam.	GM, GW-GM, SP-SM, SM	A-1, A-2, A-4	0-15	40-75	35-70	20-60	10-40	<37	NP-8
	27-60	Stratified loamy sand to gravel.	SW, GW, SW-SM, GW-GM	A-1, A-2	5-20	50-65	25-50	15-35	0-15	---	NP

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
99B---------- Copake	0-8	Gravelly fine sandy loam.	ML, SM, GM	A-1, A-2, A-4	0-5	60-80	55-75	40-70	20-60	<25	NP-4
	8-27	Gravelly loam, gravelly fine sandy loam, fine sandy loam.	ML, SM, GM	A-1, A-2, A-4	0-10	60-95	55-90	40-85	20-80	<25	NP-4
	27-60	Stratified gravelly loamy fine sand to very gravelly coarse sand.	GM, SM, GP, SP	A-1	0-20	40-75	30-70	15-50	2-20	---	NP
104B---------- Groton	0-9	Gravelly loam----	SM, GM	A-2, A-4	0-10	55-85	45-70	30-60	15-50	---	NP
	9-13	Gravelly sandy loam, gravelly fine sandy loam, very gravelly sandy loam.	GM, GP-GM, SP-SM	A-1, A-2	0-20	55-85	30-70	20-50	10-30	---	NP
	13-60	Stratified gravelly loamy fine sand to extremely gravelly coarse sand.	SP, GP, GP-GM	A-1	0-25	35-70	20-55	10-35	0-15	---	NP
105---------- Tioga	0-12	Fine sandy loam	ML, SM	A-4	0	100	95-100	65-95	40-85	<15	NP-4
	12-28	Silt loam, fine sandy loam, gravelly fine sandy loam.	SM, GM, ML	A-1, A-2, A-4	0	55-100	50-100	35-90	20-80	<15	NP-2
	28-60	Silt loam, fine sandy loam, very gravelly loamy sand.	GW-GM, GM, SM, ML	A-1, A-2, A-4, A-3	0-10	35-100	30-100	15-90	5-80	<15	NP-2
106---------- Middlebury	0-12	Loam----------	ML, SM, SM-SC, CL-ML	A-4, A-2	0	80-100	75-100	50-100	30-90	25-35	5-10
	12-24	Silt loam, loam, very fine sandy loam.	ML, SM, SM-SC, CL-ML	A-4, A-2	0	75-100	70-100	50-100	30-85	20-25	2-5
	24-60	Stratified gravelly sandy loam to sand.	GW, GM, SW, SM	A-1, A-2, A-3	0-5	40-100	35-100	20-100	0-35	---	NP
108---------- Hamlin	0-12	Silt loam--------	ML, CL-ML, CL	A-4, A-6	0	100	95-100	90-100	60-90	15-35	2-15
	12-24	Silt loam, very fine sandy loam.	ML, CL-ML, CL	A-4, A-6	0	100	95-100	90-100	60-90	15-35	2-15
	24-40	Silt loam, very fine sandy loam.	ML, CL-ML, CL	A-4, A-6	0	100	95-100	90-100	60-90	15-35	2-15
	40-60	Silt loam, very fine sandy loam, fine sandy loam.	ML, SM, CL, SM-SC	A-4	0	95-100	95-100	75-100	45-90	<25	NP-10

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
109 Teel	0-11	Silt loam	ML, CL-ML	A-4	0	100	95-100	85-100	65-90	15-25	2-7
	11-31	Silt loam, very fine sandy loam.	ML, CL-ML	A-4	0	100	95-100	85-100	65-90	15-25	2-7
	31-41	Silt loam, very fine sandy loam, sandy loam.	ML, CL-ML	A-4	0	100	95-100	70-100	55-90	15-25	NP-7
	41-60	Loamy sand, loamy coarse sand, sand.	SP, SP-SM, SM	A-1, A-3, A-2-4	0-5	75-100	70-100	35-75	3-30	<15	NP
110 Limerick	0-7	Silt loam	ML	A-4	0	100	100	95-100	80-95	---	NP
	7-25	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	80-95	---	NP
	25-60	Silt loam, very fine sandy loam.	ML	A-4	0	100	100	95-100	80-95	---	NP
111 Livingston	0-7	Silty clay loam	MH, ML	A-7	0	100	100	90-100	85-100	40-85	10-40
	7-33	Clay	MH	A-7	0	100	100	100	95-100	50-85	20-40
	33-44	Clay	MH	A-7	0	100	100	100	95-100	50-85	20-40
	44-60	Clay	MH	A-7	0	100	100	100	95-100	50-85	20-40
118C Adams	0-5	Loamy fine sand	SM, SP-SM	A-1, A-2, A-3, A-4	0	95-100	95-100	45-85	5-40	---	NP
	5-31	Loamy sand, sand, loamy fine sand.	SM, SP-SM	A-1, A-2, A-3, A-4	0	95-100	95-100	35-95	5-40	---	NP
	31-60	Sand, coarse sand, gravelly sand.	SP-SM, SW-SM, SP	A-1, A-2, A-3	0-1	80-100	70-100	20-90	0-10	---	NP
122B, 122C Lyme	0-10	Fine sandy loam	SM, ML	A-2, A-4	5-15	80-100	70-95	40-95	25-85	<25	NP-3
	10-24	Loam, fine sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4	0-15	80-95	70-90	40-80	25-60	<25	NP-3
	24-60	Fine sandy loam, sandy loam, gravelly sandy loam.	SM, ML	A-2, A-4	0-15	80-95	65-90	40-80	25-60	<25	NP-3
123B, 123C Sheepscot	0-2	Fine sandy loam	GM, SM, ML, CL-ML	A-1, A-2, A-4	0-5	55-95	50-90	25-85	15-60	<15	NP-5
	2-14	Gravelly fine sandy loam, gravelly sandy loam, very gravelly coarse sand.	GP, GM, SP, SM	A-1, A-2	0-5	50-70	30-55	15-45	2-30	<15	NP-5
	14-19	Very gravelly loamy sand, gravelly fine sandy loam, extremely gravelly coarse sand.	GP, GM, SP, SM	A-1	0-5	50-70	30-55	15-40	2-15	---	NP
	19-60	Extremely gravelly loamy sand, very gravelly loamy sand, very gravelly sand.	GP, GM, SP, SM	A-1	0-10	45-70	25-55	12-40	1-15	---	NP

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
124B, 124C, 124D, 124E	0-2	Fine sandy loam	SM, ML	A-2, A-4	5-15	80-100	70-95	50-95	25-85	<25	NP-3
Sunapee	2-28	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4	0-10	80-95	70-90	50-80	25-60	<25	NP-3
	28-60	Fine sandy loam, very gravelly fine sandy loam, gravelly loamy sand.	SM, ML	A-2, A-4	0-10	80-95	70-90	50-80	25-60	---	NP
125B, 125C, 125D, 125E	0-5	Gravelly fine sandy loam.	SM, ML	A-2, A-4, A-5	15-25	80-95	70-90	45-85	25-65	<50	NP-10
Berkshire	5-32	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4, A-5	0-15	75-95	65-85	40-75	20-60	<50	NP-10
	32-60	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4	0-15	75-90	65-85	40-80	20-55	<20	NP-6
127C, 127D, 127E- Houghtonville	0-2	Gravelly fine sandy loam.	SM, ML	A-4, A-2-4, A-5	5-20	75-100	70-95	50-90	30-70	20-50	NP-10
	2-29	Silt loam, fine sandy loam, gravelly fine sandy loam.	SM, ML	A-4, A-2-4, A-5	0-5	75-100	70-95	50-90	30-70	20-50	NP-10
	29-60	Silt loam, fine sandy loam, gravelly fine sandy loam.	SM, ML, CL, CL-ML	A-4, A-2-4	0-10	60-95	55-90	40-90	25-80	<30	NP-10
128C*, 128D*, 128E*:											
Rawsonville	0-3	Gravelly fine sandy loam.	SM, ML	A-4, A-5	5-20	75-100	70-90	50-90	30-70	20-50	NP-10
	3-23	Silt loam, loam, gravelly fine sandy loam.	SM, ML	A-4, A-2-4, A-5	0-10	75-100	70-95	50-95	30-70	20-50	NP-10
	23-30	Fine sandy loam, gravelly sandy loam, gravelly loamy fine sand.	SM, SC, GM, GC	A-4, A-2-4	0-5	60-95	55-90	35-75	10-50	<30	NP-10
	30	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Houghtonville--	0-2	Gravelly fine sandy loam.	SM, ML	A-4, A-2-4, A-5	5-20	75-100	70-95	50-90	30-70	20-50	NP-10
	2-29	Silt loam, fine sandy loam, gravelly fine sandy loam.	SM, ML	A-4, A-2-4, A-5	0-5	75-100	70-95	50-90	30-70	20-50	NP-10
	29-60	Silt loam, fine sandy loam, gravelly fine sandy loam.	SM, ML, CL, CL-ML	A-4, A-2-4	0-10	60-95	55-90	40-90	25-80	<30	NP-10

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
129D*, 129F*:											
Killington	0-1	Very cobbly loam	GM, GP-GM, ML, SM	A-1, A-1-B, A-2-4, A-4	35-60	30-80	25-75	20-70	10-55	20-50	NP-10
	1-17	Very stony loam, very cobbly loam, very gravelly fine sandy loam.	GM, GP-GM, ML, SM	A-1, A-1-B, A-2-4, A-4	35-65	30-80	25-75	20-70	10-55	20-50	NP-10
	17	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rawsonville	0-3	Gravelly fine sandy loam.	SM, ML	A-4, A-5	5-20	75-100	70-90	50-90	30-70	20-50	NP-10
	3-23	Silt loam, loam, gravelly fine sandy loam.	SM, ML	A-4, A-2-4, A-5	0-10	75-100	70-95	50-95	30-70	20-50	NP-10
	23-30	Fine sandy loam, gravelly sandy loam, gravelly loamy fine sand.	SM, SC, GM, GC	A-4, A-2-4	0-5	60-95	55-90	35-75	10-50	<30	NP-10
	30	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
130B*, 130C*, 130D*, 130E*:											
Tunbridge	0-4	Gravelly fine sandy loam.	SM, ML, GM	A-4, A-2	5-20	55-100	50-95	35-90	20-60	<20	NP-2
	4-35	Silt loam, stony fine sandy loam, very stony fine sandy loam.	SM, ML	A-5, A-2	0-15	70-100	65-95	45-95	25-85	<50	NP-6
	35	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Berkshire	0-5	Gravelly fine sandy loam.	SM, ML	A-2, A-4, A-5	15-25	80-95	70-90	45-85	25-65	<50	NP-10
	5-32	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4, A-5	0-15	75-95	65-85	40-75	20-60	<50	NP-10
	32-60	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4	0-15	75-90	65-85	40-80	20-55	<20	NP-6
131D*, 131E*:											
Lyman	0-4	Fine sandy loam	SM, ML, GM	A-1, A-2, A-4	5-20	65-95	60-90	35-80	15-75	<30	NP-6
	4-11	Fine sandy loam, channery fine sandy loam, silt loam.	SM, ML, GM	A-1, A-2, A-4	0-20	65-95	60-90	35-85	20-80	<30	NP-4
	11	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
131D*, 131E*:											
Tunbridge	0-4	Gravelly fine sandy loam.	SM, ML, GM	A-4, A-2	5-20	55-100	50-95	35-90	20-60	<20	NP-2
	4-35	Silt loam, stony fine sandy loam, very stony fine sandy loam.	SM, ML	A-5, A-2	0-15	70-100	65-95	45-95	25-85	<50	NP-6
	35	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rock outcrop.											
132C*, 132E*:											
Glebe	0-4	Gravelly sandy loam.	ML, SM	A-4, A-2-4, A-5	5-20	75-100	70-90	40-90	30-70	20-50	NP-10
	4-24	Fine sandy loam, gravelly sandy loam, gravelly fine sandy loam.	ML, SM, GM	A-4, A-2-4, A-5	0-5	65-90	60-85	40-85	25-75	20-50	NP-10
	24	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Stratton	0-5	Very cobbly loam	ML, SM	A-4, A-2-4, A-2-5, A-5	5-20	80-100	75-100	50-100	30-90	20-50	NP-10
	5-18	Very cobbly loam, very gravelly fine sandy loam, extremely cobbly fine sandy loam.	ML, GM, GW-GM	A-1, A-2, A-4, A-5	15-60	30-100	25-85	20-85	10-75	20-50	NP-10
	18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
134F*:											
Stratton	0-5	Very cobbly loam	ML, SM	A-4, A-2-4, A-2-5, A-5	5-20	80-100	75-100	50-100	30-90	20-50	NP-10
	5-18	Very cobbly loam, very gravelly fine sandy loam, extremely cobbly fine sandy loam.	ML, GM, GW-GM	A-1, A-2, A-4, A-5	15-60	30-100	25-85	20-85	10-75	20-50	NP-10
	18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Londonderry	0-6	Gravelly fine sandy loam.	ML, SM-SC, SM, CL-ML	A-4, A-2-4	5-15	95-100	75-95	45-95	20-90	<30	NP-10
	6-7	Silt loam, fine sandy loam.	ML, CL, SM, CL-ML	A-4, A-2-4	0	80-100	75-100	50-100	30-90	<30	NP-10
	7	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
134F*:											
Ricker	0-13	Peat	PT	A-8	---	---	---	---	---	---	---
	13-16	Very channery coarse sand, very cobbly fine sandy loam, loamy fine sand.	SM, ML, GM	A-1, A-2, A-4	0-35	55-100	50-95	25-95	15-85	---	NP
	16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
135D, 135E Mundal	0-9	Loam	SM, ML	A-4, A-2-4, A-5	5-20	80-100	70-95	50-90	30-70	20-50	NP-10
	9-24	Loam, fine sandy loam, gravelly loam.	SM, ML	A-4, A-2-4, A-5	0-10	80-100	75-100	45-95	20-75	20-50	NP-10
	24-60	Loam, gravelly fine sandy loam, cobbly sandy loam.	SM, GC, ML, CL	A-4, A-2-4	0-20	35-95	30-90	20-85	10-70	<30	NP-10
138C Berkshire	0-5	Gravelly fine sandy loam.	SM, ML	A-2, A-4	0-15	80-95	70-90	45-90	20-70	<30	NP-10
	5-32	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4	0-20	75-95	65-85	40-85	20-65	<30	NP-10
	32-60	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4	0-20	75-90	65-85	40-80	20-60	<20	NP-6
139B, 139C Sunapee	0-6	Fine sandy loam	ML, CL-ML	A-4, A-6	0-5	90-100	85-95	85-95	70-85	20-40	2-12
	6-28	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4	0-10	80-95	70-90	50-80	25-60	<25	NP-3
	28-60	Fine sandy loam, very gravelly fine sandy loam, gravelly loamy sand.	SM, ML	A-2, A-4	0-10	80-95	70-90	50-80	25-60	---	NP
140C, 140D, 140E Benson	0-4	Very channery loam.	ML, CL, SM	A-2, A-4, A-6	10-30	55-65	50-60	40-60	30-60	20-40	NP-18
	4-19	Very channery loam, extremely channery loam, channery silty clay loam.	ML, CL, SM, GM	A-1, A-2, A-4, A-6	15-50	40-85	35-80	30-80	20-75	20-40	NP-18
	19	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
148B*:											
Bomoseen	0-9	Channery loam	ML, CL-ML, SM, SM-SC	A-4, A-2-4	0-15	60-85	55-80	40-80	25-70	<26	NP-8
	9-27	Channery silt loam, loam, channery fine sandy loam.	ML, CL-ML, SM, SM-SC	A-4, A-2-4	5-30	65-100	60-95	45-95	25-85	<26	NP-8
	27-60	Channery silt loam, loam, very channery fine sandy loam.	ML, CL-ML, SM, SM-SC	A-4, A-2-4	5-30	50-95	45-90	35-90	20-80	<26	NP-8
Pittstown	0-9	Silt loam	ML, CL-ML	A-4, A-6, A-7	0-5	80-100	70-95	65-95	50-85	25-45	4-15
	9-22	Silt loam, gravelly silt loam, very fine sandy loam.	ML, SM, CL-ML, SM-SC	A-2, A-4	0-15	65-95	60-90	50-90	30-80	20-35	2-10
	22-60	Channery silt loam, gravelly silt loam, very fine sandy loam.	ML, SM, CL-ML, SM-SC	A-2, A-4	0-15	60-95	55-85	45-85	30-75	20-30	2-10
148C*:											
Bomoseen	0-8	Channery loam	ML, CL-ML, SM, SM-SC	A-4, A-2-4	0-15	60-85	55-80	40-80	25-70	<26	NP-8
	8-27	Channery silt loam, loam, channery fine sandy loam.	ML, CL-ML, SM, SM-SC	A-4, A-2-4	5-30	65-100	60-95	45-95	25-85	<26	NP-8
	27-60	Channery silt loam, loam, very channery fine sandy loam.	ML, CL-ML, SM, SM-SC	A-4, A-2-4	5-30	50-95	45-90	35-90	20-80	<26	NP-8
Pittstown	0-8	Silt loam	ML, CL-ML,	A-4, A-6, A-7	0-5	80-100	70-95	65-95	50-85	25-45	4-15
	8-22	Silt loam, gravelly silt loam, very fine sandy loam.	ML, SM, CL-ML, SM-SC	A-2, A-4	0-15	65-95	60-90	50-90	30-80	20-35	2-10
	22-60	Channery silt loam, channery loam, very fine sandy loam.	ML, SM, CL-ML, SM-SC	A-2, A-4	0-15	60-95	55-85	45-85	30-75	20-30	2-10
148D*:											
Bomoseen	0-7	Channery loam	ML, CL-ML, SM, SM-SC	A-4, A-2-4	0-15	60-85	55-80	40-80	25-70	<26	NP-8
	7-27	Channery silt loam, loam, channery fine sandy loam.	ML, CL-ML, SM, SM-SC	A-4, A-2-4	5-30	65-100	60-95	45-95	25-85	<26	NP-8
	27-60	Channery silt loam, loam, very channery fine sandy loam.	ML, CL-ML, SM, SM-SC	A-4, A-2-4	5-30	50-95	45-90	35-90	20-80	<26	NP-8

