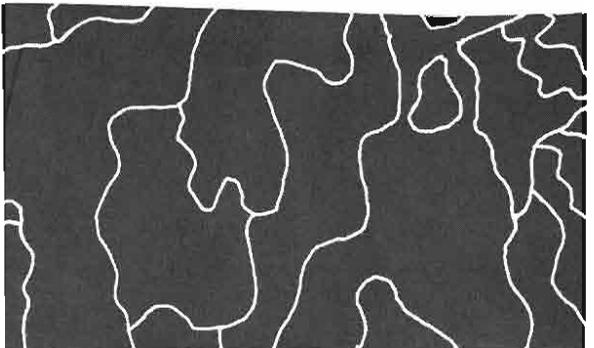
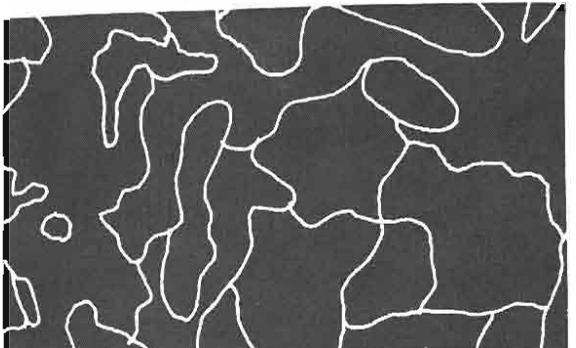
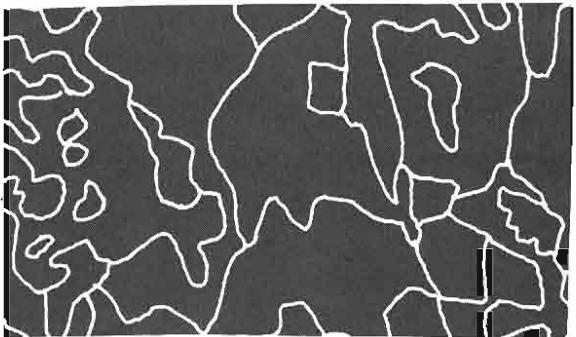
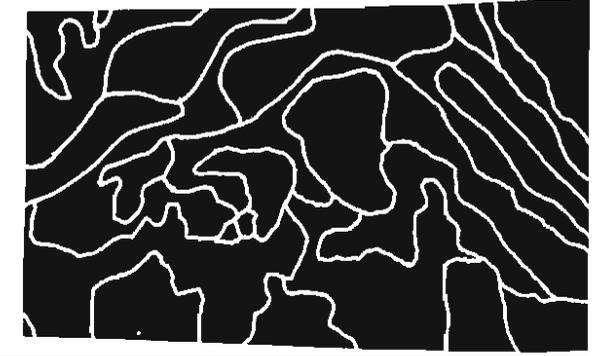
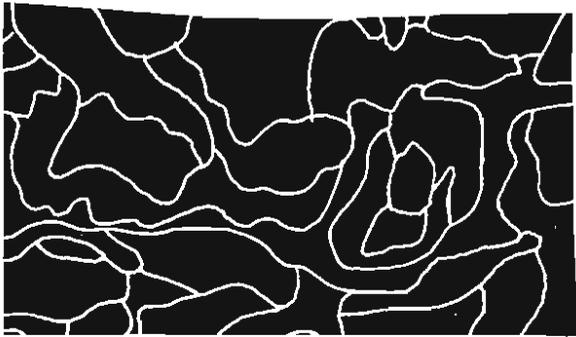
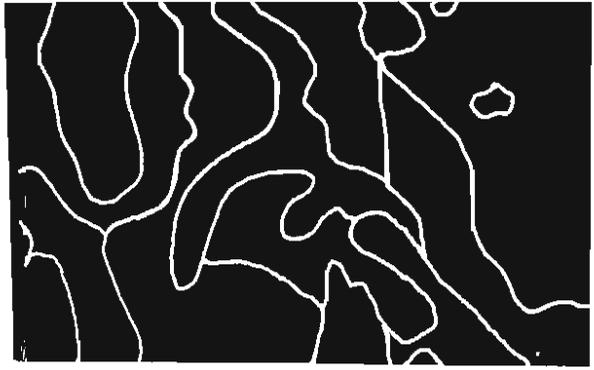


# know your land

NATURAL SOIL GROUPS  
FOR CONNECTICUT



COOPERATIVE EXTENSION SERVICE  
COLLEGE OF AGRICULTURE AND NATURAL RESOURCES  
THE UNIVERSITY OF CONNECTICUT, STORRS, CT 06268



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# KNOW YOUR LAND

## NATURAL SOIL GROUPS FOR CONNECTICUT

Environmental planning requires information regarding the physical base of the area and the involvement of many disciplines. The soil survey provides basic land information for many kinds of planning considerations and undergirds the cooperative understanding of various disciplines to promote sound land use planning.

The Natural Soil Groups system is designed to help people use soil surveys. The availability of material to interpret soil surveys for many uses has generated much interest and demand. This has led to many kinds of ratings, maps, tables, and other means of presenting information about soil. Because the number of specific land use interpretations is large when considering a tract of land containing many different soils, some means of summarizing the mass of detail to a more comprehensible level is desirable. This kind of summarization is one function of the Natural Soil Groups system. In addition, the adaptability of this system to interpretations for many uses reduces the need for numerous single-purpose interpretive maps.

State, regional, and town planners as well as owners or planners for individual tracts will find Natural Soil Groups an eminently useful system for analyzing soil survey information. Planners can make a variety of soil interpretations and select suitable alternatives from one map rather than compiling the pertinent interrelationships from a variety of maps.

The Natural Soil Groups system is especially useful in providing a framework for summarizing statistical data from a soil survey. This is more important when state, regional, or town planning involves large areas and uses computer data processing of soil information.

The system leads users of soil survey information to think and base decisions on soil characteristics and how these characteristics affect uses, rather than on the degree of limitations or suitability ratings alone. With this one system and map, users can determine the limitations as well as the potentials for a variety of purposes and land uses.

This publication does not replace the need for detailed and specific information about soil provided by published and interim soil survey reports. The Natural Soil Groups system does serve to lead the users of soil surveys into the detail of interpretations for individual soil mapping units when more specific soil information is needed. The following published and interim soil survey reports are available from the U. S. Soil Conservation Service and cooperating agencies:

- Soil Survey Hartford County, Connecticut, February 1962
- Soil Survey Tolland County, Connecticut, December 1966
- Soil Survey Litchfield County, Connecticut, November 1970
- Soil Interpretations for Urban Uses, Interim Report, Midstate Planning Region, 1968
- Soil Interpretations for Urban Uses,  
Central Naugatuck Regional Planning Agency, 1969
- Special Soils Report, Southeastern Connecticut Region, 1969
- Special Soil Report, New Haven County, 1971
- Soil Interpretations  
for Northeastern Connecticut Region, 1971
- Special Soil Survey,  
Town of Redding, Connecticut, 1969
- Special Soils Report,  
Soil Survey, Town of Ridgefield, Connecticut, 1970

The word "natural" is the most definitive single expression that can be made about the system. The soils are grouped primarily on the basis of natural physical properties. The properties considered are those highly significant to soil survey interpretations. Thus, the resulting groups, while based on physical properties, have much in common for interpretations such as sewage absorption fields, home sites, lawns and landscaping, wildlife habitat suitability, picnic areas, camp sites, and agricultural cropland potential. The system accommodates each individual soil mapping unit of the detailed soil survey. Each grouping contains soils with certain similar properties.

The first order of grouping is:

- A – Terrace soils – over sands and gravels
- B – Upland soils – over friable to firm glacial till
- C – Upland soils – over compact glacial till (hardpan)
- D – Upland soils – rocky and shallow to bedrock
- E – Floodplain soils
- F – Marsh and swamp soils
- G – Lake terrace soils – over strata high in silt and clay

Within these main divisions, the soils are separated into groups according to important soil differences such as natural drainage, steepness of slope, and degree of stoniness.

Unlike interpretive groupings, the element of classification according to use suitability or limitation does not control the Natural Soil Groups. There is no intent in the use of color separations on the Natural Soil Groups maps to represent progressively greater risks or degree of limitations.

Natural Soil Groups maps are developed from detailed soil maps. The system of colors helps identify the groupings and emphasizes the pattern of soils and landscapes in a town. The natural soil groups designations, i.e. A-1b, B-2a, E-1, etc. do not appear on the map. On the map, the soil boundaries are outlined and the detailed soil survey symbol is given for each kind of soil shown.

The following descriptions and interpretations of the natural soil groups are based on the characteristics common to the member soils. Detailed information about the individual soils is contained in the published and interim soil survey reports listed in the preceding section.

The information in this report is based on examination and interpretation of soils to a maximum depth of about 5 feet. The soil survey does not replace needed on-site investigations for critical considerations. Additional information about natural soil groups and the detailed soil survey can be obtained from the Soil Conservation Service and cooperating agencies.

# Descriptions of Natural Soil Groups

## A. Terrace Soils—Over Sands and Gravels

The terrace soils occur above flood plains in river and stream valleys. They are underlain by water-deposited beds of sand and gravel. In most places a few inches to 3 feet of loamy or fine sandy material cover the older, coarser water deposits. Nearly all sources of sand and gravel, and many of the important sources of water supply, are in areas associated with the terrace soils.

### Excessively drained soils (Light yellow on map)

A-1a Excessively drained soils with slopes less than 8 percent

A-1b Excessively drained soils with irregular slopes between 3 and 15 percent, or smooth slopes between 8 and 15 percent.

The soils in groups A-1a and A-1b are less than 20 inches deep to beds of sand and gravel and occur on terrace tops. Permeability is rapid. The shallowness to sand or gravel severely limits the water-holding capacity. Natural fertility is low.

**Urban.** The permeability of these soils is favorable for the installation and operation of septic sewage disposal systems. On slopes above 8 percent, the design and site selection for absorption fields requires special consideration. The percola-

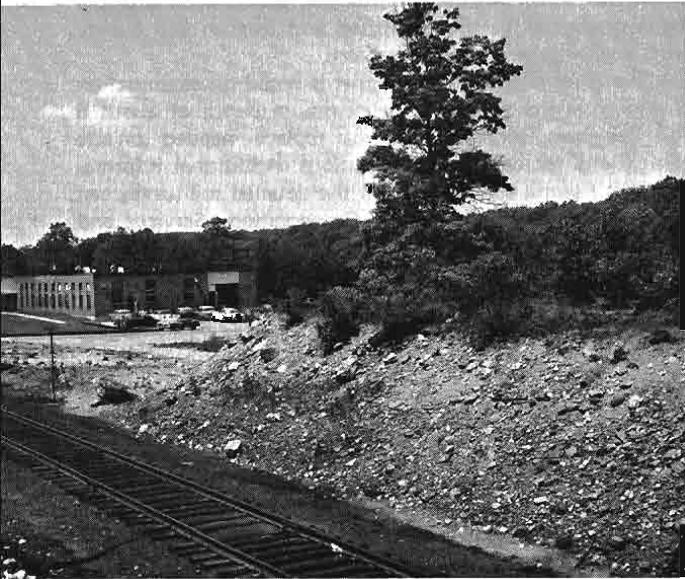


The terrace soils of group A occur above flood plains in stream valleys.

tion rate may allow sewage effluent to pollute water if water sources are nearby.

Soil conditions are favorable for homes with basements. The steeper slopes may add difficulty to site preparation. However, the steeper and irregular slopes present opportunities for a wider choice of architectural design. Conditions are favorable for stability of footings and performance of footing drains.

Land grading for landscaping will expose sand or gravel. Grass, trees, and shrubs are difficult to establish and maintain because of low water-holding capacity and low natural fertility. On the steeper slopes, further difficulty is added to these problems.



Stabilizing cut banks with growing plants is difficult on soils in group A.

When constructing streets and parking lots, earth moving is readily done, but stabilizing and vegetating cut banks is difficult, particularly on the steeper slopes.

**Recreation.** The potential for recreational uses of these soils is enhanced by their proximity to streams, ponds, and sites with potential for water developments. They are favorable for picnic areas and camp sites. Even on level areas these soils present difficulty when establishing or maintaining vegetation for play areas. The soils with steeper and irregular slopes have severe limitations for play areas.

**Wildlife.** These soils are poorly suited for the production of habitat required by openland and woodland wildlife. Dependable growth of desirable food and cover plants is limited by the low natural fertility and low moisture-holding capacity. Food and cover can be established, improved, or maintained, but it is difficult and expensive especially for openland wildlife. Results are not always satisfactory. It is impractical to develop wetland wildlife habitat on these soils.

**Woodland.** Productivity for wood crops is poor on these soils because of low natural fertility and low water-holding capacity. Because of droughtiness, high mortality of natural or

planted seedlings can be expected. White pine should produce a greater yield than hardwoods.

**Cropland.** Droughtiness and low natural fertility severely restrict the use of these soils for crop production. Irrigation with intensive fertilization is essential for satisfactory yields of crops including tobacco, corn, vegetables, and hay. If cultivated crops are grown on the steeper slopes, measures for controlling erosion and runoff are necessary. Wind erosion is a hazard particularly on loamy sands.

#### A-1c Excessively-drained soils with slopes above 15 percent

These soils consist of sandy or gravelly material on slopes steeper than 15 percent. They occur mainly on terrace breaks along drainageways. Slopes are generally short. These soils have low moisture-holding capacity and low natural fertility.

**Urban.** Because of steep slopes these areas have severe limitations for most urban uses. They provide contrast in the landscape and overlook streams, and when undisturbed by development, their natural values enhance the environment.

**Recreation.** These soils have severe limitations for picnic areas, camp sites, and play areas.

**Wildlife.** These soils are poorly suited for the production of habitat required by woodland wildlife. Dependable growth of desirable food and cover plants is limited by the low natural fertility and low moisture-holding capacity. Food and cover can be established, improved, or maintained, but is difficult and expensive, and results are not always satisfactory. It is impractical to develop openland or wetland wildlife habitat on these soils.

**Woodland.** Productivity for wood crops is poor on these soils because of low natural fertility and low moisture-holding capacity. Because of droughtiness, high mortality of natural or planted seedlings can be expected. White pine should produce a greater yield than hardwoods. Equipment operation is difficult because of the steep slopes.



The soils of group A are underlain by beds of sand or sand and gravel.

**Cropland.** Because of their steep slopes and droughtiness, these soils are unsuited for the production of cultivated crops.

#### **Well drained terrace soils (Intermediate yellow on map)**

A-1d Well drained soils with slopes less than 8 percent

A-1e Well drained soils with slopes between 8 and 15 percent

These soils occur on level to sloping terrace areas and have fair to good water-holding capacity. About 15 inches to 3 feet of friable, loamy soil material overlie the beds of sand and gravel. Permeability is moderate or rapid.

**Urban.** Permeability and most other soil factors are favorable for installation and operation of septic effluent absorption fields. The percolation rate and underlying sand and gravel may allow sewage effluent to pollute groundwater. On slopes greater than 8 percent, the design and site selection for absorption fields requires special consideration.

Soil conditions are favorable for homes with basements. On slopes above 8 percent, difficulty is added to site preparation. However, the steeper slopes may present opportunities for a wider choice of architectural design.

Soil conditions are favorable for the establishment of lawns, trees, and shrubs. Slopes above 8 percent add difficulty for landscaping. The sandy loam soils are somewhat droughty.

picnic areas and camp sites. The level soils are favorable for play areas, but limitations for this use increase on soils having slopes above 2 percent. The potential for recreational use of these soils is enhanced by their proximity to streams, ponds, and sites with potential for water developments.

**Wildlife.** Habitat for openland and woodland wildlife species is easily established, improved, or maintained on these soils. They are well suited for the dependable growth of a wide variety of desirable food and cover plants. It is impractical to develop habitat for wetland wildlife on these soils.

**Woodland.** Productivity for wood crops ranges from fair on the sandy loam soils to good on the silt loam soils. Both hardwoods and conifers are well suited. Competition from hardwoods is a problem when managing for pine, spruce, or larch.

**Cropland.** These soils are suitable for the production of all agricultural crops adapted to the area. Supplemental irrigation is needed to assure necessary production levels for crops with a high cash return. Erosion is a hazard on these soils. Intensive surface water control measures are needed on slopes above 8 percent.

#### **Moderately well drained terrace soils (Dark yellow on map)**

A-2 Soils with moderately-high seasonal water table  
These soils have a moderately-high water table during wet seasons. During the period of high saturation, usually in early spring, the water table remains within 15 to 20 inches of the soil surface. About 20 to 40 inches of friable, loamy soil material overlie the beds of sand and gravel. Permeability above the water table is moderate to rapid.

**Urban.** The seasonal water table limits successful operation of septic sewage disposal systems unless special measures are used, such as drainage and land fill.



Sloping soils may afford special advantages for adaptability to architectural variation for dwellings, but requires special planning and possible added construction costs.

Difficulty in constructing and maintaining streets and parking lots is slight on level areas, moderate on slopes between 3 and 8 percent, and severe on slopes above 8 percent. Earth moving is readily done.

**Recreation.** These soils have slight or moderate limitations for



Soils with moderately high seasonal water table will present problems as sites for homes with basements but problems are less severe for camping sites and play areas.

For homes with basements, the water table causes construction difficulties during wet seasons. Measures such as footing drains are necessary to prevent seepage into basements.

Soil conditions are favorable for the establishment and maintenance of grass, trees, and shrubs.

The seasonal water table presents problems in the design, construction, and maintenance of streets and parking lots. This may be overcome by drainage and other measures.

**Recreation.** During the main season of use, these soils are favorable for picnic areas, camp sites, and play areas. Drainage is needed to overcome the seasonal water table on playing fields for intensive use and to extend the period for picnicking and camping.

**Wildlife.** Habitat for openland and woodland wildlife species is easily established, improved, or maintained on these soils. They are well suited for the dependable growth of a wide variety of desirable food and cover plants. It is extremely difficult and expensive to develop habitat for wetland wildlife on these soils.

**Woodland.** Productivity for wood crops ranges from fair to good. Both hardwoods and conifers are well suited. Competition from hardwoods is a problem when managing for pine, spruce, or larch. These soils are suitable for the more valuable hardwoods such as black walnut, yellow poplar, and red oak.

**Cropland.** These soils are suitable for the production of silage corn, hay, and late vegetables. With adequate drainage they are suited to the production of all crops adapted to the area; however, tobacco and potatoes are subject to some damage in the very wet summers. On the steeper slopes, measures are necessary to control runoff and erosion.

#### Poorly and very poorly drained terrace soils (Purple on map)

The poorly drained soils in groups A-3a have a high water table that is 0 to 6 inches below the soil surface during the wettest part of the year. The high water table usually persists into early summer and may reappear after prolonged or heavy summer rains.

The very poorly drained soils in group A-3b have water ponded on the surface for significant periods in winter and early spring. The high water table generally remains within 3 feet of the surface throughout the year.

A-3a Soils with high seasonal water table.

A-3b Soils with high water table during most of the year.

**Urban.** These soils have severe to very severe limitations for most urban uses. Intensive and costly drainage and land fill measures are required to overcome the high water table.

**Recreation.** These soils have severe and very severe limitations for picnicking, camp sites, and play areas. However, these soils have potential for development of ponds and conservation use for environmental enhancement.

**Wildlife.** The poorly drained soils of group A-3a are poorly suited for the production of openland wildlife habitat. Habitat required by woodland and wetland wildlife species can be developed, improved, or maintained but moderate treatment is required.

The very poorly drained soils of group A-3b are poorly suited for the production of openland and woodland wildlife habitat. Dependable growth of desirable food and cover plants is limited by their wetness. Habitat for wetland wildlife species is easily developed, improved, or maintained on these soils.

**Woodland.** Productivity for wood crops ranges from fair on the poorly drained soils of group A-3a to poor on the very poorly drained soils of group A-3b. The wetness of these soils poses severe problems in the use of equipment, survival of tree seedlings, and windthrow of trees. Plant competition is moderate on the poorly drained soils and severe on the very poorly drained soils.

**Cropland.** These soils are generally unsuited to agricultural crops. With drainage the soils in group A-3a can be used to produce silage, potatoes, hay, and vegetables.

Drainage generally is not economically feasible on the soils in group A-3b.

## B. Upland Soils—Over Friable to Firm Glacial Till

The soils in this group are formed in the thicker, unconsolidated deposits of till usually occurring on hillsides. The capacity of these soils to hold water for plant growth is good where the till is loamy, but is fair to poor on the sandy till. Stones and large boulders are common in these glacial deposits and add difficulty when excavating or earth moving operations are needed.

#### Well drained soils with slopes less than 15 percent (Light green on map)

The soils in groups B-1a, B-1b, and B-1c occur on hilltops and the less sloping parts of hillsides. They do not have a high water table during any part of the year, and permeability is moderate or rapid. Slopes are less than 15 percent, but on disturbed areas with slopes above 8 percent, soil erosion can be a problem.

B-1a Nonstony and stony soils with slopes less than 8 percent

B-1b Nonstony and stony soils with slopes between 8 and 15 percent

**Urban.** The permeability of these soils is favorable for the installation and operation of septic sewage disposal systems. On the slopes greater than 8 percent, the design and site selection for absorption fields requires special consideration.

Soil conditions are favorable for homes with basements. On the stony soils and slopes above 8 percent, difficulty is added to site preparation. However, the steeper slopes may present opportunities for a wider choice of architectural design.

Soil conditions are favorable for the establishment and maintenance of grass, trees, and shrubs. The stony soils and slopes above 8 percent add difficulty in landscaping. The

hazard of soil erosion on slopes above 8 percent may require special measures such as mulching.

Difficulty in constructing and maintaining streets and parking lots ranges from slight on level areas, to moderate on slopes 3 to 8 percent, to severe on slopes above 8 percent. Earth moving is readily done.

**Recreation.** These soils are favorable for picnic areas and camp sites. The level soils have few limitations for play areas, but limitations are more severe on slopes greater than 2 percent.

**Wildlife.** These soils are well suited for the dependable growth of a wide variety of desirable openland and woodland wildlife food and cover plants. Habitat for woodland wildlife species is easily created, improved, or maintained. On the stony soils and slopes above 8 percent, it is difficult to establish grain, grasses, and legumes for openland wildlife. It is impractical to develop wetland wildlife habitat on these soils.

**Woodland.** These soils have fair productivity for wood crops. Competition from hardwoods is a problem on the soils formed in loamy till (like Charlton) when managing for pine, spruce, or larch.

to those in B-1a and B-1b for urban uses that are described on the preceding page.

**Recreation.** These soils are favorable for picnic areas and camp sites, but stone removal is necessary for their use as play areas and limitations are more severe on slopes greater than 2 percent.

**Wildlife.** Habitat requirements of openland wildlife species can be established, improved, or maintained but stoniness and the steeper slopes add difficulty in management. There are few or no soil limitations that affect the development or maintenance of woodland wildlife habitat. It is impractical to develop wetland wildlife habitat on these soils.

**Woodland.** These soils have fair productivity for wood crops. Competition from hardwoods is a problem when managing for pine, spruce, or larch on the soils underlain by loamy till (like Charlton). Equipment operation is difficult because of stoniness. Attention to erosion control measures is important on skid trails and roads on steeper slopes.

**Cropland.** When cleared of stone, these soils are suited to the production of the crops generally grown in the area. Erosion is a hazard on the steeper slopes and intensive surface water control measures are needed on such areas.



Where the soils in group B are underlain by loamy till, the soils have a good moisture holding capacity and are fairly productive for wood crops.

**Cropland.** The soils cleared of stones are well suited to the production of the crops generally grown in the area. The somewhat droughty soils (like Gloucester) are best suited for the production of early vegetables and early grass and legume crops. Erosion is a hazard on these soils. Intensive surface water control measures are needed on slopes above 8 percent.

**B-1c:** Very stony soils with slopes less than 15 percent  
**Urban.** Costly stone removal is required on these soils for installation of septage effluent absorption fields, homes with basements, streets and parking lots, and for landscaping. Except for the problem of stone removal, the soils are similar



The very stony soils in group B-1c must be cleared of stone to be suitable for cultivated crops.

#### **Well drained permeable till soils with slopes more than 15 percent (Intermediate green on map)**

The soils in groups B-1d and B-1e occupy steep hillsides. They do not have a high water table during any part of the year and permeability is moderate or rapid. The steep slopes and predominance of very stony soils limit the use of this land. Many of these areas are wooded and add to the beauty of the landscape.

**B-1e** Nonstony and stony soils with slopes between 15 and 25 percent.

**B-1e** Very stony soils with slopes between 15 and 25 percent.

**Urban.** Costly measures are required to overcome severe limitations because of slope and stoniness in developing these soils for urban use.

**Recreation.** These soils have severe limitations for picnic areas, camp sites, and play areas.

**Wildlife.** Habitat requirements of openland wildlife species can be established, improved, or maintained but slope and stoniness make it very difficult to plant grain, grasses, and legumes. These are few or no soil limitations that affect the development or maintenance of woodland wildlife habitat. It is impractical to develop wetland wildlife habitat on these soils.