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
148D*:											
Pittstown	0-7	Silt loam	ML, CL-ML	A-4, A-6, A-7	0-5	80-100	70-95	65-95	50-85	25-45	4-15
	7-22	Silt loam, gravelly silt loam, very fine sandy loam.	ML, SM, CL-ML, SM-SC	A-2, A-4	0-15	65-95	60-90	50-90	30-80	20-35	2-10
	22-60	Channery silt loam, gravelly silt loam, very fine sandy loam.	ML, SM, CL-ML, SM-SC	A-2, A-4	0-15	60-95	55-85	45-85	30-75	20-30	2-10
149B*, 149C*, 149D*, 149E*:											
Bomoseen	0-8	Channery loam	ML, CL-ML, SM, SM-SC	A-4, A-2-4	1-20	60-100	55-95	40-95	25-85	<26	NP-8
	8-27	Channery silt loam, loam, channery fine sandy loam.	ML, CL-ML, SM, SM-SC	A-4, A-2-4	5-30	65-100	60-95	45-95	25-85	<26	NP-8
	27-60	Channery silt loam, loam, very channery fine sandy loam.	ML, CL-ML, SM, SM-SC	A-4, A-2-4	5-30	50-95	45-90	35-90	20-80	<26	NP-8
Pittstown	0-7	Silt loam	ML, SM, CL-ML, SM-SC	A-2, A-4, A-6, A-7	10-20	65-90	60-85	50-85	30-75	25-45	4-15
	7-22	Silt loam, very fine sandy loam, gravelly silt loam.	ML, SM, CL-ML, SM-SC	A-2, A-4	0-15	65-95	60-90	50-90	30-80	20-35	2-10
	22-60	Channery silt loam, channery very fine sandy loam, gravelly silt loam.	ML, SM, CL-ML, SM-SC	A-2, A-4	0-15	60-95	55-85	45-85	30-75	20-30	2-10
150A	0-5	Muck	PT	A-8	---	---	---	---	---	---	---
Peacham	5-10	Silt loam, loam, gravelly sandy loam.	SM, ML	A-2, A-4, A-6	0-15	75-100	65-100	50-100	30-90	<30	NP-15
	10-60	Silt loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4, A-6	0-15	75-100	65-100	50-100	30-90	<30	NP-15
152	0-10	Silt loam	ML	A-7, A-2, A-4	0	80-100	75-100	50-95	50-90	35-45	5-15
Lyons	10-34	Silt loam, gravelly loam, silty clay loam.	CL, GC, CL-ML, GM-GC	A-4, A-6, A-2	0-5	60-95	55-90	45-85	25-80	20-35	5-15
	34-60	Gravelly loam, silty clay loam, very gravelly fine sandy loam.	CL, GC, SC, GM-GC	A-2, A-4, A-6, A-1	5-10	35-95	30-90	25-85	15-80	20-35	5-15

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
161A, 161B------- Elmridge	0-9	Sandy loam-------	SM, ML	A-2, A-4	0	100	95-100	60-85	30-55	---	NP
	9-30	Fine sandy loam, sandy loam, loam.	SM, ML	A-2, A-4	0	100	95-100	60-90	30-70	<30	NP-6
	30-60	Silty clay, silty clay loam, clay.	CL	A-6, A-7	0	100	95-100	90-100	80-100	3-50	12-25
163-------------- Canandaigua	0-8	Silt loam--------	CL, CL-ML	A-4, A-6	0	95-100	95-100	90-100	70-95	20-40	5-15
	8-25	Silt loam, very fine sandy loam, silty clay loam.	CL, CL-ML	A-4, A-6	0	95-100	95-100	90-100	70-95	20-40	5-15
	25-60	Silt loam, very fine sandy loam, silty clay loam.	ML, CL, CL-ML	A-4	0	95-100	95-100	90-100	70-95	20-30	3-10
175-------------- Wappinger	0-10	Silt loam--------	CL-ML, ML, CL	A-4	0	90-100	85-100	70-95	55-80	20-30	3-10
	10-30	Loam, fine sandy loam, silt loam.	CL-ML, ML, SM, SC	A-4	0	90-100	85-100	60-95	35-80	20-30	3-10
	30-60	Very gravelly sand, gravelly loamy sand, gravelly sand.	GW, GP, SW, SP	A-1, A-2, A-3	0-3	25-80	20-75	10-55	0-20	---	NP
177-------------- Pawling	0-9	Silt loam--------	CL-ML, ML, CL	A-4	0	90-100	85-100	70-95	55-80	20-30	3-10
	9-27	Silt loam, loam, fine sandy loam.	SM, ML, CL-ML, SC	A-4	0	90-100	85-100	60-95	35-80	20-30	3-10
	27-60	Very gravelly loamy sand, very gravelly sand, gravelly sand.	GW, GP, SW, SP	A-1, A-2	0-5	25-80	20-75	10-55	0-20	---	NP
202E*: Rawsonville-----	0-3	Gravelly fine sandy loam.	SM, ML	A-4, A-5	5-20	75-100	70-90	50-90	30-70	20-50	NP-10
	3-23	Silt loam, loam, gravelly fine sandy loam, gravelly sandy loam.	SM, ML	A-4, A-2-4, A-5	0-10	75-100	70-95	50-95	30-70	20-50	NP-10
	23-30	Fine sandy loam, loamy fine sand, gravelly sandy loam.	SM, SC, GM, GC	A-4, A-2-4	0-5	60-95	55-90	35-75	10-50	<30	NP-10
	30	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Killington------	0-1	Very cobbly loam	GM, GP-GM, ML, SM	A-1, A-1-B, A-2-4, A-4	35-60	30-80	25-75	20-70	10-55	20-50	NP-10
	1-17	Very stony loam, very cobbly loam, very gravelly fine sandy loam.	GM, GP-GM, ML, SM	A-1, A-1-B, A-2-4, A-4	35-65	30-80	25-75	20-70	10-55	20-50	NP-10
	17	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
203D*:											
Peru	0-3	Gravelly fine sandy loam.	SM, ML, CL-ML, SC	A-2, A-4	5-15	90-100	75-90	50-90	30-80	<30	NP-10
	3-17	Fine sandy loam, loam, gravelly fine sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	75-95	60-90	40-85	20-65	<30	NP-10
	17-60	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	70-95	55-95	35-80	20-60	<30	NP-10
Marlow	0-4	Fine sandy loam	SM, ML, CL-ML, SC	A-2, A-4	5-15	90-100	75-90	50-90	30-80	<30	NP-10
	4-23	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	75-95	60-90	40-85	20-65	<30	NP-10
	23-60	Fine sandy loam, loam, gravelly fine sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	70-90	60-85	35-80	20-60	<30	NP-10
205D*:											
Tunbridge	0-4	Gravelly fine sandy loam.	SM, ML, GM	A-4, A-2	5-20	55-100	50-95	35-90	20-60	<20	NP-2
	4-35	Silt loam, gravelly fine sandy loam, very stony fine sandy loam, stony fine sandy loam.	SM, ML	A-5, A-2	0-15	70-100	65-95	45-95	25-85	<50	NP-6
	35	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Berkshire	0-5	Gravelly fine sandy loam.	SM, ML	A-2, A-4, A-5	15-25	80-95	70-90	45-85	25-65	<50	NP-10
	5-32	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4, A-5	0-15	75-95	65-85	40-75	20-60	<50	NP-10
	32-60	Fine sandy loam, sandy loam, gravelly fine loam.	SM, ML	A-2, A-4	0-15	75-90	65-85	40-80	20-55	<20	NP-6
Marlow	0-4	Fine sandy loam	SM, ML, CL-ML, SC	A-2, A-4	5-15	90-100	75-90	50-90	30-80	<30	NP-10
	4-23	Fine sandy loam, loam, gravelly sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	75-95	60-90	40-85	20-65	<30	NP-10
	23-60	Fine sandy loam, loam, gravelly fine sandy loam.	SM, ML, SM-SC, CL-ML	A-2, A-4, A-1-B	0-15	70-90	60-85	35-80	20-60	<30	NP-10

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
213E*:											
Glebe	0-4	Gravelly sandy loam.	ML, SM	A-4, A-2-4, A-5	5-20	75-100	70-90	40-90	30-70	20-50	NP-10
	4-24	Gravelly sandy loam, very fine sandy loam, gravelly fine sandy loam.	ML, SM, GM	A-4, A-2-4, A-5	0-5	65-90	60-85	40-85	25-75	20-50	NP-10
	24	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Stratton	0-5	Very cobbly loam	ML, SM	A-4, A-2-4, A-2-5, A-5	5-20	80-100	75-100	50-100	30-90	20-50	NP-10
	5-18	Very cobbly loam, very gravelly fine sandy loam, extremely cobbly sandy loam.	ML, GM, GW-GM	A-1, A-2, A-4, A-5	15-60	30-100	25-85	20-85	10-75	20-50	NP-10
	18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
221F*:											
Tunbridge	0-4	Gravelly fine sandy loam.	SM, ML, GM	A-4, A-2	5-20	55-100	50-95	35-90	20-60	<20	NP-2
	4-35	Silt loam, gravelly fine sandy loam, very stony fine sandy loam, stony fine sandy loam.	SM, ML	A-5, A-2	0-15	70-100	65-95	45-95	25-85	<50	NP-6
	35	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Berkshire	0-5	Gravelly fine sandy loam.	SM, ML	A-2, A-4, A-5	15-25	80-95	70-90	45-85	25-65	<50	NP-10
	5-32	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4, A-5	0-15	75-95	65-85	40-75	20-60	<50	NP-10
	32-60	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4	0-15	75-90	65-85	40-80	20-55	<20	NP-6
402D*:											
Tunbridge	0-4	Gravelly fine sandy loam.	SM, ML, GM	A-4, A-2	5-20	55-100	50-95	35-90	20-60	<20	NP-2
	4-35	Silt loam, gravelly fine sandy loam, very stony fine sandy loam, stony fine sandy loam.	SM, ML	A-5, A-2	0-15	70-100	65-95	45-95	25-85	<50	NP-6
	35	Unweathered bedrock.	---	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
402D*:											
Lyman	0-4	Fine sandy loam	SM, ML, GM	A-1, A-2, A-4	5-20	65-95	60-90	35-80	15-75	<30	NP-6
	4-11	Fine sandy loam, channery fine sandy loam, silt loam.	SM, ML, GM	A-1, A-2, A-4	0-20	65-95	60-90	35-85	20-80	<30	NP-4
	11	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
403C*:											
Brayton	0-7	Loam	SM, ML, GM, SC	A-1, A-2, A-4	10-25	65-95	55-90	35-90	20-80	<30	NP-10
	7-15	Fine sandy loam, gravelly sandy loam, silt loam.	SM, ML, GM, SC	A-1, A-2, A-4	0-10	65-95	55-90	35-90	20-80	<30	NP-10
	15-60	Gravelly sandy loam, gravelly fine sandy loam, loam.	SM, ML, GM, SC	A-1, A-2, A-4	0-10	65-95	55-90	35-85	20-70	<30	---
Cabot	0-6	Gravelly fine sandy loam.	ML, SM, CL-ML, SM-SC	A-4, A-2	5-20	80-95	75-95	50-90	30-75	<25	NP-5
	6-12	Loam, fine sandy loam, gravelly sandy loam.	ML, SM, CL-ML, SM-SC	A-4, A-2	0-30	80-95	65-95	50-85	30-70	<25	NP-5
	12-60	Loam, gravelly loam, very gravelly fine sandy loam.	ML, SM, CL-ML, SM-SC	A-4, A-2	0-35	80-95	65-95	45-85	25-70	<25	NP-5
Pinnebog	0-35	Muck	PT	A-8	0	---	---	---	---	---	---
	35-60	Mucky peat	PT	A-8	0	---	---	---	---	---	---
405D*:											
Tunbridge	0-4	Gravelly fine sandy loam.	SM, ML, GM	A-4, A-2	5-20	55-100	50-95	35-90	20-60	<20	NP-2
	4-35	Silt loam, gravelly fine sandy loam, very stony fine sandy loam, stony fine sandy loam.	SM, ML	A-5, A-2	0-15	70-100	65-95	45-95	25-85	<50	NP-6
	35	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Berkshire	0-5	Gravelly fine sandy loam.	SM, ML	A-2, A-4, A-5	15-25	80-95	70-90	45-85	25-65	<50	NP-10
	5-32	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4, A-5	0-15	75-95	65-85	40-75	20-60	<50	NP-10
	32-60	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4	0-15	75-90	65-85	40-80	20-55	<20	NP-6

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
505D*:											
Berkshire	0-6	Gravelly fine sandy loam.	SM, ML	A-2, A-4	0-15	80-95	70-90	45-90	20-70	<30	NP-10
	6-32	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4	0-20	75-95	65-85	40-85	20-65	<30	NP-10
	32-60	Fine sandy loam, sandy loam, gravelly fine sandy loam.	SM, ML	A-2, A-4	0-20	75-90	65-85	40-80	20-60	<20	NP-6
Colton	0-6	Very gravelly fine sandy loam.	SM, GM, GW-GM, SW-SM	A-2, A-4, A-1	0-5	35-80	30-75	20-65	10-40	<10	NP-2
	6-32	Extremely gravelly loamy sand, extremely gravelly sand, cobbly coarse sand.	SM, GM, SP, GP	A-1	5-20	30-80	25-75	20-50	2-20	---	NP
	32-60	Very gravelly loamy sand, very cobbly sand, extremely gravelly sand.	GP, SP, GW, SW	A-1	10-45	20-55	15-50	10-30	0-5	---	NP
702F*:											
Killington	0-1	Very cobbly loam	GM, GP-GM, ML, SM	A-1, A-1-B, A-2-4, A-4	35-60	30-80	25-75	20-70	10-55	20-50	NP-10
	1-17	Very stony loam, very cobbly loam, very gravelly fine sandy loam.	GM, GP-GM, ML, SM	A-1, A-1-B, A-2-4, A-4	35-65	30-80	25-75	20-70	10-55	20-50	NP-10
	17	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Ricker	0-13	Peat	PT	A-8	---	---	---	---	---	---	---
	13-16	Very channery coarse sand, very cobbly fine sandy loam, loamy fine sand.	SM, ML, GM	A-1, A-2, A-4	0-35	55-100	50-95	25-95	15-85	---	NP
	16	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Rock outcrop.											