**Woodland.** These soils have fair productivity for wood crops. Competition from hardwoods is a problem when managing for pine, spruce, or larch on the soils underlain by loamy till (like Charlton). Equipment operation is difficult because of steep slopes. Attention to erosion control measures is important on skid trails and roads.

**Cropland.** The soils cleared of stones in group B-1d are suited to the production of cultivated crops in long rotations with grasses and legumes. Because of the high erosion hazard, very intensive surface water control measures are required.

The very stony soils in group B-1e are not suited to the production of cultivated crops.

#### Moderately well drained permeable till soils (Dark green on map)

The soils in groups B-2a and B-2b have a water table during wet seasons. During the period of highest saturation, usually in early spring, the water table remains within 15 to 20 inches of the soil surface. This condition seldom persists beyond late spring. Slopes do not exceed 15 percent. Permeability above the water table is moderate.

B-2a Nonstony and stony soils with moderately high seasonal water table

B-2b Very stony soils with moderately high seasonal water table

**Urban.** The water table limits successful operation of seepage effluent absorption fields unless special measures are used such as drainage and land fill. The very stony soils present problems during installation.

During wet periods the water table is a problem in construction of homes with basements. Measures such as footing drains are necessary to prevent seepage into basements. The very stony soils add difficulty in excavation.

Soil conditions are favorable for the establishment of grass, trees, and shrubs. The very stony soils add difficulty in landscaping.

The high water table is a moderate problem in the design, construction, and maintenance of streets and parking lots. Stone removal during construction is a severe problem on the very stony soils.

**Recreation.** During the main season of use, the nonstony soils with less than 3 percent slope are favorable for picnic areas and camp sites. Drainage is needed to overcome the seasonal water table on playing fields for intensive use and to extend the period of picnicking and camping. The limitations for play areas increase on the steeper slopes and stonier soils.

**Wildlife.** These soils are well suited for the dependable growth of a wide variety of desirable openland and woodland wildlife

food and cover plants. Habitat requirements of openland wildlife species can be established, improved, or maintained but the stony and very stony soils are more difficult to manage. There are few or no soil limitations that affect the development or maintenance of woodland wildlife habitat. It is extremely difficult and expensive to develop wetland wildlife habitat on these soils.

**Woodland.** These soils have fair productivity for wood crops. Competition from hardwoods is a problem when managing for pine, spruce, or larch. Hardwoods to favor on these soils are red oak, white ash, and sugar maple. Equipment operation is difficult on the very stony soils.

**Cropland.** The soils cleared of stones are suited to the production of adapted legumes and grasses, late vegetables, and small fruits. With drainage, these soils are also suitable for the production of alfalfa, corn, orchards, and early vegetables. Erosion is a hazard and on the steeper slopes more intensive surface water control measures are needed. When cleared of stones the very stony soils in group B-2b can be cropped as described above.

#### Poorly and very poorly drained soils (Purple on map)

The poorly-drained soils in group B-3a have a water table within 6 inches of the soil surface during the wettest part of the year. The high water table often persists into late spring



The high water table occurring in poorly and very poorly drained soils will create severe problems for building sites. These soils are best suited to uses that take advantage of their natural wetness.

and may recur after prolonged or heavy summer rains. Slopes are less than 3 percent.

The very poorly drained soils in group B-3b have water ponded on the surface for significant periods in winter and spring. The water table usually remains within 3 feet of the surface throughout the year. Slopes are less than 3 percent.

B-3a Nonstony and stony soils with high seasonal water table

B-3b Soils with high water table during most of the year

**Urban.** These soils have severe to very severe limitations for most urban uses. Intensive and costly drainage and land fill measures are required to overcome wetness.

**Recreation.** These soils have severe limitations for picnic areas, camp sites, and play areas but have potential for conservation uses and environmental enhancement. Pond sites are found in these areas, but difficulty of construction increases with the degree of stoniness.

**Wildlife.** The poorly drained soils in group B-3a are poorly

suited for the production of openland wildlife. Habitat required by woodland and wetland wildlife species can be developed, improved, or maintained but moderate treatment is required.

The very poorly drained soils in group B-3b are poorly suited for the production of openland or woodland wildlife habitat. Dependable growth of desirable food and cover plants is limited by their wetness. Habitat for wetland wildlife can be developed, improved, or maintained on these soils, but stoniness imposes difficulties in constructing water impoundments.

**Woodland.** Productivity for wood crops ranges from fair on the poorly drained soils in group B-3a to poor on the very poorly drained soils in group B-3b. Stoniness and wetness pose severe problems in the use of equipment. Because of wetness, there are severe problems in the survival of tree seedlings, the windthrow of trees, and competition from other plants.

**Cropland.** With drainage the soils cleared of stones in group B-3a are suitable for the production of silage corn and adapted hay crops. The stoniness and wetness of the soils in group B-3b make them unsuitable for agricultural crops.

## C. Upland Soils—Over Compact Glacial Till (hardpan)

These soils occur mostly on the tops and slopes of drumlins—hills that were smoothed and elongated north to south by the movement of glaciers. The soils are underlain by compact glacial till and have a hardpan 16 to 36 inches below the soil surface. Permeability above the hardpan is moderate but the pan drastically reduces percolation. During wet seasons, excess water in the soil moves downslope above the hardpan. The till commonly contains stones and boulders which add difficulty when excavating or earth moving operations are needed. These soils have good moisture-holding capacity for plant growth. Exceptional panoramic views are afforded from the higher areas.

### Well drained soils with slopes less than 15 percent (Light red on map)

The soils in groups C-1a, C-1b, and C-1c have excess water above the hardpan only for short periods during spring thaw or after heavy rains. They occur mostly on tops and upper slopes of drumlins.

C-1a Stony and nonstony soils with slopes less than 8 percent

C-1b Stony and nonstony soils with slopes between 8 and 15 percent

**Urban.** The design and construction of septage effluent absorption fields that function satisfactorily are very difficult because of the hardpan. Slopes above 8 percent add further difficulty and problems in design and site selection for absorption fields.

Conditions are favorable for excavation of basements of homes on soils with slopes less than 8 percent. Slopes above 8 percent are a moderate limitation; however, the steeper slopes

present opportunities for a wider choice of architectural design. Stability of footings is not a problem, but measures such as footing drains are needed to prevent seepage into basements.



Fragipans restrict the downward movement of water in the soil. Excess water from heavy rains, spring thaw, or septage effluent absorption fields will move downslope over the surface of the pan.

Soil conditions are favorable for the establishment and maintenance of grass, trees, and shrubs. The stony soils and slopes above 8 percent add difficulty in landscaping.

Difficulty in constructing streets and parking lots ranges from slight on level areas, to moderate on 3 to 8 percent slopes, to severe on slopes above 8 percent. The hazard of frost heaving because of water accumulation above the hardpan requires special consideration. Also soil slippage on road cuts is a hazard during wet seasons.

**Recreation.** These soils are favorable for picnic areas and camp sites. The level soils have few limitations for play areas, but limitations for this use are greater on the steeper slopes and stony soils.

**Wildlife.** These soils are well suited for the dependable growth of a wide variety of desirable openland and woodland wildlife food and cover plants. Habitat for woodland wildlife species is easily established, improved, or maintained. On the stony soils and slopes above 8 percent it is difficult to establish grain, grasses, and legumes for openland wildlife. It is impractical to develop wetland wildlife habitat on these soils.

**Woodland.** These soils have good productivity for wood crops. Both hardwoods and conifers are well suited. Competition from hardwoods is a serious problem when managing for pine, spruce, or larch. Hardwoods to favor on these soils are red oak, white ash, and sugar maple.

**Cropland.** The soils cleared of stones are suitable for the production of most agricultural crops grown in the area. Erosion is a hazard and on the steeper slopes more intensive surface water control measures are needed.

**C-1c Very stony soils with slopes less than 15 percent**  
**Urban.** Costly stone removal is required on these soils for installation of on-site sewage disposal systems, homes with basements, streets and parking lots, and for landscaping. Except for the problem of stone removal the soils are similar



Surface stones interfere with many activities on very stony soils and will add to costs when excavation is needed.

to those in C-1a and C-1b for urban uses that are described in the preceding text.

**Recreation.** These soils are favorable for picnic areas and camp sites, but have severe limitations for play areas.

**Wildlife.** Habitat requirements of openland wildlife species can be established, improved, or maintained but stoniness adds difficulty in management. There are few or no soil limitations that affect the development or maintenance of woodland wildlife habitat. It is impractical to develop wetland wildlife habitat on these soils.

**Woodland** These soils have good productivity for wood crops. Both hardwoods and conifers are well suited. Competition from hardwoods is a serious problem when managing for pine, spruce, or larch. Hardwoods to favor on these soils are red oak, white ash, and sugar maple. Equipment operation is difficult because of stoniness.

**Cropland.** When cleared of stones these very stony soils are suitable for the production of all agricultural crops grown in the area. Erosion is a hazard and on the steeper slopes intensive surface water control measures will be needed.

#### **Well drained compact till soils with slopes more than 15 percent (Intermediate red on map)**

The soils in groups C-1d and C-1e have excess water above the hardpan only for short periods during spring thaw and after heavy rains. They occur on steeper side slopes of drumlins. The steep slopes and predominance of stony and very stony soils limits the use of this land. Most of these areas are wooded and they add to the beauty of the landscape.

**C-1d Nonstony and stony soils with slopes more than 15 percent**

**C-1e Very stony soils with slopes more than 15 percent**

**Urban.** Costly measures are required to overcome the severe limitations imposed by steep slopes, stoniness, and hardpan in developing these areas for urban uses.

**Recreation.** The soils have severe limitations for picnic areas, camp sites, and play areas.

**Wildlife.** Habitat requirements of openland wildlife species can be established, improved, or maintained but slope and stoniness make it very difficult to plant grain, grasses, and legumes. There are few or no soil limitations that affect the development or maintenance of woodlands wildlife habitat. It is impractical to develop wetland wildlife habitat on these soils.

**Woodland.** These soils have good productivity for wood crops. Both hardwoods and conifers are well suited. Competition from hardwoods is a serious problem when managing for pine, spruce, or larch. Hardwoods to favor on these soils are red oak, white ash, and sugar maple. Equipment operation is difficult because of steep slopes and stoniness. Attention to erosion control measures is important on skid trails and roads.

**Cropland.** The soils cleared of stones in group C-1d are suited for the production of cultivated crops in long rotations with grasses and legumes. Because of the high erosion hazard, very intensive surface water control measures are required.

The very stony soils in group C-1e are not suited for the production of agricultural crops.



When cleared of stones, the soils in groups C-1a, C-1b, and C-1c are suitable for most crops grown in the area. The smooth contours of the hill in the background indicate that it is a drumlin. This is a typical landscape of the soils in group C.

#### Moderately well drained compact till soils (Dark red on map)

The soils in groups C-2a and C-2b have a moderately high water table during wet seasons. During the period of highest saturation, usually in early spring, the water table remains within 15 to 20 inches of the soil surface. This condition seldom persists beyond late spring. Slopes do not exceed 15 percent and slopes less than 8 percent predominate.

C-2a Nonstony and stony soils with moderately high seasonal water table

C-2b Very-stony soils with moderately high seasonal water table

**Urban.** The design and installation of septage effluent absorption fields that function satisfactorily are very difficult because of the hardpan and seasonal high water table. Installation of disposal systems is more difficult on the very stony soils.

During wet periods the water table is a problem in construction of homes with basements. Measures such as drainage are needed to prevent seepage into basements. The very stony soils add difficulty in excavation.

Soil conditions are favorable for the establishment and maintenance of grass, trees, and shrubs. The very stony soils and soils with slopes above 8 percent cause problems in landscaping.