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	> 3 inches	4	10	40	200		
	In				Pct					Pct	
703D*:											
Mundal	0-6	Loam	SM, ML	A-4, A-2-4, A-5	5-20	80-100	70-95	50-90	30-70	20-50	NP-10
	6-24	Loam, fine sandy loam, gravelly sandy loam.	SM, ML	A-4, A-2-4, A-5	0-10	80-100	75-100	45-95	20-75	20-50	NP-10
	24-60	Loam, gravelly fine sandy loam, cobbly sandy loam.	SM, GC, ML, CL	A-4, A-2-4	0-20	35-95	30-90	20-85	10-70	<30	NP-10
Cabot	0-6	Gravelly fine sandy loam.	ML, SM, CL-ML, SM-SC	A-4, A-2	5-20	80-95	75-95	50-90	30-75	<25	NP-5
	6-12	Loam, fine sandy loam, gravelly sandy loam.	ML, SM, CL-ML, SM-SC	A-4, A-2	0-30	80-95	65-95	50-85	30-70	<25	NP-5
	12-60	Loam, gravelly fine sandy loam, very gravelly sandy loam.	ML, SM, CL-ML, SM-SC	A-4, A-2	0-35	80-95	65-95	45-85	25-70	<25	NP-5
705D*:											
Rawsonville	0-3	Gravelly fine sandy loam.	SM, ML	A-4, A-5	5-20	75-100	70-90	50-90	30-70	20-50	NP-10
	3-23	Silt loam, loam, gravelly fine sandy loam.	SM, ML	A-4, A-2-4, A-5	0-10	75-100	70-95	50-95	30-70	20-50	NP-10
	23-30	Fine sandy loam, gravelly sandy, loam, gravelly loamy fine sand.	SM, SC, GM, GC	A-4, A-2-4	0-5	60-95	55-90	35-75	10-50	<30	NP-10
	30	Unweathered bedrock.	---	---	---	---	---	---	---	---	---
Houghtonville	0-2	Gravelly fine sandy loam.	SM, ML	A-4, A-2-4, A-5	5-20	75-100	70-95	50-90	30-70	20-50	NP-10
	2-29	Silt loam, fine sandy loam, gravelly fine sandy loam.	SM, ML	A-4, A-2-4, A-5	0-5	75-100	70-95	50-90	30-70	20-50	NP-10
	29-60	Silt loam, fine sandy loam, gravelly fine sandy loam.	SM, ML, CL, CL-ML	A-4, A-2-4	0-10	60-95	55-90	40-90	25-80	<30	NP-10

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS

(The symbol < means less than; > means more than. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Organic matter" apply only to the surface layer. Absence of an entry indicates that data were not available or were not estimated)

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
1B	0-8	3-10	1.00-1.30	0.6-2.0	0.10-0.23	3.6-6.0	Low	0.24	3	2-6
Marlow	8-23	3-10	1.30-1.60	0.6-2.0	0.06-0.20	3.6-6.0	Low	0.32		
	23-60	3-10	1.70-2.05	0.06-0.6	0.05-0.12	3.6-6.0	Low	0.20		
1C	0-7	3-10	1.00-1.30	0.6-2.0	0.10-0.23	3.6-6.0	Low	0.24	3	2-6
Marlow	7-23	3-10	1.30-1.60	0.6-2.0	0.06-0.20	3.6-6.0	Low	0.32		
	23-60	3-10	1.70-2.05	0.06-0.6	0.05-0.12	3.6-6.0	Low	0.20		
1D	0-6	3-10	1.00-1.30	0.6-2.0	0.10-0.23	3.6-6.0	Low	0.24	3	2-6
Marlow	6-23	3-10	1.30-1.60	0.6-2.0	0.06-0.20	3.6-6.0	Low	0.32		
	23-60	3-10	1.70-2.05	0.06-0.6	0.05-0.12	3.6-6.0	Low	0.20		
2C, 2D, 2E	0-4	3-10	1.00-1.30	0.6-2.0	0.10-0.23	3.6-6.0	Low	0.20	3	2-6
Marlow	4-23	3-10	1.30-1.60	0.6-2.0	0.06-0.20	3.6-6.0	Low	0.32		
	23-60	3-10	1.70-2.05	0.06-0.6	0.05-0.12	3.6-6.0	Low	0.20		
3B, 3C	0-5	3-10	1.10-1.30	0.6-2.0	0.12-0.20	3.6-6.0	Low	0.20	2	2-6
Peru	5-17	3-10	1.30-1.60	0.6-2.0	0.06-0.20	3.6-6.0	Low	0.32		
	17-60	3-10	1.60-2.05	0.06-0.6	0.05-0.12	3.6-6.0	Low	0.24		
4B	0-4	3-10	0.80-1.00	0.6-2.0	0.16-0.24	3.6-6.0	Low	0.20	2	2-6
Peru	4-17	3-10	1.30-1.60	0.6-2.0	0.06-0.20	3.6-6.0	Low	0.32		
	17-60	3-10	1.60-2.05	0.06-0.6	0.05-0.12	3.6-6.0	Low	0.24		
4C	0-3	3-10	0.80-1.00	0.6-2.0	0.16-0.24	3.6-6.0	Low	0.20	2	2-6
Peru	3-17	3-10	1.30-1.60	0.6-2.0	0.06-0.20	3.6-6.0	Low	0.32		
	17-60	3-10	1.60-2.05	0.06-0.6	0.05-0.12	3.6-6.0	Low	0.24		
4D	0-2	3-10	0.80-1.00	0.6-2.0	0.16-0.24	3.6-6.0	Low	0.20	2	2-6
Peru	2-17	3-10	1.30-1.60	0.6-2.0	0.06-0.20	3.6-6.0	Low	0.32		
	17-60	3-10	1.60-2.05	0.06-0.6	0.05-0.12	3.6-6.0	Low	0.24		
6A	0-6	5-12	0.70-1.10	0.6-2.0	0.14-0.24	5.1-7.3	Low	0.28	2	4-12
Cabot	6-12	3-8	1.30-1.70	0.6-2.0	0.10-0.22	5.1-7.3	Low	0.28		
	12-60	5-8	1.70-1.90	<0.2	0.08-0.12	5.6-7.3	Low	0.28		
7C	0-7	4-10	1.00-1.30	0.6-2.0	0.18-0.28	3.6-6.0	Low	0.20	2	4-12
Brayton	7-15	4-10	1.40-1.65	0.6-2.0	0.12-0.28	5.1-6.5	Low	0.32		
	15-60	4-10	1.70-2.00	0.06-0.6	0.01-0.06	5.6-7.3	Low	0.24		
9*:										
Pits.										
Dumps.										
11C*:										
Taconic	0-3	10-27	1.10-1.40	0.6-6.0	0.09-0.15	4.5-6.0	Low	0.24	1	2-6
	3-18	10-27	1.20-1.50	0.6-6.0	0.04-0.11	4.5-6.0	Low	0.24		
	18	---	---	0.1-20	---	---	---	---		
Hubbardton	0-3	3-18	1.10-1.40	0.6-6.0	0.08-0.15	3.6-5.5	Low	0.24	1	2-6
	3-5	3-18	1.10-1.40	0.6-6.0	0.07-0.12	3.6-5.5	Low	0.20		
	5	---	---	0.1-20	---	---	---	---		

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
12F*:										
Taconic	0-3	10-27	1.10-1.40	0.6-6.0	0.09-0.15	4.5-6.0	Low	0.24	1	2-6
	3-18	10-27	1.20-1.50	0.6-6.0	0.04-0.11	4.5-6.0	Low	0.24		
	18	---	---	0.1-20	---	---		----		
Hubbardton	0-3	3-18	1.10-1.40	0.6-6.0	0.08-0.15	3.6-5.5	Low	0.24	1	2-6
	3-5	3-18	1.10-1.40	0.6-6.0	0.07-0.12	3.6-5.5	Low	0.20		
	5	---	---	0.1-20	---	---		----		
Macomber	0-5	10-27	1.10-1.40	0.6-2.0	0.09-0.15	4.5-6.0	Low	0.24	2	2-6
	5-36	10-27	1.20-1.50	0.6-2.0	0.04-0.11	4.5-6.0	Low	0.24		
	36	---	---	0.1-20	---	---		----		
13B, 13C	0-6	4-8	1.00-1.20	6.0-20	0.06-0.12	3.6-6.0	Low	0.17	5	2-7
Hinckley	6-23	1-5	1.20-1.40	6.0-20	0.01-0.10	3.6-6.0	Low	0.17		
	23-60	0-3	1.30-1.50	>20	0.01-0.06	3.6-6.0	Low	0.10		
13D	0-5	4-8	1.00-1.20	6.0-20	0.06-0.12	3.6-6.0	Low	0.17	5	2-7
Hinckley	5-23	1-5	1.20-1.40	6.0-20	0.01-0.10	3.6-6.0	Low	0.17		
	23-60	0-3	1.30-1.50	>20	0.01-0.06	3.6-6.0	Low	0.10		
13E	0-4	4-8	1.00-1.20	6.0-20	0.06-0.12	3.6-6.0	Low	0.17	5	2-7
Hinckley	4-23	1-5	1.20-1.40	6.0-20	0.01-0.10	3.6-6.0	Low	0.17		
	23-60	0-3	1.30-1.50	>20	0.01-0.06	3.6-6.0	Low	0.10		
14A, 14B	0-3	2-6	1.10-1.40	2.0-6.0	0.10-0.25	5.1-6.5	Low	0.24	3	2-6
Sudbury	3-27	2-7	1.15-1.45	2.0-6.0	0.07-0.18	5.1-6.5	Low	0.24		
	27-60	0-3	1.30-1.45	6.0-20	0.01-0.06	6.6-7.3	Low	0.10		
15A	0-9	2-6	1.00-1.25	2.0-6.0	0.10-0.18	4.5-7.3	Low	0.20	3	2-8
Walpole	9-20	2-6	1.30-1.55	2.0-6.0	0.07-0.15	4.5-7.3	Low	0.24		
	20-60	0-2	1.40-1.65	>6.0	0.01-0.10	4.5-7.3	Low	0.10		
18B, 18C, 18D,										
18E	0-2	1-3	1.00-1.20	>6.0	0.09-0.12	4.5-6.0	Low	0.17	5	2-4
Windsor	2-24	0-3	1.30-1.55	>6.0	0.07-0.10	4.5-6.0	Low	0.17		
	24-60	0-2	1.40-1.65	>6.0	0.04-0.10	4.5-6.5	Low	0.10		
21	0-5	2-6	1.10-1.35	0.6-6.0	0.11-0.21	4.5-7.3	Low	0.20	3	3-8
Rippowam	5-25	1-6	1.20-1.45	0.6-6.0	0.09-0.18	4.5-7.3	Low	0.20		
	25-60	0-2	1.25-1.50	>6.0	0.01-0.10	4.5-7.3	Low	0.17		
22	0-11	4-15	0.80-1.20	0.6-2.0	0.24-0.34	5.1-7.3	Low	0.49	5	10-20
Saco	11-22	2-15	1.20-1.50	0.6-2.0	0.16-0.26	5.1-7.3	Low	0.64		
	22-60	2-15	1.20-1.50	0.6-2.0	0.16-0.26	6.1-7.3	Low	0.64		
23	0-19	---	0.30-0.55	0.2-6.0	0.35-0.45	5.6-7.3		----	2	55-75
Adrian	19-60	2-10	1.40-1.75	6.0-20	0.03-0.08	5.6-7.3	Low	0.15		
24	0-35	---	0.30-0.40	0.2-6.0	0.35-0.45	5.6-7.8		----	3	40-80
Pinnebog	35-60	---	0.10-0.25	0.6-6.0	0.45-0.55	5.6-7.8		----		
25A, 25B, 25C	0-8	4-15	0.95-1.15	0.6-2.0	0.18-0.25	4.5-7.3	Low	0.49	5	1-5
Belgrade	8-32	4-15	1.10-1.40	0.6-2.0	0.16-0.20	4.5-7.3	Low	0.64		
	32-60	2-20	1.20-1.40	0.06-6.0	0.06-0.20	6.1-7.3	Low	0.64		
26A	0-9	3-16	1.20-1.50	0.2-2.0	0.18-0.24	5.1-7.3	Low	0.49	5	3-10
Raynham	9-22	3-16	1.20-1.50	0.2-2.0	0.18-0.22	5.1-7.3	Low	0.64		
	22-60	3-16	1.20-1.60	0.06-0.2	0.17-0.21	5.6-7.3	Low	0.64		