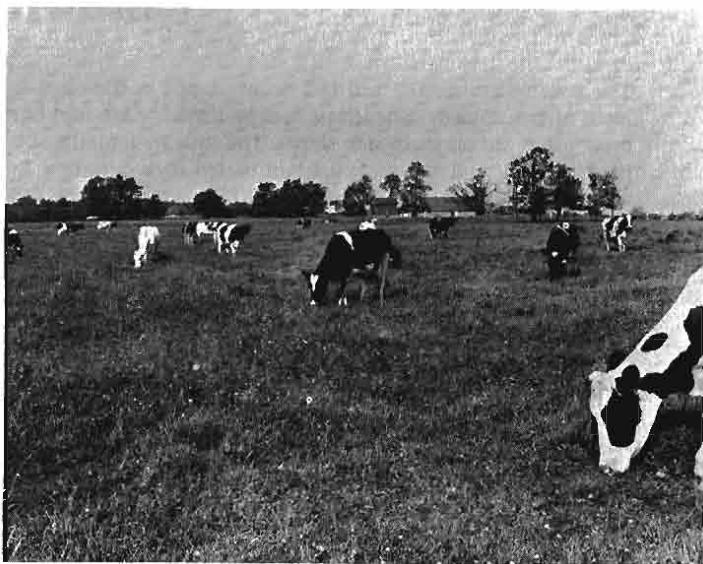
The very stony soils and soils with slopes above 8 percent present severe problems in the design and construction of streets and parking lots. The hazard of frost heaving because of water table and hardpan must be given special consideration in design and construction. Soil slippage on road cuts is a severe hazard during wet seasons.

**Recreation.** During the main season of use, the nonstony soils with less than 3 percent slope are favorable for picnic areas and camp sites. Drainage is needed to overcome the seasonal water table on playing fields for intensive use and to extend the period of picnicking and camping. The limitations for recreational use increase on the steeper and more stony soils. **Wildlife.** Habitat requirements of openland wildlife species can be established, improved, or maintained but stoniness adds difficulty in management. There are few or no soil limitations that affect the development or maintenance of woodland wildlife habitat. It is extremely difficult and expensive to develop wetland wildlife habitat on these soils.

**Woodland.** These soils have good productivity for wood crops. Both hardwoods and conifers are well suited. Competition from hardwoods is a serious problem when managing for pine, spruce, or larch. Hardwoods to favor on these soils are red oak, white ash, and sugar maple. Equipment operation is difficult on the stony soils.

**Cropland.** The soils cleared of stones in group C-2a are suited to the production of adapted legumes and grasses, late vegetables, and small fruits. With drainage these soils are also suitable for the production of alfalfa, corn, orchards, and early vegetables. Erosion is a hazard on these soils and on the steeper slopes intensive surface water control measures are needed.

When cleared of stones the very stony soils in group C-2b can be cropped as described above.



The nonstony soils in group C-2a are well suited to the production of adapted legumes and grasses.

#### Poorly drained compact till soils (Purple on map)

The poorly drained soils in group C-3a have a high water table that remains within 6 inches of the soil surface during the wettest part of the year. The high water table often persists until late spring and may recur after prolonged or heavy summer rains. Slopes are less than 3 percent.

The very poorly drained soils in group C-3b have water ponded on the surface for significant periods in winter and spring. The water table usually persists within 3 feet of the soil surface throughout the year. Slopes are less than 3 percent.

C-3a Nonstony or stony soils with a high seasonal water table

C-3b Nonstony, stony, or very stony soils with a high water table during most of the year

**Urban.** These soils have severe or very severe limitations for most urban uses. Intensive and costly drainage and land fill measures are required to overcome wetness.

**Recreation.** These soils have severe or very severe limitations for picnic areas, camp sites, and play areas but have potential for conservation uses and environmental enhancement. Pond sites are found in these areas, but difficulty of construction increases with the degree of stoniness.

**Wildlife.** These soils of group C-3a are poorly suited for the production of openland wildlife habitat. Dependable growth

of desirable food and cover plants is limited by the poor natural drainage. The habitat required by woodland or wetland wildlife species can be developed, improved, or maintained but moderate treatment is required.

The very poorly drained soils in group C-3b are poorly suited for the production of openland and woodland wildlife habitat. Dependable growth of desirable food and cover plants is hindered by their wetness. Habitat for wetland wildlife can be developed, improved, or maintained on the soils, but stoniness imposes difficulties in constructing water impoundments.

**Woodland.** Productivity for wood crops is fair on the soils in group C-3a and poor on the soils in group C-3b. Wetness poses severe problems in the use of equipment, the survival of tree seedlings, and windthrow of trees. Competition from other plants is a problem.

**Cropland.** With drainage, the soils cleared of stones in group C-3a are suitable for the production of silage corn and adapted hay and pasture crops. The stoniness and wetness of the soils in group C-3b make them unsuitable for agricultural crops.

## D. Upland Soils—Rocky and Shallow to Bedrock (brown on map)

The soils of groups D-1 and D-2 occur mostly in the rougher areas of the uplands. They may occupy narrow ridge tops but most often are on steep side slopes. The soils are underlain by hard bedrock and the areas contain barren rock outcrops. In most places, hard rock is less than 20 inches below the soil surface. These areas provide contrast in the landscape and scenic overlooks.

D-1 Rocky and very rocky soils with slopes less than 15 percent

**Urban.** Rock outcrops and soils shallow to bedrock cause severe problems when developing this land for urban uses. Occasional pockets of deeper soils can be utilized for individual home sites.

**Recreation.** Picnic areas and camp sites are very difficult to develop and access is usually a severe limitation. However, the terrain provides an attractive setting for these uses.

**Wildlife.** These soils are poorly suited for the production of openland wildlife habitat. The habitat for woodland wildlife species can be established, improved, or maintained but moderate treatment is required. It is impractical to develop wetland wildlife habitat on these soils.

**Woodland.** The productivity of most of this land is poor for wood crops. Pockets of deeper soil within these areas have fair productivity. Equipment operation is very difficult because of rock outcrops. Seedling survival and windthrow of trees are problems on the shallower areas.

**Cropland.** These soils are not suited for the production of cultivated crops because of rock outcrops and shallowness.

Scattered areas with deeper soils and less numerous rock outcrops can be used for improved hay, pasture, and orchards.



Soils shallow to bedrock may add to excavation costs, but pockets of deep soil in the area may provide desirable dwelling sites.



The areas of shallow soils in group D contain few to many ledges of rock outcrop. Many of these areas still in a natural state are interesting and picturesque.

D-2 Rocky and very rocky soils with slopes more than 15 percent and extremely rocky soils

**Urban.** Steep slopes, many rock outcrops, and soils shallow to bedrock impose very severe limitations for urban development. The rugged topography and rock ledges are picturesque and enhance adjoining areas.

**Recreation.** Picnic areas and camp sites are extremely difficult to develop.

**Wildlife.** The habitat requirements of woodland wildlife species can be established, improved, or maintained on these soils but the rockiness and steep slopes present severe limitations. Habitat management will be difficult and expensive and results may be unsatisfactory. It is impractical to develop openland or wetland wildlife habitat on these soils.

**Woodland.** The productivity of this land is poor for wood crops. Equipment operation is extremely difficult because of numerous rock outcrops and steep slopes. Seedling survival and windthrow of trees are problems.

**Cropland.** These soils are not suitable for the production of cultivated crops.

## E. Flood Plain Soils

The soils of this group occur on nearly level flood plains in stream valleys. They are formed in loamy deposits several inches to a few feet thick overlying sand and gravel layers. These soils are subject to flooding with the overlying, poorer drained soils being flooded most often.

### Well and moderately well drained soils (Orange on map)

The soils of groups E-1 and E-2 occur on higher and intermediate levels of stream flood plains. These soils have a good moisture-holding capacity for plant growth. The soils of group E-2 have a water table that remains within 12 to 20 inches of the surface during wet periods. These soils are best suited for open space uses.

E-1 Well drained soils

E-2 Moderately well drained soils

**Urban.** The hazard of flooding severely limits these soils for residential, commercial, and industrial development. The flood plains and lands adjacent to streams have many ecological values, and their retention for natural resource development is in the public interest.

**Recreation.** These soils have potential for many kinds of recreational uses including picnicking, camping, and play areas.

**Wildlife.** Habitat for openland and woodland wildlife species is easily established, improved, or maintained on these soils.



Flood plain soils may be well suited for cropland or other open space uses but flooding can cause severe problems if they are used as building sites.

They are well suited to a wide variety of desirable food and cover plants. It is impractical to develop habitat for wetland wildlife.

**Woodland.** Wood crop productivity ranges from fair on the sandy loam soils to good on the silt loam soils. Competition from hardwoods is a problem when managing for pine, larch or spruce. Flooding is a hazard to Christmas tree production on these soils especially if accompanied by ice damage. The moderately well drained soils are suitable for the more valuable hardwoods such as black walnut, yellow poplar, and red oak.

**Cropland.** Except for the hazard of flooding, the soils in group E-1 are well suited for the production of all cultivated and forage crops grown in the area.

The soils in group E-2 are suited for the production of grasses and legumes, silage corn, and late vegetables. They are poorly suited to alfalfa, tobacco, and potatoes because of the seasonal water table and the hazard of flooding.

#### Poorly and very poorly drained floodplain soils (Purple on map)

The poorly drained soils in group E-3a have a water table that remains within 6 inches of the soil surface during the wettest part of the year. This high water table often persists into late spring and may recur during periods of high stream flow.

The very poorly drained soils in group E-3b have water ponded on the surface for significant periods in winter and spring. The water table usually persists within 3 feet of the soil surface throughout the year.

E-3a Soils with high seasonal water table

E-3b Soils with high water table during most of the year.

**Urban.** Because of flood hazard and wetness these soils have very severe limitations for urban uses. They have many natural values for environmental enhancement.

**Recreation.** These areas have very severe limitations for picnic areas, camp sites, and play areas.

**Wildlife.** All of these soils are poorly suited for the production of openland wildlife habitat.

On the poorly drained soils in group E-3a, the habitat requirements of woodland wildlife can be established, improved, or maintained but moderate treatment is required. In the spring these areas provide natural habitat for wetland wildlife. The fluctuating water table limits the period of use and the flood hazard restricts the construction and management of water developments.

The very poorly drained soils in group E-3b are poorly suited for the production and management of woodland, wildlife habitat. The habitat requirements of wetland wildlife habitat can be developed, improved, or maintained but moderate treatment is required.

**Woodland.** Productivity of wood crops ranges from fair to very poor depending on the degree of wetness. Wetness causes severe problems in the use of equipment, the survival of tree seedlings, tree windthrow, and competition from other plants.

**Cropland.** When partly drained, the soils in group E-3a can be used for hay and silage corn. Frequent flooding and the lack of suitable outlets usually make drainage for other cultivated crops impractical. The soils in group E-3b are unsuited to the production of agricultural crops because of wetness and frequent flooding.

## F. Marsh and Swampy Soils (purple on map)

F-1 Deep peat and muck soils with high water table during most of the year

The soils in this group occur in depressional areas where surface organic deposits are usually 5 or more feet deep. They are saturated most of the time and water ponds on the surface in winter and spring.

**Urban.** Because of the unstable wet organic material the development of these areas is very costly and requires complete alteration. Many worthwhile and irreplaceable sites important to environment and ecosystems are destroyed when drainage, filling, pollution, or encroachment takes place in these areas.

**Recreation.** These soils are not suited for picnic areas, camp sites, and play areas but their ecological values enhance recreational use of nearby areas.

**Wildlife.** These soils are well suited for the development, improvement, or maintenance of wetland wildlife habitat. It is impractical to establish openland or woodland wildlife habitat.

**Woodland.** Productivity of this land for wood crops is poor to very poor. Atlantic white cedar is well adapted to this land. Wetness and boggy conditions pose very severe problems in the use of equipment, the survival of tree seedlings, windthrow of trees, and competition from other plants.

**Cropland.** These soils are not suitable for the production of agricultural crops.

F-2 Soils at or near the coast line that are flooded during high tide

These soils occur in flat marshy areas adjacent to or near the coast line. They are exposed to the air during low tides, and are covered with water during high tides. The soils consist of several inches to a few feet of boggy organic material overlying sandy or loamy mineral deposits. The areas near the coast line have a high content of soluble salt, but areas along larger streams, more distant from the coast, usually are not salty.

**Urban and Recreation.** Coastal and estuarine marshes are unique and irreplaceable. Their protection from alteration,



Deep organic soils may best be used for open space as wildlife habitat, or nature study areas.



The deep organic soils in group F are well suited to development of wetland wildlife habitat.

encroachment, and pollution is in the public interest. The preservation of these areas is the intent of Connecticut Public Act 695.

**Wildlife.** These soils provide the most productive wetland wildlife habitats in the state.

**Woodland.** This land is unsuited for commercial timber production because of tidal water table and most places have high salt concentrations in the soil.

**Cropland.** These soils are not suitable for the production of agricultural crops.

## G. Lake Terrace Soils—Over Strata High in Silt and Clay

Soils of this group occur in areas where glacial lake sediments accumulated. These sediments have a higher content of clay and fine silt than is common for soil materials in this area. Topography is usually level or gently sloping with slopes above 8 percent occurring only along terrace escarpments associated with stream channels. In most places, the finer-textured lake sediments are covered by coarser loamy or sandy material from several inches to a few feet thick. The permeability rate through the lake sediments is slow and the shrink-swell potential is higher than for coarser-textured soil materials.

### Well Drained Soils (Light gray on map)

These soils have a very slowly permeable clayey layer 2 to 4 feet below the soil surface. Excess water accumulates above this layer only for short periods during spring thaw or after heavy rains. These soils occur on nearly level and gently sloping areas of terraces. Slopes are less than 8 percent.

### G-1 Well-drained soils

**Urban.** The design and construction of septage effluent absorption fields that function satisfactorily is very difficult because of the very slow permeability of the clayey layer.

Conditions are favorable for the excavation of basements, but measures such as footing drains are needed to prevent seepage into basements.

Land grading for landscaping is readily done and soil conditions are favorable for the establishment and maintenance of lawns, trees, and shrubs.

Construction and maintenance of streets and parking lots is readily done.

**Recreation.** Soil conditions are favorable for use as picnic areas, camp sites, and play areas.

**Wildlife.** Habitat for openland and woodland wildlife is easily established, improved, or maintained on these soils. They are well suited for the dependable growth of a wide variety of

desirable food and cover plants. It is impractical to develop habitat for wetland wildlife on these soils.

**Woodland.** Productivity for wood crops is fair on these soils. Both hardwoods and conifers are well suited. Competition from hardwoods is a problem when managing for pine, spruce, or larch.

**Cropland.** These soils are suited to the production of all cultivated crops produced in the area. Supplemental irrigation may be necessary on the coarser-textured soils during periods of low rainfall to assure satisfactory yields. Because erosion is a hazard on these soils, surface water control measures are necessary.

#### Moderately Well Drained Soils (Dark gray on map)

These soils have a moderately high water table during wet seasons. During the period of highest saturation, usually in early spring, the water table remains within 15 to 20 inches of the soil surface. About 8 to 20 inches of friable silty soil material overlie the firm, more clayey lake bed deposits.

G-2 Soils with moderately-high seasonal water table.

**Urban.** The design and installation of septage effluent absorption fields that function satisfactorily are very difficult because the soils are slowly permeable and have a seasonal water table. On slopes above 8 percent, the design and site selection for absorption fields requires special attention.

During wet periods, the water table is a problem in construction of building foundations. Special measures are needed to prevent seepage into basements. On slopes above 8 percent, difficulty is added to site preparation. The steeper slopes may present opportunities for a wider choice of architectural design.

Soil conditions are favorable for the establishment and maintenance of lawns, trees, and shrubs. Slopes above 8 percent add difficulty for landscaping.

The seasonal water table presents problems in the design, construction, and maintenance of streets and parking lots. Problems and costs are increased on soils with more slope.

**Recreation.** During the main season of use, these soils are favorable for picnic areas and camp sites. The level areas have moderate limitations for use as play areas, but limitations increase on the soils with more slope. Drainage is needed to overcome the seasonal water table on playing fields for intensive use and to extend the period for picnicking and camping.

**Wildlife.** Habitat for openland and woodland wildlife species is easily established, improved, or maintained on these soils. They are well suited for the dependable growth of a wide variety of desirable food and cover plants. Habitat for wetland wildlife species can be developed, improved, or maintained with moderate treatment on the more level soils, but such development on the sloping soils is more difficult and expensive.

**Woodland.** Productivity for wood crops is fair on these soils. Competition from hardwoods is a problem when managing for pine, spruce, and larch. Equipment operation is difficult during wet seasons.

**Cropland.** These soils are suited for the production of adapted grasses, legumes, silage corn, and late vegetables. They are poorly suited for alfalfa, tobacco, potatoes, and tree fruits. Erosion is a hazard even on gentle slopes and on the steeper slopes, more intensive surface water control measures are needed.

#### Poorly and Very Poorly Drained Lake Terrace Soils (Purple on map)

The poorly drained soils in group G-3a have a high water table that is less than 6 inches below the soil surface during the wettest part of the year. The high water table often persists into early summer and may reappear after prolonged or heavy summer rains.

The very poorly drained soils in group G-3b have water ponded on the surface for significant periods during winter and early spring. The water table usually remains within 3 feet of the soil surface throughout the year.

G-3a Soils with high seasonal water table

G-3b Soils with high water table during most of the year

**Urban.** These soils have severe limitations for most urban uses. Intensive drainage and land fill measures are necessary to overcome the high water table.

**Recreation.** These soils have severe limitations for picnicking, camp sites, and play areas. However, these soils have potential for development of ponds and conservation uses for environmental enhancement.

**Wildlife.** These soils are poorly suited for the production of openland wildlife habitat. On the poorly drained soils in group G-3a, habitat requirements of woodland and wetland wildlife species can be developed, improved, or maintained but moderate treatment is required.

The very poorly drained soils in group G-3b are poorly suited for the production and management of woodland wildlife habitat but are well suited for the development, improvement, and maintenance of wetland wildlife habitat.

**Woodland.** Productivity is poor on these soils. Wetness causes severe problems of equipment use, survival of tree seedlings, windthrow of trees, and competition from other plants. Red maple, elm, and willow are adapted to these soils.

**Cropland.** If adequate subsurface drainage is installed the soils in this group are suitable for the production of most crops generally grown in the area.

The soils in group G-3b are not suitable for the production of agricultural crops.

## U. Other Land

These areas are not classified into natural soil groups. They are variable in nature and on-site investigation is required for

determining suitability or limitations for any intended use.

# Glossary

Definitions of technical terms are given for the convenience of the readers

**Compact till.** Glacial till with relatively high volume weight and low permeability rate.

**Droughtiness (droughty soil).** Property of soils with low water-holding capacity (excessively drained) that retain moisture to support plant growth for only short periods during the growing season, especially during hot spells.

**Friable to firm glacial till.** See permeable till.

**Glacial till.** Unstratified glacial drift deposited directly by the ice and consisting of clay, silt, sand, gravel, and boulders intermingled in any proportion.

**Habitat.** The environment in which the life needs of a plant or animal are supplied.

**Loamy.** Intermediate in texture and properties between fine-textured and coarse-textured soils. Includes all textural classes with the word "loam" as a part of the class name, such as fine sandy loam.

**Openland wildlife.** Birds and mammals that frequent croplands, pastures, meadows, lawns, and areas overgrown with grasses, herbs, and shrubby growth. Examples: pheasants, field sparrows, rabbits, red foxes, woodchucks.

**Permeability of soil.** The quality of a soil horizon that enables water or air to move through it. The permeability of a soil may be limited by the presence of one nearly impermeable horizon even though others are permeable.

**Permeable till.** Glacial till with relatively low volume weight and medium to high permeability rate.

**Sandy.** Coarse-textured soil with high content of sand and low content of finer particles. Includes textured classes with the word "sand" as a part of the class name, such as loamy fine sand.

**Septage effluent.** The liquid outflow from a home septic tank, which is a product of the digestion of household sewage.

**Water table.** The upper limit of the part of soil or underlying rock material that is wholly saturated with water. In some places an upper or perched water table may be separated from a lower one by an unsaturated zone.

**Wetland wildlife.** Birds and mammals that normally frequent wet areas such as ponds, marshes, and swamps. Examples: black ducks, wood ducks, herons, mink, muskrats, beavers.

**Woodland wildlife.** Birds and mammals that normally frequent wooded areas of hardwood or coniferous trees and shrubs or mixtures of such plants. Examples: ruffed grouse, woodcock, gray squirrels, white-tailed deer.

Map Symbol	Natural Soil Group	Soil Name
AbA	A-1d	Agawam sandy loam, 0-3% slopes
AbB	A-1d	Agawam sandy loam, 3-8% slopes
AcA	B-2a	Acton fine sandy loam, 0-3% slopes
AcB	B-2a	Acton fine sandy loam, 3-8% slopes
AdB	B-2a	Acton stony fine sandy loam, 3-8% slopes
AfA	A-1d	Agawam fine sandy loam, 0-3% slopes
AfB	A-1d	Agawam fine sandy loam, 3-8% slopes
AfC	A-1e	Agawam fine sandy loam, 8-15% slopes
AgA	A-1d	Agawam very fine sandy loam, 0-3% slopes
AgB	A-1d	Agawam very fine sandy loam, 3-8% slopes
AgC	A-1e	Agawam very fine sandy loam, 8-15% slopes
AKA	A-1d	Agawam very fine sandy loam, overflow, 0-3% slopes
Am	E-3a	Alluvial land
AnA	C-2a	Amenia silt loam, 0-3% slopes
AnB	C-2a	Amenia silt loam, 3-8% slopes
AnC	C-2a	Amenia silt loam, 8-15% slopes
AoB	C-2a	Amenia stony silt loam, 3-8% slopes
AoC	C-2a	Amenia stony silt loam, 8-15% slopes
ApB	C-2b	Amenia very stony silt loam, 3-8% slopes
ApC	C-2b	Amenia very stony silt loam, 3-15% slopes
Au	A-3a	Au Cres loamy fine sand
BaA	A-2	Belgrade silt loam, 0-3% slopes
BaB	A-2	Belgrade silt loam, 3-8% slopes
BanB	A-2	Belgrade-Enfield silt loams, 0-5% slopes
Bax	U	Beach sand
BbA	A-2	Belgrade silt loam, reddish variant, 0-3% slopes
BbB	A-2	Belgrade silt loam, reddish variant, 3-8% slopes
BcA	G-2	Berlin silt loam, 0-3% slopes
BcB	G-2	Berlin silt loam, 3-8% slopes
BcC	G-2	Berlin silt loam, 8-15% slopes
BdA	E-1	Bermudian sandy loam, 0-3% slopes
BeA	E-1	Bermudian silt loam, 0-3% slopes
Bf	G-3b	Biddeford silt loam
BfA	G-3b	Biddeford silt loam, 0-3% slopes
BgA	G-3b	Biddeford silt loam, reddish variant, 0-3% slopes
BhA <sup>1/</sup>	C-2a	Birchwood fine sandy loam, 0-3% slopes
BhA <sup>2/</sup>	G-2a	Birchwood sandy loam, 0-3% slopes
BhB <sup>1/</sup>	C-2a	Birchwood fine sandy loam, 3-8% slopes
BhB <sup>2/</sup>	C-2a	Birchwood sandy loam, 3-8% slopes
BjA	B-1s	Bridgehampton silt loam, 0-3% slopes
BjB	B-1a	Bridgehampton silt loam, 3-8% slopes
BjoB	B-1a	Bridgehampton stony silt loam, 3-8% slopes
BjtA	A-1d	Bridgehampton silt loam, terrace, 0-3% slopes
BjxC	B-1c	Bridgehampton very stony silt loam, 3-15% slopes
Bk	U	Borrow and fill land, coarse materials
BkC	D-1	Brimfield-Brookfield complex, 3-15% slopes
Bl	U	Borrow and fill land, loamy materials
Bm	E-3a	Bowmansville silt loam
BmA	E-3a	Bowmansville silt loam, 0-3% slopes
BmC	E-3a	Bowmansville silt loam, gravelly substratum variant
BnC	D-1	Brimfield very rocky fine sandy loam, 3-15% slopes
BnD	D-2	Brimfield very rocky fine sandy loam, 15-25% slopes
BoA	A-1d	Branford silt loam, 0-3% slopes
BoB	A-1d	Branford loam, 3-8% slopes
BobB	A-1d	Branford silt loam, 3-8% slopes