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
28*:										
Udifluvents.										
Fluvaquents.										
29*:										
Histosols.										
Aquents.										
30B	0-12	3-12	1.00-1.25	0.6-2.0	0.10-0.20	4.5-6.0	Low	0.24	3	2-5
Paxton	12-26	3-12	1.35-1.60	0.6-2.0	0.08-0.18	4.5-6.0	Low	0.32		
	26-60	3-12	1.70-2.00	<0.2	0.05-0.10	4.5-6.0	Low	0.24		
30C	0-10	3-12	1.00-1.25	0.6-2.0	0.10-0.20	4.5-6.0	Low	0.24	3	2-5
Paxton	10-26	3-12	1.35-1.60	0.6-2.0	0.08-0.18	4.5-6.0	Low	0.32		
	26-60	3-12	1.70-2.00	<0.2	0.05-0.10	4.5-6.0	Low	0.24		
30D	0-9	3-12	1.00-1.25	0.6-2.0	0.10-0.20	4.5-6.0	Low	0.24	3	2-5
Paxton	9-26	3-12	1.35-1.60	0.6-2.0	0.08-0.18	4.5-6.0	Low	0.32		
	26-60	3-12	1.70-2.00	<0.2	0.05-0.10	4.5-6.0	Low	0.24		
31B, 31C, 31D	0-9	3-12	1.00-1.25	0.6-2.0	0.08-0.18	4.5-6.0	Low	0.20	3	2-5
Paxton	9-26	3-12	1.35-1.60	0.6-2.0	0.08-0.18	4.5-6.0	Low	0.32		
	26-60	3-12	1.70-2.00	<0.2	0.05-0.10	4.5-6.0	Low	0.24		
31E	0-7	3-12	1.00-1.25	0.6-2.0	0.08-0.18	4.5-6.0	Low	0.20	3	2-5
Paxton	7-26	3-12	1.35-1.60	0.6-2.0	0.08-0.18	4.5-6.0	Low	0.32		
	26-60	3-12	1.70-2.00	<0.2	0.05-0.10	4.5-6.0	Low	0.24		
38A	0-12	3-12	1.00-1.30	0.6-2.0	0.20-0.30	4.5-6.0	Low	0.49	3	2-6
Tisbury	12-22	3-12	1.30-1.60	0.6-2.0	0.18-0.28	4.5-6.0	Low	0.64		
	22-60	0-3	1.40-1.65	>6.0	0.01-0.08	4.5-6.0	Low	0.10		
39B*:										
Galway	0-8	7-18	1.10-1.40	0.6-2.0	0.15-0.21	5.6-7.3	Low	0.32	2	2-6
	8-24	5-18	1.20-1.50	0.6-2.0	0.08-0.19	5.6-7.8	Low	0.24		
	24	---	---	0.1-20	---	---				
Nellis	0-8	5-18	1.30-1.60	0.6-2.0	0.13-0.20	5.6-7.3	Low	0.32	3	2-6
	8-21	5-18	1.40-1.70	0.6-2.0	0.08-0.19	5.6-7.8	Low	0.24		
	21-60	3-18	1.70-1.95	0.2-2.0	0.07-0.19	6.6-8.4	Low	0.24		
Farmington	0-8	10-27	1.10-1.40	0.6-2.0	0.11-0.19	5.1-6.5	Low	0.32	1	2-6
	8-12	10-27	1.20-1.50	0.6-2.0	0.07-0.18	5.6-7.8	Low	0.32		
	12	---	---	0.1-20	---	---				
40C*:										
Galway	0-3	7-18	1.10-1.40	0.6-2.0	0.15-0.21	5.6-7.3	Low	0.32	2	2-6
	3-24	5-18	1.20-1.50	0.6-2.0	0.08-0.19	5.6-7.8	Low	0.24		
	24	---	---	0.1-20	---	---				
Nellis	0-8	5-18	1.30-1.60	0.6-2.0	0.13-0.20	5.6-7.3	Low	0.32	3	2-6
	8-21	5-18	1.40-1.70	0.6-2.0	0.08-0.19	5.6-7.8	Low	0.24		
	21-60	3-18	1.70-1.95	0.2-2.0	0.07-0.19	6.6-8.4	Low	0.24		
Farmington	0-3	10-27	1.10-1.40	0.6-2.0	0.11-0.19	5.1-6.5	Low	0.32	1	2-6
	3-12	10-27	1.20-1.50	0.6-2.0	0.07-0.18	5.6-7.8	Low	0.32		
	12	---	---	0.1-20	---	---				

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
40D*:										
Galway	0-3	7-18	1.10-1.40	0.6-2.0	0.09-0.16	5.6-7.3	Low	0.24	2	2-6
	3-24	5-18	1.20-1.50	0.6-2.0	0.08-0.19	5.6-7.8	Low	0.24		
	24	---	---	0.1-20	---	---				
Nellis	0-2	5-18	1.30-1.60	0.6-2.0	0.10-0.19	5.6-7.3	Low	0.24	3	2-6
	2-21	5-18	1.40-1.70	0.6-2.0	0.08-0.19	5.6-7.8	Low	0.24		
	21-60	3-18	1.70-1.95	0.2-2.0	0.07-0.11	6.6-8.4	Low	0.24		
Farmington	0-3	10-27	1.10-1.40	0.6-2.0	0.11-0.19	5.1-6.5	Low	0.32	1	2-6
	3-12	10-27	1.20-1.50	0.6-2.0	0.07-0.18	5.6-7.8	Low	0.32		
	12	---	---	0.1-20	---	---				
41C*, 41E*:										
Farmington	0-3	10-27	1.10-1.40	0.6-2.0	0.11-0.19	5.1-6.5	Low	0.32	1	2-6
	3-12	10-27	1.20-1.50	0.6-2.0	0.07-0.18	5.6-7.8	Low	0.32		
	12	---	---	0.1-20	---	---				
Galway	0-3	7-18	1.10-1.40	0.6-2.0	0.09-0.16	5.6-7.3	Low	0.24	2	2-6
	3-24	5-18	1.20-1.50	0.6-2.0	0.08-0.19	5.6-7.8	Low	0.24		
	24	---	---	0.1-20	---	---				
Galoo	0-3	10-27	1.10-1.40	0.6-2.0	0.14-0.20	5.6-7.3	Low	0.32	1	2-6
	3	---	---	0.1-20	---	---				
42C*, 42D*:										
Macomber	0-6	10-27	1.10-1.40	0.6-2.0	0.09-0.15	4.5-6.0	Low	0.24	2	2-6
	6-36	10-27	1.20-1.50	0.6-2.0	0.04-0.11	4.5-6.0	Low	0.24		
	36	---	---	0.1-20	---	---				
Taconic	0-3	10-27	1.10-1.40	0.6-6.0	0.09-0.15	4.5-6.0	Low	0.24	1	2-6
	3-18	10-27	1.20-1.50	0.6-6.0	0.04-0.11	4.5-6.0	Low	0.24		
	18	---	---	0.1-20	---	---				
42F*:										
Macomber	0-5	10-27	1.10-1.40	0.6-2.0	0.09-0.15	4.5-6.0	Low	0.24	2	2-6
	5-36	10-27	1.20-1.50	0.6-2.0	0.04-0.11	4.5-6.0	Low	0.24		
	36	---	---	0.1-20	---	---				
Taconic	0-3	10-27	1.10-1.40	0.6-6.0	0.09-0.15	4.5-6.0	Low	0.24	1	2-6
	3-18	10-27	1.20-1.50	0.6-6.0	0.04-0.11	4.5-6.0	Low	0.24		
	18	---	---	0.1-20	---	---				
43C*:										
Taconic	0-3	10-27	1.10-1.40	0.6-6.0	0.09-0.15	4.5-6.0	Low	0.24	1	2-6
	3-18	10-27	1.20-1.50	0.6-6.0	0.04-0.11	4.5-6.0	Low	0.24		
	18	---	---	0.1-20	---	---				
Macomber	0-6	10-27	1.10-1.40	0.6-2.0	0.09-0.15	4.5-6.0	Low	0.24	2	2-6
	6-36	10-27	1.20-1.50	0.6-2.0	0.04-0.11	4.5-6.0	Low	0.24		
	36	---	---	0.1-20	---	---				
44B, 44C	0-5	4-10	1.00-1.20	0.6-2.0	0.20-0.24	4.5-6.0	Low	0.32	5	3-8
Dutchess	5-26	4-10	1.30-1.50	0.6-2.0	0.14-0.20	4.5-6.0	Low	0.37		
	26-60	4-10	1.40-1.60	0.6-2.0	0.10-0.18	5.1-6.5	Low	0.32		
44D	0-4	4-10	1.00-1.20	0.6-2.0	0.20-0.24	4.5-6.0	Low	0.32	5	3-8
Dutchess	4-26	4-10	1.30-1.50	0.6-2.0	0.14-0.20	4.5-6.0	Low	0.37		
	26-60	4-10	1.40-1.60	0.6-2.0	0.10-0.18	5.1-6.5	Low	0.32		

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
47B, 47C, 47D, 47E----------	0-4	4-10	1.00-1.20	0.6-2.0	0.16-0.20	4.5-6.0	Low----------	0.28	5	3-8
Dutchess	4-26	4-10	1.30-1.50	0.6-2.0	0.14-0.20	4.5-6.0	Low----------	0.37		
	26-60	4-10	1.40-1.60	0.6-2.0	0.10-0.18	5.1-6.5	Low----------	0.32		
50A----------	0-9	8-22	1.10-1.40	0.6-2.0	0.14-0.20	5.6-7.3	Low----------	0.28	3	3-8
Massena	9-26	7-18	1.20-1.50	0.06-0.6	0.08-0.15	5.6-7.3	Low----------	0.20		
	26-60	7-18	1.70-1.95	0.06-0.6	0.06-0.14	6.6-8.4	Low----------	0.20		
52B*:										
Macomber---------	0-6	10-27	1.10-1.40	0.6-2.0	0.10-0.17	4.5-6.0	Low----------	0.24	2	2-6
	6-36	10-27	1.20-1.50	0.6-2.0	0.04-0.11	4.5-6.0	Low----------	0.24		
	36	---	---	0.1-20	---	---	----------	----		
Dutchess---------	0-4	4-10	1.00-1.20	0.6-2.0	0.20-0.24	4.5-6.0	Low----------	0.32	5	3-8
	4-26	4-10	1.30-1.50	0.6-2.0	0.14-0.20	4.5-6.0	Low----------	0.37		
	26-60	4-10	1.40-1.60	0.6-2.0	0.10-0.18	5.1-6.5	Low----------	0.32		
53----------	0-17	8-18	1.35-1.55	0.6-2.0	0.20-0.24	5.6-7.8	Low----------	0.37	5	1-2
Elvers	17-60	---	0.10-0.24	2.0-6.0	0.35-0.45	5.6-7.8	----------	----		
54A----------	0-9	3-12	1.00-1.25	0.6-6.0	0.15-0.24	4.5-6.0	Low----------	0.32	3	2-5
Ninigret	9-20	3-12	1.35-1.60	0.6-6.0	0.14-0.22	4.5-6.0	Low----------	0.37		
	20-60	0-2	1.45-1.70	>6.0	0.01-0.10	4.5-6.5	Low----------	0.15		
56B*, 56C*, 56D*, 56E*:										
Colton---------	0-6	1-7	1.10-1.40	6.0-20	0.02-0.05	3.6-6.0	Low----------	0.17	5	3-8
	6-32	0-5	1.25-1.55	6.0-20	0.02-0.05	4.5-6.0	Low----------	0.17		
	32-60	0-3	1.45-1.65	>20	0.01-0.02	4.5-6.5	Low----------	0.17		
Duxbury---------	0-1	1-7	1.00-1.20	2.0-6.0	0.14-0.18	3.6-6.5	Low----------	0.28	2	2-5
	1-18	2-8	0.80-1.20	2.0-6.0	0.16-0.24	3.6-6.5	Low----------	0.49		
	18-60	0-2	1.40-1.70	>6.0	0.01-0.06	4.5-6.5	Low----------	0.17		
57B*:										
Duxbury---------	0-6	1-7	1.30-1.40	2.0-6.0	0.16-0.20	3.6-6.5	Low----------	0.32	2	2-5
	6-18	2-8	0.80-1.20	2.0-6.0	0.16-0.24	3.6-6.5	Low----------	0.49		
	18-60	0-2	1.40-1.70	6.0-20.0	0.01-0.06	4.5-6.5	Low----------	0.17		
Colton----------	0-6	2-7	1.10-1.40	>6.0	0.08-0.12	3.6-6.0	Low----------	0.17	5	3-8
	6-32	0-5	1.25-1.55	>6.0	0.02-0.05	3.6-6.0	Low----------	0.17		
	32-60	0-3	1.45-1.65	>20	0.01-0.02	4.5-6.5	Low----------	0.17		
58C*:										
Colton----------	0-6	2-7	1.10-1.40	>6.0	0.08-0.12	3.6-6.0	Low----------	0.17	5	3-8
	6-32	0-5	1.25-1.55	>6.0	0.02-0.05	3.6-6.0	Low----------	0.17		
	32-60	0-3	1.45-1.65	>20	0.01-0.02	4.5-6.5	Low----------	0.17		
Duxbury---------	0-5	1-7	1.30-1.40	2.0-6.0	0.16-0.20	3.6-6.5	Low----------	0.32	2	2-5
	5-18	2-8	0.80-1.20	2.0-6.0	0.16-0.24	3.6-6.5	Low----------	0.49		
	18-60	0-2	1.40-1.70	6.0-20.0	0.01-0.06	4.5-6.5	Low----------	0.17		
58D*:										
Colton----------	0-6	2-7	1.10-1.40	>6.0	0.08-0.12	3.6-6.0	Low----------	0.17	5	3-8
	6-32	0-5	1.25-1.55	>6.0	0.02-0.05	3.6-6.0	Low----------	0.17		
	32-60	0-3	1.45-1.65	>20	0.01-0.02	4.5-6.5	Low----------	0.17		
Duxbury---------	0-4	1-7	1.30-1.40	2.0-6.0	0.16-0.20	3.6-6.5	Low----------	0.32	2	2-5
	4-18	2-8	0.80-1.20	2.0-6.0	0.16-0.24	3.6-6.5	Low----------	0.49		
	18-60	0-2	1.40-1.70	6.0-20.0	0.01-0.06	4.5-6.5	Low----------	0.17		