Map Symbol	Natural Soil Group	Soil Name
BoC	A-1e	Branford loam, 8-15% slopes
BocC	A-1e	Branford silt loam, 8-15% slopes
BohC	D-1	Branford-Holyoke complex, 3-15% slopes
BomC	A-1d	Branford-Manchester complex, 3-15% slopes
BpC	D-2	Brimfield extremely rocky fine sandy loam, 3-15% slopes
BpD	D-2	Brimfield extremely rocky fine sandy loam, 15-25% slopes
BqB	C-1a	Bernardston silt loam, 3-8% slopes
BqC	C-1b	Bernardston silt loam, 8-15% slopes
BrA	C-1a	Broadbrook silt loam, 0-3% slopes
BrB	C-1a	Broadbrook silt loam, 3-8% slopes
BrB2	C-1a	Broadbrook silt loam, 3-8% slopes, eroded
BrC	C-1b	Broadbrook silt loam, 8-15% slopes
BrC2	C-1b	Broadbrook silt loam, 8-15% slopes, eroded
BrD	C-1d	Broadbrook silt loam, 15-25% slopes
BsA	C-1a	Broadbrook stony silt loam, 0-3% slopes
BsB	C-1a	Broadbrook stony silt loam, 3-8% slopes
BsC	C-1b	Broadbrook stony silt loam, 8-15% slopes
BsD	C-1d	Broadbrook stony silt loam, 15-25% slopes
BsxC	C-1c	Broadbrook very stony silt loam, 3-15% slopes
BtB	B-1a	Brookfield fine sandy loam, 3-8% slopes
BtC	B-1b	Brookfield fine sandy loam, 8-15% slopes
BtD	B-1d	Brookfield fine sandy loam, 15-25% slopes
BuB	C-1a	Bernardston stony silt loam, 3-8% slopes
BuC	C-1b	Bernardston stony silt loam, 8-15% slopes
BvB	B-1a	Brookfield stony fine sandy loam, 3-8% slopes
BvC <sup>1/</sup>	B-1b	Brookfield stony fine sandy loam, 8-15% slopes
BvC <sup>2/</sup>	B-1b	Brookfield stony fine sandy loam, 3-15% slopes
BvC <sup>3/</sup>	B-1b	Brookfield stony fine sandy loam, 8-15% slopes
BwC	C-1c	Bernardston very stony silt loam, 3-15% slopes
BwD	C-1e	Bernardston very stony silt loam, 15-25% slopes
BxA	G-2	Buxton silt loam, 0-3% slopes
BxB	G-2	Buxton silt loam, 3-8% slopes
BxC	G-2	Buxton silt loam, 8-15% slopes
ByC	B-1c	Brookfield very stony fine sandy loam, 3-15% slopes
ByD	B-1e	Brookfield very stony fine sandy loam, 15-25% slopes
Bz	G-3b	Birdsall silt loam
CaA	B-1a	Charlton fine sandy loam, 0-3% slopes
CaB	B-1a	Charlton fine sandy loam, 3-8% slopes
CaB2	B-1a	Charlton fine sandy loam, 3-8% slopes, eroded
CaC	B-1b	Charlton fine sandy loam, 8-15% slopes
CaC2	B-1b	Charlton fine sandy loam, 8-15% slopes, eroded
CaD	B-1d	Charlton fine sandy loam, 15-25% slopes
CaE	B-1d	Charlton fine sandy loam, 25-35% slopes
ChA	B-1a	Charlton stony fine sandy loam, 0-3% slopes
ChB	B-1a	Charlton stony fine sandy loam, 3-8% slopes
ChC	B-1b	Charlton stony fine sandy loam, 8-15% slopes
ChD	B-1d	Charlton stony fine sandy loam, 15-25% slopes
CjB	B-1a	Canton fine sandy loam, 3-8% slopes
CjC	B-1b	Canton fine sandy loam, 8-15% slopes
CjD	B-1d	Canton fine sandy loam, 15-25% slopes
CjxB	B-1a	Canton stony fine sandy loam, 3-8% slopes
CjxC	B-1b	Canton stony fine sandy loam, 8-15% slopes
CjxD	B-1d	Canton stony fine sandy loam, 15-25% slopes
CkC	B-1c	Canton very stony fine sandy loam, 3-15% slopes
CkD	B-1e	Canton very stony fine sandy loam, 15-35% slopes

C1B	D-1	Charlton-Hollis rocky fine sandy loams, 3-15% slopes	FaE	D-2	Farmington very rocky silt loam, 15-25% slopes
CrA	B-1c	Charlton very stony fine sandy loam, 0-3% slopes	FbC	D-1	Farmington rocky silt loam, 3-15% slopes
CrB	B-1c	Charlton very stony fine sandy loam, 3-8% slopes	FbE	D-2	Farmington rocky silt loam, 15-35% slopes
CrC	B-1c	Charlton very stony fine sandy loam, 3-15% slopes	FmC	D-2	Farmington extremely rocky silt loam, 3-15% slopes
CrC2	B-1c	Charlton very stony fine sandy loam, 8-15% slopes	FmE	D-2	Farmington extremely rocky silt loam, 15-35% slopes
CrD	B-1e	Charlton very stony fine sandy loam, 15-35% slopes	Fr	A-3a	Fredon silt loam
CsA	B-1a	Cheshire fine sandy loam, 0-3% slopes	Fw	F-1	Fresh water marsh
CsB	B-1a	Cheshire fine sandy loam, 3-8% slopes			
CsB2	B-1a	Cheshire fine sandy loam, 3-8% slopes, eroded	GaA	B-1a	Gloucester sandy loam, 0-3% slopes
CsC	B-1b	Cheshire fine sandy loam, 8-15% slopes	GaB	B-1a	Gloucester sandy loam, 3-8% slopes
CsC2	B-1b	Cheshire fine sandy loam, 8-15% slopes, eroded	GaC	B-1b	Gloucester sandy loam, 8-15% slopes
CsD	B-1d	Cheshire fine sandy loam, 15-25% slopes	GaD	B-1d	Gloucester sandy loam, 15-25% slopes
CsD2	B-1d	Cheshire fine sandy loam, 15-25% slopes, eroded	GbA	B-1a	Gloucester stony sandy loam, 0-3% slopes
CtB	B-1a	Cheshire stony fine sandy loam, 3-8% slopes	GbB	B-1a	Gloucester stony sandy loam, 3-8% slopes
CtC	B-1b	Cheshire stony fine sandy loam, 8-15% slopes	GbC	B-1b	Gloucester stony sandy loam, 8-15% slopes
CtD	B-1d	Cheshire stony fine sandy loam, 15-25% slopes	GbD	B-1d	Gloucester stony sandy loam, 15-25% slopes
CvC	B-1c	Cheshire very stony fine sandy loam, 3-15% slopes	GbmD	B-1e	Gloucester very stony sandy loam, 15-35% slopes
CvD	B-1e	Cheshire very stony fine sandy loam, 15-35% slopes	GcA	B-1a	Gloucester fine sandy loam, 0-3% slopes
CwA	A-1d	Copake loam, 0-3% slopes	GcG	B-1a	Gloucester fine sandy loam, 3-8% slopes
CwB	A-1d	Copake loam, 3-8% slopes	GcC	B-1b	Gloucester fine sandy loam, 8-15% slopes
CwC	A-1e	Copake loam, 8-15% slopes	GcD	B-1d	Gloucester fine sandy loam, 15-25% slopes
CyB	C-1a	Cheshire silt loam, bedrock variant, 3-8% slopes	GeC <sub>2/</sub>	B-1c	Gloucester and Charlton very stony soils, 3-15% slopes
CyC	C-1b	Cheshire silt loam, bedrock variant, 8-15% slopes	GeC <sub>3/</sub>	B-1c	Gloucester very stony sandy loam, 3-15% slopes
Cz	U	Coastal beaches	GeE <sub>2/</sub>	B-1e	Gloucester and Charlton very stony soils, 15-35% slopes
			GeE <sub>3/</sub>	B-1e	Gloucester very stony sandy loam, 15-35% slopes
DeA	A-2	Deerfield loamy fine sand, 0-3% slopes	Gf	E-1	Genesee silt loam
DoA	B-1a	Dover fine sandy loam, 0-3% slopes	Gn	A-3a	Granby loamy fine sand
DoB	B-1a	Dover fine sandy loam, 3-8% slopes	Gp	U	Gravel pit
DoC	B-1b	Dover fine sandy loam, 8-15% slopes	GrA	A-1a	Groton gravelly sandy loam, 0-3% slopes
DoD	B-1d	Dover fine sandy loam, 15-25% slopes	GrC	A-1b	Groton gravelly sandy loam, 3-15% slopes
DvB	B-1a	Dover stony fine sandy loam, 3-8% slopes	GsB	B-1a	Gloucester stony fine sandy loam, 3-8% slopes
DvC	B-1b	Dover stony fine sandy loam, 8-15% slopes	GsC	B-1b	Gloucester stony fine sandy loam, 8-15% slopes
			CsD	B-1d	Gloucester stony fine sandy loam, 15-25% slopes
Ee	E-2	Eel silt loam	GvC	B-1c	Gloucester and Brookfield very stony fine sandy loams, 3-15% slopes
EfA	A-2	Ellington fine sandy loam, 0-3% slopes	GvD	B-1e	Gloucester and Brookfield very stony fine sandy loams, 15-35% slopes
EhA	A-2	Ellington silt loam, 0-3% slopes			
EhB	A-2	Ellington silt loam, 3-8% slopes	Ha	E-1	Hadley silt loam
EmA	G-2	Elmwood loamy sand, 0-3% slopes	Haa	E-1	Hadley silt loam, 0-3% slopes
EnA	G-2	Elmwood sandy loam, 0-3% slopes	HbA	A-1d	Hartland silt loam, 0-3% slopes
EnB	G-2	Elmwood sandy loam, 3-8% slopes	HbB	A-1d	Hartland silt loam, 3-8% slopes
EoA	G-2	Elmwood very fine sandy loam, 0-3% slopes	HbC	A-1e	Hartland silt loam, 8-15% slopes
EoB	G-2	Elmwood very fine sandy loam, 3-8% slopes	RdA	A-1d	Hartford fine sandy loam, 0-3% slopes
EsA	A-1d	Enfield silt loam, 0-3% slopes	HdB	A-1d	Hartford fine sandy loam, 3-8% slopes
EsA2	A-1a	Enfield silt loam, 0-3% slopes, eroded	HeA	A-2	Hero loam, 0-3% slopes
EsB	A-1d	Enfield silt loam, 3-8% slopes	HeB	A-2	Hero loam, 3-8% slopes
EsB2	A-1a	Enfield silt loam, 3-8% slopes, eroded	HfA	A-1d	Hartford sandy loam, 0-3% slopes
EsC	A-1e	Enfield silt loam, 8-15% slopes	HfB	A-1d	Hartford sandy loam, 3-8% slopes
EsC2	A-1b	Enfield silt loam, 8-15% slopes, eroded	HfC	A-1e	Hartford sandy loam, 8-15% slopes
EtA <sub>1/</sub>	A-1a	Enfield silt loam, shallow, 0-3% slopes	HfG	A-1b	Hinckley-Enfield complex, 3-15% slopes
EtA <sub>3/</sub>	A-1a	Enfield silt loam, shallow variant, 0-3% slopes	HkA	A-1a	Hinckley gravelly sandy loam, 0-3% slopes
EtA <sub>2/</sub>	A-1a	Enfield gravelly silt loam, 0-3% slopes	HkB	A-1a	Hinckley gravelly sandy loam, 3-8% slopes
EtB <sub>2/</sub>	A-1a	Enfield silt loam, shallow, 3-8% slopes	HkC	A-1b	Hinckley gravelly sandy loam, 3-15% slopes
EtB <sub>3/</sub>	A-1a	Enfield silt loam, shallow variant, 3-8% slopes	HmA	A-1a	Hinckley gravelly loamy sand, 0-3% slopes
EtB	A-1a	Enfield silt loam, shallow variant, 3-8% slopes	HmC	A-1b	Hinckley gravelly loamy sand, 3-15% slopes
EtB2	A-1a	Enfield gravelly silt loam, 3-8% slopes	HnC	A-1b	Hinckley loamy sand, 3-15% slopes
EtC	A-1b	Enfield silt loam, shallow variant, 8-15% slopes	HoC <sub>1/</sub>	D-1	Hollis rocky loam, 3-15% slopes
EwA	A-1d	Enfield silt loam, overflow, 0-3% slopes	HoC <sub>2/</sub>	D-1	Hollis rocky fine sandy loam, 3-15% slopes
			HoC <sub>3/</sub>	D-1	Hollis rocky fine sandy loam, 3-15% slopes
FaC	D-1	Farmington very rocky silt loam, 3-15% slopes			

1/ Hartford County only.

2/ Tolland County only.

3/ All counties except Hartford and Tolland.

Map Symbol	Natural Soil Group	Soil Name	Map Symbol	Natural Soil Group	Soil Name
HoD	D-2	Hollis rocky loam, 15-35% slopes	MgrC	A-1b	Manchester gravelly sandy loam, 8-15% slopes
HpC	D-1	Hollis-Charlton rocky complex, 3-15% slopes	MhC	A-1b	Manchester loamy sand, 3-15% slopes
HpE	D-2	Hollis-Charlton rocky complex, 15-35% slopes	MmA	G-1	Melrose sandy loam, 0-3% slopes
HqD	D-2	Holyoke-Branford very rocky complex, 15-35% slopes	MmB	G-1	Melrose sandy loam, 3-8% slopes
HrC	D-1	Hollis very rocky fine sandy loam, 3-15% slopes	MnA	G-1	Melrose very fine sandy loam, 0-3% slopes
HrE	D-2	Hollis very rocky fine sandy loam, 15-35% slopes	MnB	G-1	Melrose very fine sandy loam, 3-8% slopes
HsC	D-1	Hollis very rocky loam, 3-15% slopes	MOA	C-3b	Menlo silt loam, 0-3% slopes
HsE	D-2	Hollis very rocky loam, 15-35% slopes	MpA	C-3b	Menlo stony silt loam, 0-3% slopes
HtC	D-1	Holyoke rocky silt loam, 3-15% slopes	MrA	A-1d	Merrimac fine sandy loam, 0-3% slopes
HtD	D-2	Holyoke rocky silt loam, 15-35% slopes	MrB	A-1d	Merrimac fine sandy loam, 3-8% slopes
HuC	D-1	Holyoke-Cheshire very rocky complex, 3-15% slopes	MsA	A-1d	Merrimac fine sandy loam, overflow, 0-3% slopes
HuD	D-2	Holyoke-Cheshire very rocky complex, 15-35% slopes	MyA	A-1d	Merrimac sandy loam, 0-3% slopes
HvC	D-1	Hollis-Narragansett rocky complex, 3-15% slopes	MyB	A-1d	Merrimac sandy loam, 3-8% slopes
HvE	D-2	Hollis-Narragansett rocky complex, 15-35% slopes	MyC	A-1e	Merrimac sandy loam, 8-15% slopes
Hwy	U	Hydraulic fill land	NaA	B-1a	Narragansett silt loam, 0-3% slopes
HxC	D-2	Hollis extremely rocky fine sandy loam, 3-15% slopes	NaB	B-1a	Narragansett silt loam, 3-8% slopes
HxE	D-2	Hollis extremely rocky fine sandy loam, 15-35% slopes	NaB2	B-1a	Narragansett silt loam, 0-3% slopes, eroded
HyC	D-1	Holyoke very rocky silt loam, 3-15% slopes	NaC	B-1b	Narragansett silt loam, 8-15% slopes
HzC	D-2	Holyoke extremely rocky silt loam, 3-15% slopes	NaC2	B-1b	Narragansett silt loam, 8-15% slopes, eroded
HzE <sup>1/</sup>	D-2	Holyoke very rocky loam, 15-35% slopes	NaD	B-1d	Narragansett silt loam, 15-25% slopes
HzE <sup>3/</sup>	D-2	Holyoke extremely rocky silt loam, 15-35% slopes	NgB	B-1a	Narragansett stony silt loam, 3-8% slopes
JaC	A-1b	Jaffrey sandy loam and loamy sand, 3-15% slopes	NgC	B-1b	Narragansett stony silt loam, 8-15% slopes
Ka	C-3a	Kendaia silt loam	NgD	B-1d	Narragansett stony silt loam, 15-25% slopes
Kb	C-3a	Kendaia stony silt loam	NhC	B-1c	Narragansett very atony silt loam, 3-15% slopes
Ke	C-3b	Kendaia-Lyons very stony silt loams	NrE	B-1e	Narragansett very stony silt loam, 15-35% slopes
Lc	B-3a	Leicester fine sandy loam	NkC	C-1c	Narragansett and Broadbrook very stony silt loams, 3-15% slopes
LcA	B-3a	Leicester loam, 0-3% slopes	NlC	D-1	Narragansett-Hollis rocky complex, 3-15% slopes
LdA	B-3b	Leicester, Whitman and Ridgebury very stony soils, 0-5% slopes	NmD	C-1e	Narragansett and Broadbrook very stony soils, 15-35% slopes
Le	B-3a	Leicester stony fine sandy loam	NnA	A-2	Ninigret fine sandy loam, 0-3% slopes
LeA	B-3a	Leicester stony loam, 0-3% slopes	NnB	A-2	Ninigret fine sandy loam, 3-8% slopes
Le <sup>2/</sup>	B-3b	Leicester-Ridgebury-Whitman very stony complex	NoC	B-1c	Narragansett-Gloucester very stony complex, 3-15% slopes
Le <sup>3/</sup>	B-3b	Leicester, Ridgebury and Whitman very stony fine sandy loams	NrA	A-2	Ninigret sandy loam, 0-3% slopes
Lm	E-3a	Limerick silt loam	NrB	A-2	Ninigret sandy loam, 3-8% slopes
LmA	E-3a	Limerick silt loam, 0-3% slopes	NsA	A-2	Ninigret very fine sandy loam, 0-3% slopes
Lm	E-3a	Limerick silt loam, gravelly substratum variant	NsB	A-2	Ninigret very fine sandy loam, 3-8% slopes
LoA	C-2a	Ludlow loam, 0-3% slopes	On <sup>2/</sup>	E-1	Ondawa sandy loam
LoB	C-2a	Ludlow loam, 3-8% slopes	On <sup>3/</sup>	E-1	Ondawa fine sandy loam
LpA	C-2a	Ludlow silt loam, 0-3% slopes	OnA	E-1	Ondawa sandy loam, 0-3% slopes
LpB	C-2a	Ludlow silt loam, 3-8% slopes	PaB	C-1a	Paxton fine sandy loam, reddish substratum, 3-8% slopes
LpC	C-2a	Ludlow silt loam, 8-15% slopes	PaC	C-1b	Paxton fine sandy loam, reddish substratum, 8-15% slopes
LsB	C-2a	Ludlow stony loam, 3-8% slopes	PaD	C-1d	Paxton fine sandy loam, reddish substratum, 15-25% slopes
LuA	C-2a	Ludlow stony silt loam, 0-3% slopes	Paw	F-2	Pawtucket peat
LuB	C-2a	Ludlow stony silt loam, 3-8% slopes	PbA	C-1a	Paxton fine sandy loam, 0-3% slopes
LumC	C-2b	Ludlow very stony silt loam, 3-15% slopes	PbB <sup>1/</sup>	C-1a	Paxton loam, 3-8% slopes
LwC	C-2b	Ludlow and Watchaug very stony soils, 3-15% slopes	PbB <sup>2/</sup>	C-1a	Paxton fine sandy loam, 3-8% slopes
Ly	C-3b	Lyons silt loam	PbB <sup>3/</sup>	C-1a	Paxton fine sandy loam, 3-8% slopes
Ma	U	Made land	PbB <sup>2/</sup>	C-1a	Paxton fine sandy loam, 3-8% slopes, eroded
McA	A-1a	Manchester gravelly loam, 0-3% slopes	PbC <sup>1/</sup>	C-1b	Paxton loam, 8-15% slopes
McC	A-1b	Manchester gravelly loam, 3-15% slopes	PbC <sup>2/</sup>	C-1b	Paxton fine sandy loam, 8-15% slopes
MgA	A-1a	Manchester gravelly sandy loam, 0-3% slopes	PbC <sup>3/</sup>	C-1b	Paxton fine sandy loam, 8-15% slopes
MgB	A-1a	Manchester gravelly sandy loam, 3-8% slopes	PbC2	C-1b	Paxton fine sandy loam, 8-15% slopes, eroded
MgC	A-1b	Manchester gravelly sandy loam, 3-15% slopes	PbD	C-1d	Paxton fine sandy loam, 15-25% slopes
			PbD2 <sup>1/</sup>	C-1d	Paxton loam, 15-25% slopes, eroded

P5D2<sup>1</sup>/C-1d Paxton fine sandy loam, 15-25% slopes, eroded  
 P5E C-1d Paxton fine sandy loam, 25-35% slopes  
 P6B C-1a Paxton stony fine sandy loam, reddish substratum, 3-8% slopes  
 P6C C-1b Paxton stony fine sandy loam, reddish substratum, 8-15% slopes  
 P6D C-1d Paxton stony fine sandy loam, reddish substratum, 15-25% slopes  
 P6A C-1a Paxton stony fine sandy loam, 0-3% slopes  
 P6B<sup>1</sup>/C-1a Paxton stony loam, 3-8% slopes  
 P6B<sup>2</sup>/C-1a Paxton stony fine sandy loam, 3-8% slopes  
 P6C<sup>1</sup>/C-1b Paxton stony fine sandy loam, 3-8% slopes  
 P6C<sup>2</sup>/C-1b Paxton stony loam, 8-15% slopes  
 P6C<sup>3</sup>/C-1b Paxton stony fine sandy loam, 8-15% slopes  
 P6C<sup>4</sup>/C-1b Paxton stony fine sandy loam, 8-15% slopes  
 P6D<sup>1</sup>/C-1d Paxton stony loam, 15-25% slopes  
 P6D<sup>2</sup>/C-1d Paxton stony fine sandy loam, 15-25% slopes  
 P6E C-1c Paxton very stony fine sandy loam, 0-3% slopes  
 P6F C-1c Paxton very stony fine sandy loam, 3-8% slopes  
 P6G C-1c Paxton very stony loam, 3-15% slopes  
 P6H C-1c Paxton very stony fine sandy loam, 3-15% slopes  
 P6I C-1c Paxton very stony fine sandy loam, 3-15% slopes  
 P6J C-1c Paxton very stony fine sandy loam, 8-15% slopes  
 P6K C-1e Paxton very stony loam, 15-35% slopes  
 P6L C-1e Paxton very stony fine sandy loam, 15-25% slopes  
 P6M C-1e Paxton very stony fine sandy loam, 15-35% slopes  
 P7C C-1c Paxton and Broadbrook very stony soils, 3-15% slopes  
 P7D C-1e Paxton and Broadbrook very stony soils, 15-35% slopes  
 P7A C-1a Paxton fine sandy loam, thick solum, 0-3% slopes  
 P7B C-1a Paxton fine sandy loam, thick solum, 3-8% slopes  
 P7C C-1b Paxton fine sandy loam, thick solum, 8-15% slopes  
 P7M C-1c Paxton very stony fine sandy loam, thick solum, 3-15% slopes  
 P7XA C-1a Paxton stony fine sandy loam, thick solum, 0-3% slopes  
 P7XB C-1a Paxton stony fine sandy loam, thick solum, 3-8% slopes  
 P7XC C-1b Paxton stony fine sandy loam, thick solum, 8-15% slopes  
 P8 F-1 Peat and muck  
 P8A F-1 Peats and mucks  
 P8B A-3b Peat and mucks, shallow  
 P8C A-3b Muck, shallow  
 P8D A-3b Peats and mucks, shallow  
 P8E A-3b Peat and muck, shallow  
 P8 F A-3b Peat and muck, shallow to sand  
 P8A A-1a Penwood loamy sand, 0-3% slopes  
 P8B A-1a Penwood loamy sand, 3-8% slopes  
 P8C A-1b Penwood loamy sand, 8-15% slopes  
 P9 E-2 Podunk fine sandy loam  
 P9A E-2 Podunk sandy loam, 0-3% slopes  
 P9B C-1a Poquonock loamy sand, 3-8% slopes  
 P9C C-1b Poquonock loamy sand, 8-15% slopes  
 P9 A-3b Peat and muck, shallow to silt  
 P9A C-1a Poquonock sandy loam, 0-3% slopes  
 P9B C-1a Poquonock sandy loam, 3-8% slopes  
 P9C C-1b Poquonock sandy loam, 8-15% slopes  
  
 RaA C-2a Rainbow silt loam, 0-3% slopes  
 RaB C-2a Rainbow silt loam, 3-8% slopes  
 RaC C-2a Rainbow silt loam, 8-15% slopes  
 RbA C-2a Rainbow stony silt loam, 0-3% slopes  
 RbB C-2a Rainbow stony silt loam, 3-8% slopes  
 RbM C-2b Rainbow very stony silt loam, 3-15% slopes

Rc C-3a Raynham silt loam  
 Rcm C-3a Raynham silt loam, shallow variant  
 Rcn C-3a Raynham silt loam, reddish variant  
 Rd C-3a Ridgebury fine sandy loam  
 RDA C-3a Ridgebury loam, 0-3% slopes  
 Re E-3b Riverwash  
 Rg C-3a Ridgebury stony fine sandy loam  
 Rh D-2 Rock land  
 RhC<sup>1</sup>/D-2 Rocky land, Hollis materials, 3-15% slopes  
 RhC<sup>2</sup>/D-2 Rocky land, 3-15% slopes  
 RhC<sup>3</sup>/D-2 Rocky land, Hollis materials, 15-35% slopes  
 RhE<sup>1</sup>/D-2 Rock land, 15-35% slopes  
 Rk D-2 Rock land  
 RkC D-2 Rocky land, Holyoke materials, 3-15% slopes  
 RkE D-2 Rocky land, Holyoke materials, 15-35% slopes  
 Rm C-3a Ridgebury silt loam  
 Rn C-3b Ridgebury very stony silt loam  
 Ro E-2 Rowland silt loam  
 RoA E-2 Rowland silt loam, 0-3% slopes  
 Ru E-3a Rumney fine sandy loam  
 RuA E-3a Rumney sandy loam, 0-3% slopes  
  