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
59A----------	0-11	2-7	1.00-1.20	6.0-20	0.07-0.13	4.5-7.3	Low----------	0.17	5	1-4
Deerfield	11-32	1-7	1.20-1.45	6.0-20	0.01-0.13	4.5-7.3	Low----------	0.17		
	32-60	0-5	1.40-1.50	>6.0	0.01-0.08	4.5-7.3	Low----------	0.17		
61A, 61B----------	0-10	1-5	1.40-1.60	6.0-20	0.10-0.18	5.1-7.3	Low----------	0.24	5	2-4
Eldridge	10-30	1-5	1.60-1.80	6.0-20	0.06-0.11	5.1-7.3	Low----------	0.24		
	30-60	3-18	1.50-1.80	0.06-0.6	0.19-0.21	5.1-7.3	Low----------	0.43		
62----------	0-6	1-5	1.60-1.80	6.0-20	0.07-0.14	4.5-6.5	Low----------	0.24	5	2-4
Enosburg	6-27	1-5	1.60-1.80	6.0-20	0.04-0.11	4.5-7.3	Low----------	0.24		
	27-60	3-18	1.50-1.70	0.06-0.6	0.12-0.22	5.6-7.3	Low----------	0.43		
64B, 64C, 64D----	0-6	5-18	1.00-1.25	0.6-2.0	0.11-0.20	5.1-7.3	Low----------	0.24	3	2-6
Stockbridge	6-28	5-18	1.40-1.65	0.6-2.0	0.12-0.22	5.6-7.3	Low----------	0.37		
	28-60	3-18	1.60-1.85	0.06-0.6	0.07-0.17	5.6-8.4	Low----------	0.24		
65B, 65C, 65D, 65E----------	0-6	5-18	1.00-1.25	0.6-2.0	0.11-0.21	5.1-7.3	Low----------	0.24	3	2-6
Stockbridge	6-28	5-18	1.40-1.65	0.6-2.0	0.12-0.22	5.6-7.3	Low----------	0.37		
	28-60	3-18	1.60-1.85	0.06-0.6	0.07-0.17	5.6-8.4	Low----------	0.24		
66B*:										
Georgia----------	0-10	7-18	1.00-1.30	0.6-2.0	0.17-0.24	5.1-7.3	Low----------	0.32	3	3-8
	10-30	5-18	1.30-1.60	0.6-2.0	0.09-0.18	5.1-7.3	Low----------	0.32		
	30-60	10-18	1.60-1.80	0.06-0.2	0.08-0.18	5.1-7.3	Low----------	0.32		
Amenia----------	0-8	5-18	1.10-1.40	0.6-2.0	0.13-0.20	5.6-7.3	Low----------	0.32	3	2-6
	8-24	5-18	1.30-1.60	0.6-2.0	0.08-0.19	5.6-7.3	Low----------	0.24		
	24-60	5-18	1.70-1.95	0.06-0.2	0.08-0.12	7.4-8.4	Low----------	0.24		
66C*:										
Georgia----------	0-9	7-18	1.00-1.30	0.6-2.0	0.17-0.24	5.1-7.3	Low----------	0.32	3	3-8
	9-30	5-18	1.30-1.60	0.6-2.0	0.09-0.18	5.1-7.3	Low----------	0.32		
	30-60	10-18	1.60-1.80	0.06-0.2	0.08-0.18	5.1-7.3	Low----------	0.32		
Amenia----------	0-8	5-18	1.10-1.40	0.6-2.0	0.13-0.20	5.6-7.3	Low----------	0.32	3	2-6
	8-24	5-18	1.30-1.60	0.6-2.0	0.08-0.19	5.6-7.3	Low----------	0.24		
	24-60	5-18	1.70-1.95	0.06-0.2	0.08-0.12	7.4-8.4	Low----------	0.24		
67B*:										
Georgia----------	0-10	7-18	1.00-1.30	0.6-2.0	0.13-0.22	5.1-7.3	Low----------	0.28	3	3-8
	10-30	5-18	1.30-1.60	0.6-2.0	0.10-0.22	5.1-7.3	Low----------	0.32		
	30-60	10-18	1.30-1.80	0.06-0.2	0.12-0.22	5.1-7.3	Low----------	0.32		
Amenia----------	0-8	5-18	1.10-1.40	0.6-2.0	0.09-0.16	5.6-7.3	Low----------	0.24	3	2-6
	8-24	5-18	1.30-1.60	0.6-2.0	0.08-0.19	5.6-7.3	Low----------	0.24		
	24-60	5-18	1.70-1.95	0.06-0.2	0.08-0.12	7.4-8.4	Low----------	0.24		
67C*:										
Georgia----------	0-9	7-18	1.00-1.30	0.6-2.0	0.13-0.22	5.1-7.3	Low----------	0.28	3	3-8
	9-30	5-18	1.30-1.60	0.6-2.0	0.10-0.22	5.1-7.3	Low----------	0.32		
	30-60	10-18	1.30-1.80	0.06-0.2	0.12-0.22	5.1-7.3	Low----------	0.32		
Amenia----------	0-8	5-18	1.10-1.40	0.6-2.0	0.09-0.16	5.6-7.3	Low----------	0.24	3	2-6
	8-24	5-18	1.30-1.60	0.6-2.0	0.08-0.19	5.6-7.3	Low----------	0.24		
	24-60	5-18	1.70-1.95	0.06-0.2	0.08-0.12	7.4-8.4	Low----------	0.24		
67D*:										
Georgia----------	0-8	7-18	1.00-1.30	0.6-2.0	0.13-0.22	5.1-7.3	Low----------	0.28	3	3-8
	8-30	5-18	1.30-1.60	0.6-2.0	0.10-0.22	5.1-7.3	Low----------	0.32		
	30-60	10-18	1.30-1.80	0.06-0.2	0.12-0.22	5.1-7.3	Low----------	0.32		

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
67D*:										
Amenia	0-8	5-18	1.10-1.40	0.6-2.0	0.09-0.16	5.6-7.3	Low	0.24	3	2-6
	8-24	5-18	1.30-1.60	0.6-2.0	0.08-0.19	5.6-7.3	Low	0.24		
	24-60	5-18	1.70-1.95	0.06-0.2	0.08-0.12	7.4-8.4	Low	0.24		
68A	0-9	8-22	1.10-1.40	0.6-2.0	0.08-0.15	5.6-7.3	Low	0.20	3	4-8
Massena	9-26	7-18	1.20-1.50	0.06-0.6	0.08-0.15	5.6-7.3	Low	0.20		
	26-60	7-18	1.70-1.95	0.06-0.6	0.06-0.14	6.6-8.4	Low	0.20		
71A	0-8	4-15	1.10-1.40	0.6-6.0	0.08-0.12	5.6-6.0	Low	0.20	3	4-10
Castile	8-26	4-15	1.25-1.55	2.0-6.0	0.05-0.13	5.6-6.0	Low	0.17		
	26-60	2-10	1.45-1.65	>6.0	0.01-0.02	5.6-7.3	Low	0.17		
72A	0-8	5-15	1.20-1.40	0.6-2.0	0.12-0.15	5.6-7.3	Low	0.20	3	3-5
Fredon	8-24	7-20	1.20-1.40	0.2-2.0	0.12-0.20	5.6-7.3	Low	0.24		
	24-60	2-10	1.30-1.50	6.0-20	0.02-0.06	6.1-8.4	Low	0.10		
73	0-9	---	0.55-0.75	6.0-20.0	0.20-0.45	5.6-7.3	Low	----	5	20-60
Scarboro	9-16	1-5	1.15-1.35	>6.0	0.04-0.13	6.1-7.3	Low	0.17		
	16-60	0-2	1.35-1.55	>6.0	0.01-0.13	6.1-7.3	Low	0.10		
80A, 80B	0-9	27-50	1.35-1.55	0.06-0.2	0.12-0.22	5.1-7.8	Moderate	0.49	2	3-9
Kingsbury	9-20	60-90	1.40-1.75	<0.06	0.12-0.13	5.1-7.8	High	0.28		
	20-60	60-90	1.40-1.50	<0.06	0.12-0.14	7.9-8.4	High	0.28		
81	0-7	35-90	1.10-1.60	0.2-0.6	0.11-0.23	5.1-7.3	Moderate	0.49	2	4-16
Livingston	7-33	60-90	1.30-1.45	<0.2	0.09-0.11	5.1-7.8	Moderate	0.49		
	33-44	60-90	1.30-1.45	<0.2	0.09-0.11	6.6-7.8	Moderate	0.49		
	44-60	60-90	1.30-1.50	<0.2	0.08-0.10	7.4-8.4	Moderate	0.49		
82B	0-9	27-90	1.25-1.55	0.06-0.6	0.11-0.21	4.5-7.3	Moderate	0.49	2	2-6
Vergennes	9-11	60-90	1.10-1.40	<0.2	0.09-0.11	4.5-7.3	Moderate	0.49		
	11-18	60-90	1.10-1.40	<0.2	0.09-0.11	5.6-8.4	Moderate	0.49		
	18-60	60-90	1.20-1.50	<0.06	0.08-0.10	7.9-8.4	Moderate	0.49		
82C	0-8	27-90	1.25-1.55	0.06-0.6	0.11-0.21	4.5-7.3	Moderate	0.49	2	2-6
Vergennes	8-11	60-90	1.10-1.40	<0.2	0.09-0.11	4.5-7.3	Moderate	0.49		
	11-18	60-90	1.10-1.40	<0.2	0.09-0.11	5.6-8.4	Moderate	0.49		
	18-60	60-90	1.20-1.50	<0.06	0.08-0.10	7.9-8.4	Moderate	0.49		
82D, 82E	0-6	27-90	1.25-1.55	0.06-0.6	0.11-0.21	4.5-7.3	Moderate	0.49	2	2-6
Vergennes	6-11	60-90	1.10-1.40	<0.2	0.09-0.11	4.5-7.3	Moderate	0.49		
	11-18	60-90	1.10-1.40	<0.2	0.09-0.11	5.6-8.4	Moderate	0.49		
	18-60	60-90	1.20-1.50	<0.06	0.08-0.10	7.9-8.4	Moderate	0.49		
86	0-36	0	0.15-0.40	0.2-6.0	0.35-0.45	5.6-7.3	---	----	2	40-70
Linwood	36-60	5-35	1.60-1.90	0.2-2.0	0.11-0.20	5.6-7.3	Low	0.28		
88	0-6	3-16	0.55-0.75	0.2-2.0	0.17-0.30	4.5-6.0	Low	----	5	20-60
Birdsall	6-28	3-16	1.20-1.50	0.2-0.6	0.15-0.26	5.1-7.3	Low	0.64		
	28-60	3-16	1.20-1.50	0.06-0.2	0.15-0.26	5.1-7.3	Low	0.64		
90B, 90C, 90D	0-6	3-10	1.10-1.50	0.6-2.0	0.18-0.24	5.1-7.3	Low	0.49	5	2-8
Hartland	6-17	3-10	1.20-1.50	0.6-2.0	0.18-0.22	5.1-7.3	Low	0.64		
	17-60	3-16	1.20-1.60	0.2-2.0	0.17-0.21	5.1-7.3	Low	0.64		
95.										
Udorthents										
96.										
Udipsamments										

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
97A*, 97B*, 97C*, 97D*:										
Warwick	0-6	3-8	1.10-1.20	2.0-6.0	0.04-0.20	3.6-6.5	Low	0.17	3	1-5
	6-27	3-8	1.20-1.40	2.0-6.0	0.03-0.16	4.5-6.0	Low	0.24		
	27-60	0-3	1.30-1.50	>20	0.01-0.05	4.5-6.5	Low	0.10		
Quonset	0-7	2-7	1.20-1.30	2.0-20	0.04-0.13	3.6-5.5	Low	0.17	5	1-7
	7-20	1-4	1.40-1.50	2.0-20	0.04-0.07	3.6-6.0	Low	0.17		
	20-60	0-2	1.40-1.50	>20	0.01-0.03	5.1-6.5	Low	0.10		
98E*:										
Quonset	0-7	2-7	1.20-1.30	2.0-20	0.04-0.13	3.6-5.5	Low	0.17	5	1-7
	7-20	1-4	1.40-1.50	2.0-20	0.04-0.07	3.6-6.0	Low	0.17		
	20-60	0-2	1.40-1.50	>20	0.01-0.03	5.1-6.5	Low	0.10		
Warwick	0-6	3-8	1.10-1.20	2.0-6.0	0.04-0.20	3.6-6.5	Low	0.17	3	1-5
	6-27	3-8	1.20-1.40	2.0-6.0	0.03-0.16	4.5-6.0	Low	0.24		
	27-60	0-3	1.30-1.50	>20	0.01-0.05	4.5-6.5	Low	0.10		
99B--Copake	0-8	4-18	1.10-1.40	0.6-6.0	0.10-0.18	4.5-7.3	Low	0.24	3	2-5
	8-27	4-18	1.25-1.55	0.6-6.0	0.10-0.20	5.1-7.3	Low	0.24		
	27-60	1-10	1.45-1.70	>20	0.01-0.06	6.1-7.3	Low	0.10		
104B--Groton	0-9	2-8	1.00-1.30	2.0-20	0.07-0.15	5.6-7.3	Low	0.17	5	1-4
	9-13	2-6	1.25-1.50	2.0-20	0.04-0.12	5.6-7.8	Low	0.17		
	13-60	0-2	1.40-1.70	>20	0.01-0.06	6.6-7.8	Low	0.10		
105--Tioga	0-12	5-18	1.15-1.40	0.6-6.0	0.15-0.21	5.1-7.3	Low	0.37	5	2-6
	12-28	5-18	1.15-1.45	0.6-6.0	0.07-0.20	5.1-7.3	Low	0.28		
	28-60	3-15	1.25-1.55	0.6-20	0.02-0.20	5.6-7.8	Low	0.28		
106--Middlebury	0-12	5-18	1.15-1.40	0.6-2.0	0.14-0.21	5.6-7.3	Low	0.28	5	3-7
	12-24	5-18	1.15-1.45	0.6-2.0	0.10-0.20	5.6-7.3	Low	0.28		
	24-60	1-10	1.25-1.55	2.0-20.0	0.01-0.10	5.6-7.3	Low	0.20		
108--Hamlin	0-12	8-18	1.15-1.40	0.6-2.0	0.18-0.21	5.1-7.3	Low	0.49	5	2-6
	12-24	5-18	1.15-1.45	0.6-2.0	0.17-0.19	5.1-7.3	Low	0.49		
	24-40	5-18	1.15-1.45	0.6-2.0	0.17-0.19	5.6-7.8	Low	0.49		
	40-60	3-10	1.25-1.55	0.6-2.0	0.17-0.19	5.6-7.8	Low	0.49		
109--Teel	0-11	8-18	1.15-1.40	0.6-2.0	0.20-0.24	5.6-7.3	Low	0.37	5	2-6
	11-31	5-18	1.15-1.45	0.6-2.0	0.17-0.22	5.6-7.3	Low	0.43		
	31-41	2-18	1.25-1.55	0.6-2.0	0.15-0.22	5.6-7.3	Low	0.43		
	41-60	2-10	1.50-1.70	2.0-20	0.05-0.10	5.6-7.3	Low	0.15		
110--Limerick	0-7	4-10	1.10-1.50	0.6-2.0	0.18-0.30	5.6-7.3	Low	0.49	5	2-5
	7-25	2-10	1.10-1.50	0.6-2.0	0.18-0.26	5.6-7.3	Low	0.49		
	25-60	1-8	1.20-1.50	0.6-2.0	0.18-0.25	5.6-7.3	Low	0.49		
111--Livingston	0-7	35-90	1.10-1.60	0.2-0.6	0.11-0.23	5.1-7.3	Moderate	0.49	2	4-16
	7-33	60-90	1.30-1.45	<0.2	0.09-0.11	5.1-7.3	Moderate	0.49		
	33-44	60-90	1.30-1.45	<0.2	0.09-0.11	6.6-7.8	Moderate	0.49		
	44-60	60-90	1.30-1.45	<0.2	0.09-0.10	7.4-8.4	Moderate	0.49		
118C--Adams	0-5	0-5	1.00-1.30	6.0-20	0.06-0.12	4.5-6.0	Low	0.17	3	1-4
	5-31	0-5	1.10-1.45	6.0-20	0.03-0.10	4.5-6.0	Low	0.17		
	31-60	0-5	1.20-1.50	>20	0.03-0.04	5.6-6.5	Low	0.17		
122B, 122C--Lyme	0-10	3-10	1.00-1.25	0.6-6.0	0.06-0.24	4.5-5.5	Low	0.24	5	2-6
	10-24	3-10	1.35-1.60	0.6-6.0	0.05-0.20	4.5-5.5	Low	0.32		
	24-60	2-7	1.45-1.70	0.6-6.0	0.04-0.16	4.5-5.5	Low	0.24		