 Sa E-3b Saco fine sandy loam  
 SaA E-3b Saco sandy loam, 0-3% slopes  
 Sb E-3b Saco silt loam  
 SBA E-3b Saco silt loam, 0-3% slopes  
 Sbx E-3b Saco silt loam, gravelly substratum variant  
 ScA C-3a Scantic silt loam, 0-3% slopes  
 Sc C-3a Scantic silt loam, reddish variant  
 SCA C-3a Scantic silt loam, reddish variant, 0-3% slopes  
 SeA A-3b Seabrook loam, 0-3% slopes  
 Sf A-3b Seabrook fine sandy loam  
 SgA A-2 Sudbury sandy loam, 0-3% slopes  
 SgB A-2 Sudbury sandy loam, 3-8% slopes  
 Shv A-3b Shaughtuck silt loam, silty variant  
 S J A-3b Seabrook loamy fine sand  
 SkC D-1 Shapleigh very rocky silt loam, 3-15% slopes  
 SkE D-2 Shapleigh very rocky sandy loam, 15-35% slopes  
 SmC D-2 Shapleigh extremely rocky sandy loam, 3-15% slopes  
 SmE D-2 Shapleigh extremely rocky sandy loam, 15-35% slopes  
 SnA C-1a Stockbridge loam, 0-3% slopes  
 SnB C-1a Stockbridge loam, 3-8% slopes  
 SnB2 C-1a Stockbridge loam, 3-8% slopes, eroded  
 SnC C-1b Stockbridge loam, 8-15% slopes  
 SnC2 C-1b Stockbridge loam, 8-15% slopes, eroded  
 SnD D-1d Stockbridge loam, 15-25% slopes  
 SnD2 C-1d Stockbridge loam, 15-25% slopes  
 SpB C-1a Stockbridge stony loam, 3-8% slopes  
 SpC C-1b Stockbridge stony loam, 8-15% slopes  
 SpD C-1d Stockbridge stony loam, 15-25% slopes  
 SpC C-1c Stockbridge very stony loam, 3-15% slopes  
 SpD C-1e Stockbridge very stony loam, 15-35% slopes  
 SsA A-2 Sudbury fine sandy loam, 0-3% slopes  
 SsB A-2 Sudbury fine sandy loam, 3-8% slopes  
 St E-1 Suncook loamy fine sand  
 StA<sup>1</sup>/E-1 Suncook loamy sand, 0-3% slopes  
 StA<sup>2</sup>/E-1 Suncook loamy sand  
 SuC D-1 Sunderland rocky fine sandy loam, 3-15% slopes

Map Symbol	Natural Soil Group	Soil Name
SuE	D-2	Sunderland rocky fine sandy loam, 15-35% slopes
SvA <sup>1/</sup>	B-2a	Sutton loam, 0-3% slopes
SvA <sup>2/</sup>	B-2a	Sutton fine sandy loam, 0-3% slopes
SvA <sup>3/</sup>	B-2a	Sutton fine sandy loam, 0-3% slopes
SvB <sup>1/</sup>	B-2a	Sutton loam, 3-8% slopes
SvB <sup>2/</sup>	B-2a	Sutton fine sandy loam, 3-8% slopes
SvB <sup>3/</sup>	B-2a	Sutton fine sandy loam, 3-8% slopes
SvC	B-2a	Sutton fine sandy loam, 8-15% slopes
SwA <sup>1/</sup>	B-2a	Sutton stony loam, 0-3% slopes
SwA <sup>2/</sup>	B-2a	Sutton stony fine sandy loam, 0-3% slopes
SwA <sup>3/</sup>	B-2a	Sutton stony fine sandy loam, 0-3% slopes
SwB <sup>1/</sup>	B-2a	Sutton stony loam, 3-8% slopes
SwB <sup>2/</sup>	B-2a	Sutton stony fine sandy loam, 3-8% slopes
SwB <sup>3/</sup>	B-2a	Sutton stony fine sandy loam, 3-8% slopes
SwC	B-2a	Sutton stony fine sandy loam, 8-15% slopes
SxA	B-2b	Sutton very stony fine sandy loam, 0-3% slopes
SxB	B-2b	Sutton very stony fine sandy loam, 3-8% slopes
SxC <sup>1/</sup>	B-2b	Sutton and Acton very stony loams, 3-15% slopes
SxC <sup>3/</sup>	B-2b	Sutton very stony fine sandy loam, 3-15% slopes
SyA	G-3a	Swanton sandy loam, 0-3% slopes
SzA	C-2	Swanton very fine sandy loam, 0-3% slopes

Tc	A-1c	Terrace escarpments, clay
Te	A-1c	Terrace escarpments, sand and clay
Tg <sup>1/</sup>	A-1c	Terrace escarpments, sand and gravel
Tg <sup>2/</sup>	A-1c	Terrace escarpments
Tg <sup>3/</sup>	A-1c	Terrace escarpments
Tm	F-2	Tidal marsh
TsA	A-2	Tisbury silt loam, 0-3% slopes
TsB	A-2	Tisbury silt loam, 3-8% slopes
TwA	A-2	Tisbury and Sudbury soils, 0-3% slopes
TwB	A-2	Tisbury and Sudbury soils, 3-8% slopes

Uf U Urban land

WaA	C-2	Wallington silt loam, 0-3% slopes
WbA	C-2	Wallington silt loam, reddish variant, 0-3% slopes
WcA	A-3a	Walpole loam, 0-3% slopes
Wd	A-3a	Walpole sandy loam
WdA	A-3a	Walpole sandy loam, 0-3% slopes
WeA	B-2a	Wapping silt loam, 0-3% slopes
WeB	D-2n	Wapping silt loam, 3-8% slopes
WfA	B-2a	Wapping stony silt loam, 0-3% slopes
WfB	B-2a	Wapping stony silt loam, 3-8% slopes
WfxA	B-2b	Wapping very stony silt loam, 0-3% slopes
WfxC	B-2b	Wapping very stony silt loam, 3-15% slopes
WgA <sup>1/</sup>	B-2a	Watchaug loam, 0-3% slopes
WgA <sup>2/</sup>	B-2a	Watchaug fine sandy loam, 0-3% slopes
WgA <sup>3/</sup>	B-2a	Watchaug fine sandy loam, 0-3% slopes
WgB <sup>1/</sup>	B-2a	Watchaug loam, 3-8% slopes
WgB <sup>2/</sup>	B-2a	Watchaug fine sandy loam, 3-8% slopes
WgB <sup>3/</sup>	B-2a	Watchaug fine sandy loam, 3-8% slopes
WgxA	B-2a	Watchaug stony fine sandy loam, 0-3% slopes
WgxB	B-2a	Watchaug stony fine sandy loam, 3-8% slopes
WgzB	B-2b	Watchaug very stony fine sandy loam, 3-15% slopes
WhA	B-2a	Watchaug stony loam, 0-3% slopes

Map Symbol	Natural Soil Group	Soil Name
WhB	B-2a	Watchaug stony loam, 3-8% slopes
WkA	C-1a	Wethersfield loam, 0-3% slopes
WkB	C-1a	Wethersfield loam, 3-8% slopes
WkB2	C-1a	Wethersfield loam, 3-8% slopes, eroded
WkC	C-1b	Wethersfield loam, 8-15% slopes
WkC2	C-1b	Wethersfield loam, 8-15% slopes, eroded
WkD	C-1d	Wethersfield loam, 15-25% slopes
WkD3	C-1d	Wethersfield loam, 15-25% slopes, severely eroded
Wl	A-3a	Walpole and Raynham soils
WmA	C-1a	Wethersfield stony loam, 0-3% slopes
WmB	C-1a	Wethersfield stony loam, 3-8% slopes
WmC	C-1b	Wethersfield stony loam, 8-15% slopes
WmD	C-1d	Wethersfield stony loam, 15-25% slopes
WmX	A-3a	Wareham loamy fine sand, non-acid variant
WnC	C-1c	Wethersfield very stony loam, 3-15% slopes
WnD	C-1e	Wethersfield very stony loam, 15-35% slopes
WoA	G-3b	Whately loam, 0-3% slopes
Wp	C-3b	Whitman stony fine sandy loam
WpA	C-3b	Whitman stony loam, 0-3% slopes
Wpn	C-3b	Whitman fine sandy loam
Wps	C-3b	Whitman silt loam
Wpz	C-3b	Whitman-Ridgebury very stony silt loams
Wr	C-3a	Wilbraham silt loam
WEA	C-3a	Wilbraham silt loam, 0-3% slopes
Ws	C-3a	Wilbraham stony silt loam
WSA	C-3a	Wilbraham stony silt loam, 0-3% slopes
Wt	C-3b	Wilbraham very stony silt loam
WtA	C-3b	Wilbraham and Menlo very stony soils, 0-3% slopes
WuA	A-1a	Windsor loamy coarse sand, 0-3% slopes
WuB	A-1a	Windsor loamy coarse sand, 3-8% slopes
WuC	A-1b	Windsor loamy coarse sand, 8-15% slopes
WvA	A-1a	Windsor loamy fine sand, 0-3% slopes
WvAA	A-1a	Windsor loamy sand, 0-3% slopes
WvB <sup>1/</sup>	A-1a	Windsor loamy fine sand, 3-8% slopes
WvB <sup>2/</sup>	A-1a	Windsor loamy sand, 3-8% slopes
WvB <sup>3/</sup>	A-1a	Windsor loamy fine sand, 3-8% slopes
WvbB	A-1a	Windsor loamy sand, 3-8% slopes
WvG <sup>1/</sup>	A-1b	Windsor loamy fine sand, 8-15% slopes
WvC <sup>2/</sup>	A-1b	Windsor loamy sand, 8-15% slopes
WvC <sup>3/</sup>	A-1b	Windsor loamy fine sand, 8-15% slopes
Wvcc	A-1b	Windsor loamy sand, 8-15% slopes
Ww	E-2	Winooski and Hadley silt loams
WwA	E-2	Winooski silt loam, 0-3% slopes
Wwk	E-2	Winooski silt loam
Www	F-2	Westbrook peat
Wwx	F-2	Westbrook peat, low salt variant
WxA <sup>1/</sup>	C-2a	Woodbridge loam, 0-3% slopes
WxA <sup>2/</sup>	C-2a	Woodbridge fine sandy loam, 0-3% slopes
WxA <sup>3/</sup>	C-2a	Woodbridge fine sandy loam, 0-3% slopes
WxB <sup>1/</sup>	C-2a	Woodbridge loam, 3-8% slopes
WxB <sup>2/</sup>	C-2a	Woodbridge fine sandy loam, 3-8% slopes
WxB <sup>3/</sup>	C-2a	Woodbridge fine sandy loam, 3-8% slopes
WxC	C-2a	Woodbridge fine sandy loam, 8-15% slopes
WyA <sup>1/</sup>	C-2a	Woodbridge loam, reddish substratum, 0-3% slopes
WyA <sup>2/</sup>	C-2a	Woodbridge stony fine sandy loam, 0-3% slopes
WyA <sup>3/</sup>	C-2a	Woodbridge stony fine sandy loam, 0-3% slopes

WyB<sup>1</sup>/ C-2a Woodbridge loam, reddish substratum, 3-8% slopes  
WyB<sup>2</sup>/ C-2a Woodbridge stony fine sandy loam, 3-8% slopes  
WyB<sup>3</sup>/ C-2a Woodbridge stony fine sandy loam, 3-8% slopes  
WyC C-2a Woodbridge stony fine sandy loam, 8-15% slopes  
WzA<sup>1</sup>/ C-2a Woodbridge stony loam, 0-3% slopes  
WzA<sup>2</sup>/ C-2b Woodbridge very stony fine sandy loam, 0-3% slopes  
WzA<sup>3</sup>/ C-2b Woodbridge very stony fine sandy loam, 0-3% slopes  
WzaB C-2a Woodbridge stony loam, reddish substratum, 3-8% slopes  
WzB C-2a Woodbridge stony loam, 3-8% slopes  
WzbC C-2b Woodbridge very stony soils, 3-15% slopes  
WzC C-2b Woodbridge very stony fine sandy loam, 3-15% slopes  
WzrA C-2b Woodbridge and Rainbow very stony soils, 0-3% slopes  
WzrC C-2b Woodbridge and Rainbow very stony soils, 3-15% slopes

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1/ Hartford County only.

2/ Tolland County only.

3/ All counties except Hartford and Tolland.

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