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
123B, 123C------- Sheepscot	0-2 2-14 14-19 19-60	3-5 1-5 0-3 0-3	1.00-1.30 1.20-1.50 1.45-1.70 1.45-1.70	0.6-6.0 0.6-6.0 >6.0 >6.0	0.11-0.21 0.06-0.15 0.02-0.09 0.01-0.06	3.6-6.5 3.6-6.5 3.6-6.5 4.5-6.0	Low Low Low Low	0.17 0.10 0.10 0.10	2	2-6
124B, 124C, 124D, 124E------------ Sunapee	0-2 2-28 28-60	2-14 2-12 2-10	0.80-1.20 0.80-1.30 1.20-1.50	0.6-2.0 0.6-2.0 0.6-6.0	0.10-0.20 0.07-0.17 0.03-0.17	3.6-5.5 3.6-5.5 3.6-6.0	Low Low Low	0.20 0.20 0.20	5	2-6
125B, 125C, 125D, 125E------------ Berkshire	0-5 5-32 32-60	3-10 3-10 1-10	1.10-1.15 1.15-1.30 1.30-1.60	0.6-6.0 0.6-6.0 0.6-6.0	0.06-0.22 0.10-0.20 0.10-0.18	3.6-6.0 3.6-6.0 3.6-6.0	Low Low Low	0.20 0.32 0.24	5	2-5
127C, 127D, 127E- Houghtonville	0-2 2-29 29-60	3-10 3-10 3-10	0.70-1.00 0.80-1.10 1.50-1.80	0.6-6.0 0.6-6.0 0.6-6.0	0.10-0.22 0.13-0.45 0.08-0.15	3.6-6.0 3.6-6.0 3.6-6.0	Low Low Low	0.43 0.64 0.28	3	4-8
128C*, 128D*, 128E*: Rawsonville---- Houghtonville-- 	0-3 3-23 23-30 30 0-2 2-29 29-60	3-10 3-10 3-10 --- 3-10 3-10 3-10	0.70-1.00 0.70-1.00 0.80-1.10 --- 0.70-1.00 0.80-1.10 1.50-1.80	0.6-6.0 0.6-6.0 0.6-6.0 0.1-20 0.6-6.0 0.6-6.0 0.6-6.0	0.13-0.22 0.13-0.45 0.07-0.17 --- 0.10-0.22 0.13-0.45 0.08-0.15	3.6-5.5 3.6-5.5 3.6-5.5 --- 3.6-6.0 3.6-6.0 3.6-6.0	Low Low Low --- Low Low Low	0.43 0.64 0.28 ---- 0.43 0.64 0.28	2 3 	4-8 4-8
129D*, 129F*: Killington------ Rawsonville----- 	0-1 1-17 17 0-3 3-23 23-30 30	1-10 1-10 --- 3-10 3-10 3-10 ---	0.60-1.00 0.60-1.00 --- 0.70-1.00 0.70-1.00 0.80-1.10 ---	2.0-6.0 2.0-6.0 0.1-20 0.6-6.0 0.6-6.0 0.6-6.0 0.1-20	0.06-0.18 0.06-0.30 --- 0.13-0.22 0.13-0.45 0.07-0.17 ---	4.5-5.5 4.5-6.0 --- 3.6-5.5 3.6-5.5 3.6-5.5 ---	Low Low --- Low Low Low ---	0.32 0.28 ---- 0.43 0.64 0.28 ----	1 2 	4-8 4-8
130B*, 130C*, 130D*, 130E*: Tunbridge------ Berkshire------ 	0-4 4-35 35 0-5 5-32 32-60	5-9 3-9 --- 3-10 3-10 1-10	0.80-1.20 1.20-1.40 --- 1.10-1.15 1.15-1.30 1.30-1.60	0.6-6.0 0.6-6.0 0.1-20 0.6-6.0 0.6-6.0 0.6-6.0	0.11-0.21 0.10-0.21 --- 0.06-0.22 0.10-0.20 0.10-0.18	3.6-6.0 3.6-6.0 --- 3.6-6.0 3.6-6.0 3.6-6.0	Low Low --- Low Low Low	0.20 0.20 ---- 0.20 0.32 0.24	2 5 	2-4 2-5
131D*, 131E*: Lyman----------- Tunbridge------- Rock outcrop.	0-4 4-11 11 0-4 4-35 35	2-10 2-10 --- 5-9 3-9 ---	0.75-1.20 0.90-1.40 --- 0.80-1.20 1.20-1.40 ---	2.0-6.0 2.0-6.0 0.1-20 0.6-6.0 0.6-6.0 0.1-20	0.13-0.24 0.08-0.28 --- 0.11-0.21 0.10-0.21 ---	3.6-6.0 3.6-6.0 --- 3.6-6.0 3.6-6.0 ---	Low Low --- Low Low ---	0.20 0.32 ---- 0.20 0.20 ----	1 2 	2-4 2-4

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
132C*, 132E*:										
Glebe	0-4	1-7	0.80-1.00	2.0-6.0	0.15-0.22	3.6-5.5	Low	0.43	2	8-20
	4-24	1-12	0.60-1.00	2.0-6.0	0.35-0.45	3.6-5.5	Low	0.64		
	24	---	---	0.1-20	---	---		----		
Stratton	0-5	1-7	0.80-1.50	0.6-6.0	0.15-0.22	3.6-5.5	Low	0.43	1	4-8
	5-18	1-10	0.70-1.10	0.6-6.0	0.10-0.35	3.6-5.5	Low	0.49		
	18	---	---	0.1-20	---	---		----		
134F*:										
Stratton	0-5	1-7	0.80-1.50	0.6-6.0	0.15-0.22	3.6-5.5	Low	0.43	1	4-8
	5-18	1-10	0.70-1.10	0.6-6.0	0.10-0.35	3.6-5.5	Low	0.49		
	18	---	---	0.1-20	---	---		----		
Londonderry	0-6	2-7	1.10-1.30	0.6-2.0	0.12-0.24	3.6-5.5	Low	0.43	1	2-8
	6-7	2-7	1.10-1.30	0.6-2.0	0.14-0.22	3.6-5.5	Low	0.43		
	7	---	---	0.1-20	---	---		----		
Ricker	0-13	---	0.07-0.30	2.0-6.0	0.45-0.65	3.6-4.4	Low	----	1	20-60
	13-16	3-18	1.35-1.80	0.6-6.0	0.06-0.18	3.6-5.0	Low	0.49		
	16	---	---	0.1-20	---	---		----		
135D, 135E	0-9	3-10	0.70-1.00	0.6-2.0	0.10-0.22	3.6-6.0	Low	0.43	3	4-8
Mundal	9-24	3-10	0.80-1.10	0.6-2.0	0.13-0.45	3.6-6.0	Low	0.64		
	24-60	3-10	1.80-2.00	0.06-0.6	0.06-0.10	5.1-6.5	Low	0.37		
138C	0-5	3-10	1.10-1.15	0.6-6.0	0.10-0.22	3.6-6.0	Low	0.24	5	2-5
Berkshire	5-32	3-10	1.15-1.30	0.6-6.0	0.10-0.20	3.6-6.0	Low	0.32		
	32-60	1-10	1.30-1.60	0.6-6.0	0.10-0.18	3.6-6.0	Low	0.24		
139B, 139C	0-6	2-14	0.80-1.20	0.6-2.0	0.16-0.22	3.6-5.5	Low	0.28	5	3-8
Sunapee	6-28	2-12	0.80-1.30	0.6-2.0	0.07-0.17	3.6-5.5	Low	0.20		
	28-60	2-10	1.20-1.50	0.6-6.0	0.03-0.17	3.6-6.0	Low	0.20		
140C, 140D, 140E-	0-4	10-30	1.40-1.60	0.6-2.0	0.14-0.20	5.6-7.8	Low	0.20	1	2-6
Benson	4-19	10-30	1.40-1.70	0.6-2.0	0.06-0.16	6.1-7.8	Low	0.17		
	19	---	---	0.1-20	---	---		----		
148B*:										
Bomoseen	0-9	4-16	1.00-1.30	0.6-2.0	0.12-0.20	5.6-7.3	Low	0.28	3	2-6
	9-27	4-16	1.30-1.60	0.6-2.0	0.12-0.20	5.6-7.3	Low	0.37		
	27-60	4-16	1.70-2.00	<0.06	0.08-0.12	6.1-8.4	Low	0.28		
Pittstown	0-9	2-12	1.00-1.30	0.6-2.0	0.15-0.20	4.5-6.0	Low	0.28	3	2-6
	9-22	2-12	1.30-1.60	0.6-2.0	0.15-0.20	4.5-6.0	Low	0.37		
	22-60	2-12	1.70-2.00	0.06-0.6	0.10-0.15	4.5-6.0	Low	0.28		
148C*:										
Bomoseen	0-8	4-16	1.00-1.30	0.6-2.0	0.12-0.20	5.6-7.3	Low	0.28	3	2-6
	8-27	4-16	1.30-1.60	0.6-2.0	0.12-0.20	5.6-7.3	Low	0.37		
	27-60	4-16	1.70-2.00	<0.06	0.08-0.12	6.1-8.4	Low	0.28		
Pittstown	0-8	2-12	1.00-1.30	0.6-2.0	0.15-0.20	4.5-6.0	Low	0.20	3	2-6
	8-22	2-12	1.30-1.60	0.6-2.0	0.15-0.20	4.5-6.0	Low	0.37		
	22-60	2-12	1.70-2.00	0.06-0.6	0.10-0.15	4.5-6.0	Low	0.28		
148D*:										
Bomoseen	0-7	4-16	1.00-1.30	0.6-2.0	0.12-0.20	5.6-7.3	Low	0.28	3	2-6
	7-27	4-16	1.30-1.60	0.6-2.0	0.12-0.20	5.6-7.3	Low	0.37		
	27-60	4-16	1.70-2.00	<0.06	0.08-0.12	6.1-8.4	Low	0.28		

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
148D*:										
Pittstown	0-7	2-12	1.00-1.30	0.6-2.0	0.15-0.20	4.5-6.0	Low	0.28	3	2-6
	7-22	2-12	1.30-1.60	0.6-2.0	0.15-0.20	4.5-6.0	Low	0.37		
	22-60	2-12	1.70-2.00	0.06-0.6	0.10-0.15	4.5-6.0	Low	0.28		
149B*, 149C*, 149D*, 149E*:										
Bomoseen	0-8	4-16	1.00-1.30	0.6-2.0	0.12-0.18	5.6-7.3	Low	0.28	3	2-6
	8-27	4-16	1.30-1.60	0.6-2.0	0.12-0.20	5.6-7.3	Low	0.37		
	27-60	4-16	1.70-2.00	<0.06	0.08-0.12	6.1-8.4	Low	0.28		
Pittstown	0-7	2-12	1.00-1.30	0.6-2.0	0.15-0.20	4.5-6.0	Low	0.20	3	2-6
	7-22	2-12	1.30-1.60	0.6-2.0	0.15-0.20	4.5-6.0	Low	0.37		
	22-60	2-12	1.70-2.00	0.06-0.2	0.10-0.15	4.5-6.0	Low	0.28		
150A	0-5	---	0.30-0.50	0.2-6.0	0.35-0.45	4.5-7.3	Low	----	2	20-60
Peacham	5-10	3-10	1.20-1.40	0.6-2.0	0.11-0.22	4.5-7.3	Low	0.28		
	10-60	3-10	1.80-2.00	<0.2	0.02-0.06	4.5-7.3	Low	0.28		
152	0-10	15-30	1.10-1.40	0.2-2.0	0.15-0.23	6.6-7.3	Low	0.37	3	3-15
Lyons	10-34	18-28	1.20-1.50	0.2-2.0	0.08-0.18	6.6-7.3	Low	0.37		
	34-60	18-28	1.70-1.95	<0.2	0.06-0.15	7.3-7.8	Low	0.28		
161A, 161B	0-9	2-8	1.00-1.30	2.0-6.0	0.14-0.18	4.5-7.3	Low	0.24	3	2-6
Elmridge	9-30	2-8	1.35-1.60	2.0-6.0	0.12-0.20	5.1-7.3	Low	0.24		
	30-60	35-60	1.55-1.80	<0.2	0.09-0.15	5.6-7.8	Moderate	0.43		
163	0-8	18-35	1.20-1.40	0.2-0.6	0.19-0.20	6.1-7.8	Low	0.49	5	4-15
Canandaigua	8-25	18-35	1.20-1.40	0.2-0.6	0.19-0.20	6.1-7.8	Low	0.49		
	25-60	18-35	1.15-1.40	0.2-0.6	0.19-0.21	6.6-8.4	Low	0.64		
175	0-10	5-18	1.15-1.40	0.6-2.0	0.14-0.21	5.6-7.3	Low	0.49	4	2-6
Wappinger	10-30	5-18	1.15-1.45	0.6-2.0	0.11-0.17	5.6-7.3	Low	0.49		
	30-60	1-8	1.25-1.55	2.0-20	0.01-0.11	5.6-7.3	Low	0.17		
177	0-9	6-18	1.15-1.40	0.6-2.0	0.14-0.21	5.1-7.3	Low	0.49	4	4-6
Pawling	9-27	6-18	1.15-1.45	0.6-2.0	0.11-0.17	5.1-7.3	Low	0.49		
	27-60	1-8	1.25-1.55	2.0-20.0	0.01-0.11	5.6-7.3	Low	0.17		
202E*:										
Rawsonville	0-3	3-10	0.70-1.00	0.6-6.0	0.13-0.22	3.6-5.5	Low	0.43	2	4-8
	3-23	3-10	0.70-1.00	0.6-6.0	0.13-0.45	3.6-5.5	Low	0.64		
	23-30	3-10	0.80-1.10	0.6-6.0	0.07-0.17	3.6-5.5	Low	0.28		
	30	---	---	0.1-20	---	---	---	----		
Killington	0-1	1-10	0.60-1.00	2.0-6.0	0.06-0.18	3.6-5.5	Low	0.32	1	4-8
	1-17	1-10	0.60-1.00	2.0-6.0	0.06-0.30	3.6-5.5	Low	0.28		
	17	---	---	0.1-20	---	---	---	----		
203D*:										
Peru	0-3	3-10	0.80-1.00	0.6-2.0	0.16-0.24	3.6-6.0	Low	0.20	2	2-6
	3-17	3-10	1.30-1.60	0.6-2.0	0.06-0.20	3.6-6.0	Low	0.32		
	17-60	3-10	1.60-2.05	0.06-0.6	0.05-0.12	3.6-6.0	Low	0.24		
Marlow	0-4	3-10	1.00-1.30	0.6-2.0	0.10-0.23	3.6-6.0	Low	0.20	3	2-6
	4-23	3-10	1.30-1.60	0.6-2.0	0.06-0.20	3.6-6.0	Low	0.32		
	23-60	3-10	1.70-2.05	0.06-0.6	0.05-0.12	3.6-6.0	Low	0.20		

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
205D*:										
Tunbridge	0-4	5-9	0.80-1.20	0.6-6.0	0.11-0.21	3.6-6.0	Low	0.20	2	2-4
	4-35	3-9	1.20-1.40	0.6-6.0	0.10-0.21	3.6-6.0	Low	0.20		
	35	---	---	0.1-20	---	---		----		
Berkshire	0-5	3-10	1.10-1.15	0.6-6.0	0.06-0.22	3.6-6.0	Low	0.20	5	2-5
	5-32	3-10	1.15-1.30	0.6-6.0	0.10-0.20	3.6-6.0	Low	0.32		
	32-60	1-10	1.30-1.60	0.6-6.0	0.10-0.18	3.6-6.0	Low	0.24		
Marlow	0-4	3-10	1.00-1.30	0.6-2.0	0.10-0.23	3.6-6.0	Low	0.20	3	2-6
	4-23	3-10	1.30-1.60	0.6-2.0	0.06-0.20	3.6-6.0	Low	0.32		
	23-60	3-10	1.70-2.05	0.06-0.6	0.05-0.12	3.6-6.0	Low	0.20		
213E*:										
Glebe	0-4	1-7	0.80-1.00	2.0-6.0	0.15-0.22	3.6-5.5	Low	0.43	2	8-20
	4-24	1-12	0.60-1.00	2.0-6.0	0.35-0.45	3.6-5.5	Low	0.64		
	24	---	---	0.1-20	---	---		----		
Stratton	0-5	1-7	0.80-1.50	0.6-6.0	0.15-0.22	3.6-5.5	Low	0.43	1	4-8
	5-18	1-10	0.70-1.10	0.6-6.0	0.10-0.35	3.6-5.5	Low	0.49		
	18	---	---	0.1-20	---	---		----		
221F*:										
Tunbridge	0-4	5-9	0.80-1.20	0.6-6.0	0.11-0.21	3.6-6.0	Low	0.20	2	2-4
	4-35	3-9	1.20-1.40	0.6-6.0	0.10-0.21	3.6-6.0	Low	0.20		
	35	---	---	0.1-20	---	---		----		
Berkshire	0-5	3-10	1.10-1.15	0.6-6.0	0.06-0.22	3.6-6.0	Low	0.20	5	2-5
	5-32	3-10	1.15-1.30	0.6-6.0	0.10-0.20	3.6-6.0	Low	0.32		
	32-60	1-10	1.30-1.60	0.6-6.0	0.10-0.18	3.6-6.0	Low	0.24		
402D*:										
Tunbridge	0-4	5-9	0.80-1.20	0.6-6.0	0.11-0.21	3.6-6.0	Low	0.20	2	2-4
	4-35	3-9	1.20-1.40	0.6-6.0	0.10-0.21	3.6-6.0	Low	0.20		
	35	---	---	0.1-20	---	---		----		
Lyman	0-4	2-10	0.75-1.20	2.0-6.0	0.13-0.24	3.6-6.0	Low	0.20	1	2-4
	4-11	2-10	0.90-1.40	2.0-6.0	0.08-0.28	3.6-6.0	Low	0.32		
	11	---	---	0.1-20	---	---		----		
403C*:										
Brayton	0-7	4-10	1.00-1.30	0.6-2.0	0.18-0.28	3.6-6.0	Low	0.20	2	4-12
	7-15	4-10	1.40-1.65	0.6-2.0	0.12-0.28	5.1-6.5	Low	0.32		
	15-60	4-10	1.70-2.00	0.06-0.6	0.01-0.06	5.6-7.3	Low	0.24		
Cabot	0-6	5-12	0.70-1.10	0.6-2.0	0.14-0.24	5.1-7.3	Low	0.28	2	4-12
	6-12	3-8	1.30-1.70	0.6-2.0	0.10-0.22	5.1-7.3	Low	0.28		
	12-60	5-8	1.70-1.90	<0.2	0.08-0.12	5.6-7.3	Low	0.28		
Pinnebog	0-35	---	0.30-0.40	0.2-6.0	0.35-0.45	5.6-7.8		----	3	40-80
	35-60	---	0.10-0.25	0.6-6.0	0.45-0.55	5.6-7.8		----		
405D*:										
Tunbridge	0-4	5-9	0.80-1.20	0.6-6.0	0.11-0.21	3.6-6.0	Low	0.20	2	2-4
	4-35	3-9	1.20-1.40	0.6-6.0	0.10-0.21	3.6-6.0	Low	0.20		
	35	---	---	0.1-20	---	---		----		
Berkshire	0-5	3-10	1.10-1.15	0.6-6.0	0.06-0.22	3.6-6.0	Low	0.20	5	2-5
	5-32	3-10	1.15-1.30	0.6-6.0	0.10-0.20	3.6-6.0	Low	0.32		
	32-60	1-10	1.30-1.60	0.6-6.0	0.10-0.18	3.6-6.0	Low	0.24		

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	G/cc	In/hr	In/in	pH				Pct
505D*:										
Berkshire-------	0-6	3-10	1.10-1.15	0.6-6.0	0.10-0.22	3.6-6.0	Low----------	0.24	5	2-5
	6-32	3-10	1.15-1.30	0.6-6.0	0.10-0.20	3.6-6.0	Low----------	0.32		
	32-60	1-10	1.30-1.60	0.6-6.0	0.10-0.18	3.6-6.0	Low----------	0.24		
Colton----------	0-6	1-7	1.10-1.40	>6.0	0.09-0.12	3.6-6.0	Low----------	0.20	5	3-8
	6-32	0-5	1.25-1.55	>6.0	0.02-0.05	3.6-6.0	Low----------	0.17		
	32-60	0-3	1.45-1.65	>20	0.01-0.02	4.5-6.5	Low----------	0.17		
702F*:										
Killington------	0-1	1-10	0.60-1.00	2.0-6.0	0.06-0.18	4.5-5.5	Low----------	0.32	1	4-8
	1-17	1-10	0.60-1.00	2.0-6.0	0.06-0.30	4.5-6.0	Low----------	0.28		
	17	---	---	0.1-20	---	---	----------	----		
Ricker----------	0-13	---	0.07-0.30	2.0-6.0	0.45-0.65	3.6-4.4	Low----------	----	1	20-60
	13-16	3-18	1.35-1.80	0.6-6.0	0.06-0.18	3.6-5.0	Low----------	0.49		
	16	---	---	0.1-20	---	---	----------	----		
Rock outcrop.										
703D*:										
Mundal----------	0-6	3-10	0.70-1.00	0.6-2.0	0.10-0.22	3.6-6.0	Low----------	0.43	3	4-8
	6-24	3-10	0.80-1.10	0.6-2.0	0.13-0.45	3.6-6.0	Low----------	0.64		
	24-60	3-10	1.80-2.00	0.06-0.6	0.06-0.10	5.1-6.5	Low----------	0.37		
Cabot-----------	0-6	5-12	0.70-1.10	0.6-2.0	0.14-0.24	5.1-7.3	Low----------	0.28	2	4-12
	6-12	3-8	1.30-1.70	0.6-2.0	0.10-0.22	5.1-7.3	Low----------	0.28		
	12-60	5-8	1.70-1.90	<0.2	0.08-0.12	5.6-7.8	Low----------	0.28		
705D*:										
Rawsonville-----	0-3	3-10	0.70-1.00	0.6-6.0	0.13-0.22	3.6-5.5	Low----------	0.43	2	4-8
	3-23	3-10	0.70-1.00	0.6-6.0	0.13-0.45	3.6-5.5	Low----------	0.64		
	23-30	3-10	0.80-1.10	0.6-6.0	0.07-0.17	3.6-5.5	Low----------	0.28		
	30	---	---	0.1-20	---	---	----------	----		
Houghtonville---	0-2	3-10	0.70-1.00	0.6-6.0	0.10-0.22	3.6-6.0	Low----------	0.43	3	4-8
	2-29	3-10	0.80-1.10	0.6-6.0	0.13-0.45	3.6-6.0	Low----------	0.64		
	29-60	3-10	1.50-1.80	0.6-6.0	0.08-0.15	3.6-6.0	Low----------	0.28		

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 17.--SOIL AND WATER FEATURES

("Flooding" and "water table" and terms such as "rare," "brief," "apparent," and "perched" are explained in the text. The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock	Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth		Uncoated steel	Concrete
					Ft			In			
1B, 1C, 1D, 2C, 2D, 2E---------- Marlow	C	None--------	---	---	2.0-3.5	Perched	Mar-Apr	>60	Moderate----	Low------	Moderate.
3B, 3C, 4B, 4C, 4D---------- Peru	C	None--------	---	---	1.5-2.5	Perched	Nov-May	>60	High--------	Moderate	Moderate.
6A---------- Cabot	D	None--------	---	---	0-2.0	Perched	Nov-May	>60	High--------	High-----	Moderate.
7C---------- Brayton	C	None--------	---	---	0-1.0	Perched	Nov-May	>60	High--------	High-----	Moderate.
9*: Pits.											
Dumps.											
11C*: Taconic----------	C/D	None--------	---	---	>6.0	---	---	10-20	Moderate----	Low------	High.
Hubbardton-------	D	None--------	---	---	>6.0	---	---	2-10	Moderate----	Low------	High.
12F*: Taconic----------	C/D	None--------	---	---	>6.0	---	---	10-20	Moderate----	Low------	High.
Hubbardton-------	D	None--------	---	---	>6.0	---	---	2-10	Moderate----	Low------	High.
Macomber---------	C	None--------	---	---	>6.0	---	---	20-40	Moderate----	Low------	High.
13B, 13C, 13D, 13E---------- Hinckley	A	None--------	---	---	>6.0	---	---	>60	Low---------	Low------	High.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock	Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth		Uncoated steel	Concrete
					Ft			In			
14A, 14B---------- Sudbury	B	None--------	---	---	1.5-3.0	Apparent	Dec-Apr	>60	Moderate----	Low------	High.
15A---------- Walpole	C	None--------	---	---	0-1.0	Apparent	Nov-May	>60	High--------	Low------	Moderate.
18B, 18C, 18D, 18E---------- Windsor	A	None--------	---	---	>6.0	---	---	>60	Low---------	Low------	High.
21---------- Rippowam	C	Frequent----	Brief-----	Oct-May	0-1.5	Apparent	Sep-Jun	>60	High--------	High-----	High.
22---------- Saco	D	Frequent----	Brief-----	Oct-May	0-0.5	Apparent	Sep-Jun	>60	High--------	Low------	Moderate.
23---------- Adrian	A/D	None--------	---	---	+1-1.0	Apparent	Nov-May	>60	High--------	High-----	Moderate.
24---------- Pinnebog	A/D	None--------	---	---	+1-1.0	Apparent	Oct-Jul	>60	High--------	Moderate	Moderate.
25A, 25B, 25C----- Belgrade	B	None--------	---	---	1.5-3.5	Apparent	Nov-Apr	>60	High--------	Moderate	Moderate.
26A---------- Raynham	C	None--------	---	---	0-2.0	Apparent	Nov-May	>60	High--------	High-----	Moderate.
28*: Udifluvents.											
Fluvaquents.											
29*: Histosols.											
Aquents.											

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock	Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth		Uncoated steel	Concrete
					Ft			In			
30B, 30C, 30D, 31B, 31C, 31D, 31E---------- Paxton	C	None--------	---	---	1.5-2.5	Perched	Feb-Apr	>60	Moderate----	Low------	Moderate.
38A---------- Tisbury	B	None--------	---	---	1.5-2.5	Apparent	Nov-Apr	>60	High--------	Low------	Moderate.
39B*, 40C*, 40D*:											
Galway----------	B	None--------	---	---	>6.0	---	---	20-40	Moderate----	Low------	Low.
Nellis----------	B	None--------	---	---	>6.0	---	---	>60	Moderate----	Low------	Low.
Farmington-------	C	None--------	---	---	>6.0	---	---	10-20	Moderate----	Low------	Moderate.
41C*, 41E*:											
Farmington-------	C	None--------	---	---	>6.0	---	---	10-20	Moderate----	Low------	Moderate.
Galway----------	B	None--------	---	---	>6.0	---	---	20-40	Moderate----	Low------	Low.
Galoo----------	C/D	None--------	---	---	>6.0	---	---	2-10	Moderate----	Low------	Low.
42C*, 42D*, 42F*:											
Macomber---------	C	None--------	---	---	>6.0	---	---	20-40	Moderate----	Low------	High.
Taconic----------	C/D	None--------	---	---	>6.0	---	---	10-20	Moderate----	Low------	High.
43C*:											
Taconic----------	C/D	None--------	---	---	>6.0	---	---	10-20	Moderate----	Low------	High.
Macomber---------	C	None--------	---	---	>6.0	---	---	20-40	Moderate----	Low------	High.
44B, 44C, 44D, 47B, 47C, 47D, 47E---------- Dutchess	B	None--------	---	---	>6.0	---	---	>60	Moderate----	Low------	Moderate.
50A---------- Massena	C	None--------	---	---	0.5-1.5	Apparent	Nov-May	>60	High--------	Moderate	Moderate.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock	Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth		Uncoated steel	Concrete
					Ft			In			
52B*:											
Macomber	C	None	---	---	>6.0	---	---	20-40	Moderate	Low	High.
Dutchess	B	None	---	---	>6.0	---	---	>60	Moderate	Low	Moderate.
53--- Elvers	B/D	Frequent	Long	Nov-May	+1-1.0	Apparent	Nov-May	>60	High	High	Moderate.
54A--- Ninigret	B	None	---	---	1.5-2.5	Apparent	Nov-Apr	>60	High	Moderate	High.
56B*, 56C*, 56D*, 56E*:											
Colton	A	None	---	---	>6.0	---	---	>60	Low	Low	High.
Duxbury	A	None	---	---	>6.0	---	---	>60	Low	Low	High.
57B*:											
Duxbury	A	None	---	---	>6.0	---	---	>60	Low	Low	High.
Colton	A	None	---	---	>6.0	---	---	>60	Low	Low	High.
58C*, 58D*:											
Colton	A	None	---	---	>6.0	---	---	>60	Low	Low	High.
Duxbury	A	None	---	---	>6.0	---	---	>60	Low	Low	High.
59A--- Deerfield	B	None	---	---	1.5-3.0	Apparent	Dec-Apr	>60	Moderate	Low	High.
61A, 61B--- Eldridge	C	None	---	---	1.0-2.0	Apparent	Nov-May	>60	Moderate	Moderate	High.
62--- Enosburg	C	None	---	---	0-1.0	Apparent	Nov-May	>60	High	High	High.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock	Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth		Uncoated steel	Concrete
					Ft			In			
64B, 64C, 64D, 65B, 65C, 65D, 65E---------- Stockbridge	C	None--------	---	---	>6.0	---	---	>60	Moderate----	Moderate	Low.
66B*, 66C*, 67B*, 67C*, 67D*:											
Georgia---------	C	None--------	---	---	1.5-3.0	Perched	Nov-May	>60	Moderate----	Moderate	Moderate.
Amenia----------	B	None--------	---	---	1.5-3.0	Perched	Nov-May	>60	Moderate----	Moderate	Low.
68A---------- Massena	C	None--------	---	---	0.5-1.5	Apparent	Nov-May	>60	High--------	Moderate	Moderate.
71A---------- Castile	B	None--------	---	---	1.5-2.0	Apparent	Mar-May	>60	High--------	Moderate	Moderate.
72A---------- Fredon	C	None--------	---	---	0-1.5	Apparent	Oct-Jun	>60	High--------	Low------	Low.
73---------- Scarboro	D	None--------	---	---	+1-1.0	Apparent	Jan-Dec	>60	High--------	High-----	High.
80A, 80B---------- Kingsbury	D	None--------	---	---	0.5-1.5	Perched	Dec-May	>60	High--------	High-----	Moderate.
81---------- Livingston	D	None--------	---	---	0-1.0	Apparent	Sep-Jul	>60	High--------	High-----	Moderate.
82B, 82C, 82D, 82E---------- Vergennes	C	None--------	---	---	1.0-3.0	Apparent	Dec-May	>60	Moderate----	High-----	Moderate.
86---------- Linwood	A/D	None--------	---	---	+1-1.0	Apparent	Nov-Jun	>60	High--------	Moderate	Low.
88---------- Birdsall	D	None--------	---	---	+1-1.0	Apparent	Oct-Jul	>60	High--------	High-----	High.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock	Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth		Uncoated steel	Concrete
					Ft			In			
90B, 90C, 90D----- Hartland	B	None--------	---	---	>6.0	---	---	>60	High--------	Low------	Moderate.
95. Udorthents											
96. Udipsamments											
97A*, 97B*, 97C*, 97D*:											
Warwick---------	A	None--------	---	---	>6.0	---	---	>60	Low---------	Low------	High.
Quonset---------	A	None--------	---	---	>6.0	---	---	>60	Low---------	Low------	High.
98E*:											
Quonset----------	A	None--------	---	---	>6.0	---	---	>60	Low---------	Low------	High.
Warwick----------	A	None--------	---	---	>6.0	---	---	>60	Low---------	Low------	High.
99B--------------- Copake	B	None--------	---	---	>6.0	---	---	>60	Moderate----	Low------	Moderate.
104B-------------- Groton	A	None--------	---	---	>6.0	---	---	>60	Low---------	Low------	Low.
105--------------- Tioga	B	Occasional	Brief-----	Nov-May	3.0-6.0	Apparent	Feb-Apr	>60	Moderate----	Low------	Moderate.
106--------------- Middlebury	B	Occasional	Brief-----	Nov-May	0.5-2.0	Apparent	Feb-Apr	>60	High--------	Moderate	Low.
108--------------- Hamlin	B	Occasional	Brief-----	Nov-May	3.0-6.0	Apparent	Nov-May	>60	High--------	Low------	Low.
109--------------- Teel	B	Occasional	Brief-----	Nov-May	1.5-2.0	Apparent	Nov-May	>60	High--------	Moderate	Low.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock	Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth		Uncoated steel	Concrete
					Ft			In			
110--- Limerick	C	Frequent	Brief	Nov-May	0-1.5	Apparent	Nov-May	>60	High	High	Low.
111--- Livingston	D	Frequent	Long	Nov-May	0-1.0	Apparent	Sep-Jul	>60	High	High	Moderate.
118C--- Adams	A	None	---	---	>6.0	---	---	>60	Low	Low	High.
122B, 122C--- Lyme	C	None	---	---	0-1.5	Apparent	Nov-May	>60	High	Low	High.
123B, 123C--- Sheepscot	B	None	---	---	1.5-2.5	Apparent	Nov-May	>60	Low	Low	High.
124B, 124C, 124D, 124E--- Sunapee	B	None	---	---	1.5-3.0	Apparent	Nov-May	>60	Moderate	Low	High.
125B, 125C, 125D, 125E--- Berkshire	B	None	---	---	>6.0	---	---	>60	Moderate	Low	High.
127C, 127D, 127E--- Houghtonville	C	None	---	---	>6.0	---	---	>60	Moderate	High	High.
128C*, 128D*, 128E*:											
Rawsonville	C	None	---	---	>6.0	---	---	20-40	Moderate	High	High.
Houghtonville---	C	None	---	---	>6.0	---	---	>60	Moderate	High	High.
129D*, 129F*:											
Killington	D	None	---	---	>6.0	---	---	10-20	Moderate	High	High.
Rawsonville	C	None	---	---	>6.0	---	---	20-40	Moderate	High	High.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock	Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth		Uncoated steel	Concrete
					Ft			In			
130B*, 130C*, 130D*, 130E*:											
Tunbridge	C	None	---	---	>6.0	---	---	20-40	Moderate	High	High.
Berkshire	B	None	---	---	>6.0	---	---	>60	Moderate	Low	High.
131D*, 131E*:											
Lyman	C/D	None	---	---	>6.0	---	---	10-20	Moderate	Low	High.
Tunbridge	C	None	---	---	>6.0	---	---	20-40	Moderate	High	High.
Rock outcrop.											
132C*, 132E*:											
Glebe	C	None	---	---	>6.0	---	---	20-40	High	High	High.
Stratton	C	None	---	---	>6.0	---	---	10-20	Moderate	High	High.
134F*:											
Stratton	C	None	---	---	>6.0	---	---	10-20	Moderate	High	High.
Londonderry	C/D	None	---	---	>6.0	---	---	2-10	Moderate	High	High.
Ricker	A	None	---	---	>6.0	---	---	2-26	Low	High	High.
135D, 135E--Mundal	C	None	---	---	1.5-2.5	Perched	Sep-May	>60	Moderate	High	High.
138C--Berkshire	B	None	---	---	>6.0	---	---	>60	Moderate	Low	High.
139B, 139C--Sunapee	B	None	---	---	1.5-3.0	Apparent	Nov-May	>60	Moderate	Low	High.
140C, 140D, 140E--Benson	D	None	---	---	>6.0	---	---	10-20	Moderate	Low	Moderate.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock	Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth		Uncoated steel	Concrete
					Ft			In			
148B*, 148C*, 148D*, 149B*, 149C*, 149D*, 149E*:											
Bomoseen	C	None	---	---	1.5-3.0	Perched	Nov-Apr	>60	Moderate	Moderate	Moderate.
Pittstown	C	None	---	---	1.5-3.0	Perched	Nov-Apr	>60	Moderate	Moderate	High.
150A Peacham	D	None	---	---	+1-0.5	Apparent	Oct-Jun	>60	High	Moderate	High.
152 Lyons	D	None	---	---	+1-0.5	Apparent	Nov-Jun	>60	High	High	Low.
161A, 161B Elmridge	C	None	---	---	1.5-2.5	Perched	Nov-May	>60	High	Moderate	Moderate.
163 Canandaigua	D	None	---	---	+1-1.0	Apparent	Nov-May	>60	High	High	Low.
175 Wappinger	B	Occasional	Brief	Nov-May	3.0-5.0	Apparent	Feb-Apr	>60	Moderate	Low	Low.
177 Pawling	B	Occasional	Brief	Nov-May	1.5-2.0	Apparent	Feb-Apr	>60	High	Low	Low.
202E*:											
Rawsonville	C	None	---	---	>6.0	---	---	20-40	Moderate	High	High.
Killington	D	None	---	---	>6.0	---	---	10-20	Moderate	High	High.
203D*:											
Peru	C	None	---	---	1.5-2.5	Perched	Nov-May	>60	High	Moderate	Moderate.
Marlow	C	None	---	---	2.0-3.5	Perched	Mar-Apr	>60	Moderate	Low	Moderate.
205D*:											
Tunbridge	C	None	---	---	>6.0	---	---	20-40	Moderate	High	High.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock	Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth		Uncoated steel	Concrete
					Ft			In			
205D*:											
Berkshire	B	None	---	---	>6.0	---	---	>60	Moderate	Low	High.
Marlow	C	None	---	---	2.0-3.5	Perched	Mar-Apr	>60	Moderate	Low	Moderate.
213E*:											
Glebe	C	None	---	---	>6.0	---	---	20-40	High	High	High.
Stratton	C	None	---	---	>6.0	---	---	10-20	Moderate	High	High.
221F*:											
Tunbridge	C	None	---	---	>6.0	---	---	20-40	Moderate	High	High.
Berkshire	B	None	---	---	>6.0	---	---	>60	Moderate	Low	High.
402D*:											
Tunbridge	C	None	---	---	>6.0	---	---	20-40	Moderate	High	High.
Lyman	C/D	None	---	---	>6.0	---	---	10-20	Moderate	Low	High.
403C*:											
Brayton	C	None	---	---	0-1.0	Perched	Nov-May	>60	High	High	Moderate.
Cabot	D	None	---	---	0-2.0	Perched	Nov-May	>60	High	High	Moderate.
Pinnebog	A/D	None	---	---	+1-1.0	Apparent	Oct-Jul	>60	High	Moderate	Moderate.
405D*:											
Tunbridge	C	None	---	---	>6.0	---	---	20-40	Moderate	High	High.
Berkshire	B	None	---	---	>6.0	---	---	>60	Moderate	Low	High.
505D*:											
Berkshire	B	None	---	---	>6.0	---	---	>60	Moderate	Low	High.
Colton	A	None	---	---	>6.0	---	---	>60	Low	Low	High.
702F*:											
Killington	D	None	---	---	>6.0	---	---	10-20	Moderate	High	High.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock	Potential frost action	Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth		Uncoated steel	Concrete
					Ft			In			
702F*:											
Ricker	A	None	---	---	>6.0	---	---	2-26	Low	High	High.
Rock outcrop.											
703D*:											
Mundal	C	None	---	---	1.5-2.5	Perched	Sep-May	>60	Moderate	High	High.
Cabot	D	None	---	---	0-2.0	Perched	Nov-May	>60	High	High	Moderate.
705D*:											
Rawsonville	C	None	---	---	>6.0	---	---	20-40	Moderate	High	High.
Houghtonville	C	None	---	---	>6.0	---	---	>60	Moderate	High	High.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 18.--CLASSIFICATION OF THE SOILS

Soil name	Family or higher taxonomic class
Adams	Sandy, mixed, frigid Typic Haplorthods
Adrian	Sandy or sandy-skeletal, mixed, euic, mesic Terric Medisaprists
Amenia	Coarse-loamy, mixed, mesic Aquic Eutrochrepts
Aquents	Aquents
Belgrade	Coarse-silty, mixed, mesic Aquic Dystric Eutrochrepts
Benson	Loamy-skeletal, mixed, mesic Lithic Eutrochrepts
Berkshire	Coarse-loamy, mixed, frigid Typic Haplorthods
Birdsall	Coarse-silty, mixed, nonacid, mesic Typic Humaquepts
Bomoseen	Coarse-loamy, mixed, mesic Aquic Dystric Eutrochrepts
Brayton	Coarse-loamy, mixed, nonacid, frigid Aeric Haplaquepts
Cabot	Coarse-loamy, mixed, nonacid, frigid Typic Humaquepts
Canandaigua	Fine-silty, mixed, nonacid, mesic Mollic Haplaquepts
Castile	Loamy-skeletal, mixed, mesic Aquic Dystrochrepts
Colton	Sandy-skeletal, mixed, frigid Typic Haplorthods
Copake	Coarse-loamy over sandy or sandy-skeletal, mixed, mesic Dystric Eutrochrepts
Deerfield	Mixed, mesic Aquic Udipsamments
Dutchess	Coarse-loamy, mixed, mesic Typic Dystrochrepts
Duxbury	Coarse-loamy over sandy or sandy-skeletal, mixed, frigid Typic Haplorthods
Eldridge	Sandy over loamy, mixed, nonacid, mesic Aquic Udorthents
Elmridge	Coarse-loamy over clayey, mixed, mesic Aquic Dystric Eutrochrepts
Elvers	Coarse-silty, mixed, nonacid, mesic Thapto-Histic Fluvaquents
Enosburg	Sandy over loamy, mixed, nonacid, mesic Mollic Haplaquents
Farmington	Loamy, mixed, mesic Lithic Eutrochrepts
Fluvaquents	Fluvaquents
Fredon	Coarse-loamy over sandy or sandy-skeletal, mixed, nonacid, mesic Aeric Haplaquepts
Galoo	Loamy, mixed, nonacid, mesic Lithic Udorthents
Galway	Coarse-loamy, mixed, mesic Typic Eutrochrepts
Georgia	Coarse-loamy, mixed, mesic Aquic Dystric Eutrochrepts
Glebe	Thixotropic Humic Cryorthods
Groton	Sandy-skeletal, mixed, mesic Typic Eutrochrepts
Hamlin	Coarse-silty, mixed, mesic Dystric Fluventic Eutrochrepts
Hartland	Coarse-silty, mixed, mesic Dystric Eutrochrepts
Hinckley	Sandy-skeletal, mixed, mesic Typic Udorthents
Histosols	Histosols
Houghtonville	Coarse-loamy, mixed, frigid Typic Haplorthods
Hubbardton	Loamy-skeletal, mixed, acid, frigid Lithic Udorthents
Killington	Loamy-skeletal, mixed, frigid Lithic Haplorthods
Kingsbury	Very-fine, illitic, mesic Aeric Ochraqualfs
Limerick	Coarse-silty, mixed, nonacid, mesic Typic Fluvaquents
Linwood	Loamy, mixed, euic, mesic Terric Medisaprists
Livingston	Very-fine, illitic, nonacid, mesic Mollic Haplaquepts
Londonderry	Loamy, mixed, acid Lithic Cryorthents
Lyman	Loamy, mixed, frigid Lithic Haplorthods
Lyme	Coarse-loamy, mixed, acid, frigid Aeric Haplaquepts
Lyons	Fine-loamy, mixed, nonacid, mesic Mollic Haplaquepts
Macomber	Loamy-skeletal, mixed, frigid Typic Dystrochrepts
Marlow	Coarse-loamy, mixed, frigid Typic Haplorthods
Massena	Coarse-loamy, mixed, nonacid, mesic Aeric Haplaquepts
Middlebury	Coarse-loamy, mixed, mesic Fluvaquentic Eutrochrepts
Mundal	Coarse-loamy, mixed, frigid Typic Haplorthods
Nellis	Coarse-loamy, mixed, mesic Typic Eutrochrepts
Ninigret	Coarse-loamy over sandy or sandy-skeletal, mixed, mesic Aquic Dystrochrepts
Pawling	Coarse-loamy over sandy or sandy-skeletal, mixed, mesic Fluvaquentic Eutrochrepts
Paxton	Coarse-loamy, mixed, mesic Typic Dystrochrepts
Peacham	Coarse-loamy, mixed, nonacid, frigid Histic Humaquepts
Peru	Coarse-loamy, mixed, frigid Aquic Haplorthods
Pinnebog	Euic, mesic Hemic Medisaprists
Pittstown	Coarse-loamy, mixed, mesic Aquic Dystrochrepts
Quonset	Sandy-skeletal, mixed, mesic Typic Udorthents
Rawsonville	Coarse-loamy, mixed, frigid Typic Haplorthods
Raynham	Coarse-silty, mixed, nonacid, mesic Aeric Haplaquepts
Ricker	Dysic Lithic Borofolists
Rippowam	Coarse-loamy, mixed, nonacid, mesic Aeric Fluvaquents

TABLE 18.--CLASSIFICATION OF THE SOILS--Continued

Soil name	Family or higher taxonomic class
Saco	Coarse-silty, mixed, nonacid, mesic Fluvaquentic Humaquepts
Scarboro	Sandy, mixed, mesic Histic Humaquepts
Sheepscot	Sandy-skeletal, mixed, frigid Typic Haplorthods
Stockbridge	Coarse-loamy, mixed, mesic Dystric Eutrochrepts
Stratton	Thixotropic-skeletal Humic Lithic Cryorthods
Sudbury	Sandy, mixed, mesic Aquic Dystrochrepts
Sunapee	Coarse-loamy, mixed, frigid Aquic Haplorthods
Taconic	Loamy-skeletal, mixed, frigid Lithic Dystrochrepts
Teel	Coarse-silty, mixed, mesic Fluvaquentic Eutrochrepts
Tioga	Coarse-loamy, mixed, mesic Dystric Fluventic Eutrochrepts
Tisbury	Coarse-silty over sandy or sandy-skeletal, mixed, mesic Aquic Dystrochrepts
Tunbridge	Coarse-loamy, mixed, frigid Typic Haplorthods
Udifluvents	Udifluvents
Udipsamments	Udipsamments
Udorthents	Udorthents
Vergennes	Very-fine, illitic, mesic Glossaquic Hapludalfs
Walpole	Sandy, mixed, mesic Aeric Haplaquepts
Wappinger	Coarse-loamy over sandy or sandy-skeletal, mixed, mesic Dystric Fluventic Eutrochrepts
Warwick	Loamy-skeletal, mixed, mesic Typic Dystrochrepts
Windsor	Mixed, mesic Typic Udipsamments

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