

# NEW HAMPSHIRE STATE-WIDE NUMERICAL SOIL LEGEND

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# NEW HAMPSHIRE STATE-WIDE NUMERICAL SOIL LEGEND

## INTRODUCTION

This document represents the ninth release of the permanent New Hampshire State-Wide Numerical Soil Legend since the original development and adoption of a numerical system by the Natural Resources Conservation Service in New Hampshire in 1985. New releases are triggered when significant changes or additions are made in mapping concepts or in the legend itself. In between releases, new map units or new taxonomic units added to the soil survey legend are posted on the New Hampshire NRCS website.

The major changes with fifth release, published in 1999, were the addition of the Properties and Interpretations Table and the deletion of the hydric A and B determination listing.

The sixth release published in 2003 introduced the addition of several frigid Dystrudepts soils that were previously unrecognized in New Hampshire. With changes in Soil Taxonomy and specifically the changes to the definition of spodic materials, New Hampshire began to recognize extensive areas of soils in the frigid temperature regime that do not have spodic horizons. Many of these soils have not been identified in any other survey area and some still do not have an official series description (OSD). Until an official series description has been created and adopted these soils are termed variants, such as Berkshire Variant.

The seventh release incorporated two significant changes. First, a new column was added to identify the map unit symbol by its type, such as consociation, complex, association or undifferentiated group. Definitions of these types of map units can be found on page 4 under the heading “Kinds of Map Units”. Second, the recognition of more than one descriptive map unit name for a single NH State-Wide Numerical Soil Legend Number which allows descriptive non-technical terms to be used to suit the needs of the user of the soil survey. This change was made for the purposes of SSURGO (Soil Survey Geographic Database) certifying the Carroll County maintenance evaluation soils information with the NRCS. The descriptive terms carry the exact same concept as each map unit, therefore maintaining a single map unit number per soil map unit concept. Further description and examples can be found on Page 6 under the heading “Naming conventions for state legend map units”.

The eighth release included the addition of several new map units as a result of the SSURGO certification of the Merrimack-Belknap Soil Survey Update including mesic organic map units that have never been recognized in New Hampshire up to this point.

This ninth release also includes the addition of several new map units as a result of the correlation update of Carroll County, additional updates on the Merrimack-Belknap Soil Survey legend, updates to the Disturbed Map Unit section and the addition of the disturbed map unit catena key.

## INTRODUCTION (continued)

This document is available on the New Hampshire NRCS web site (<http://www.nh.nrcs.usda.gov/>). The web-site legend is kept up to date between hard copy publications.

All soil survey activities conducted in the State of New Hampshire, as part of the National Cooperative Soil Survey Program, or identified by the private sector as conforming to the standards of the National Cooperative Soil Survey, will adhere to the use of this numerical legend. This includes field mapping, soil correlation and soil map digitizing.

Revisions to this numerical legend, other than typographical errors, are not accepted; taxonomic units will be added to the legend only through approval by the State Soil Scientist. New state legend numbers can be added by following the procedures as described on page 39 of the Site Specific Soil Mapping Standards for New Hampshire and Vermont, SSSNNE Publication No. 3 dated December 2006 or the updates to this document.

Suggestions for improving this document are always welcome.

Questions or comments in regard to this document, or any other aspect of the National Cooperative Soil Survey in New Hampshire, should be directed to the NH State Soil Scientist:

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## KINDS OF MAP UNITS

Soils differ in size and shape of their areas, in degree of contrast with adjacent soils, and in geographic relationships. Four kinds of map units are used in soil surveys to show these relationships: *consociations*, *complexes*, *associations*, and *undifferentiated groups*. (From Soil Survey Manual; Soil Survey Staff, 1993).

**Consociations**—In a consociation, delineated areas are dominated by a single soil taxon (or miscellaneous area) and similar soils. As a rule, at least one-half of the pedons in each delineation of a soil consociation are of the same soil components that provide the name for the map unit<sup>1</sup>. Most of the remainder of the delineation consists of soil components so similar to the named soil that major interpretations are not affected significantly. The total amount of dissimilar inclusions of other components in a map unit generally does not exceed about 15 percent if limiting and 25 percent if non-limiting. A single component of a dissimilar limiting inclusion generally does not exceed 10 percent if very contrasting. The amount of dissimilar inclusions in an individual delineation of a map unit can be greater than this if no useful purpose would be served by defining a new map unit. The soil in a consociation may be identified at any taxonomic level.

A consociation named for a kind of miscellaneous area is dominated by the kind of area for which it is named to the extent that inclusions do not significantly affect the use of the map unit. Generally, this means that less than about 15 percent of any delineation is soil or less than about 25 percent is other kinds of miscellaneous areas. Percentages may vary, depending on the kind of miscellaneous area and the kind, size, and pattern of the inclusions.

**Complexes and associations**—Complexes and associations consist of two or more dissimilar components occurring in a regularly repeating pattern. Only the following arbitrary rule related to mapping scale determines whether the name complex or association should be used. The major components of a complex cannot be mapped separately at a scale of about 1:24,000. The major components of an association can be separated at a scale of about 1:24,000. In either case, the major components are sufficiently different in morphology or behavior that the map unit cannot be called a consociation. In each delineation of either a complex or an association, each major component is normally present, though their proportions may vary appreciably from one delineation to another. The total amount of inclusions in a map unit that are dissimilar to any of the major components does not exceed about 15 percent if limiting and 25 percent if non-limiting, and a single kind of dissimilar limiting inclusion generally does not exceed 10 percent if very contrasting.

**Undifferentiated groups**—Undifferentiated groups consist of two or more taxa components that are not consistently associated geographically and, therefore, do not always occur together in the same map delineation. These taxa are included as the same named map unit because use and management are the same or very similar for common uses. Generally, they are included together

## **KINDS OF MAP UNITS** (continued)

because some common feature such as steepness, stoniness, or flooding determines use and management. If two or more very steep soils geographically separated are so similar in their potentials for use and management that defining two or more additional map units would serve no useful purpose, they may be placed in the same unit. Every delineation has at least one of the major components and some may have all of them. The same principles regarding proportion of inclusions apply to undifferentiated groups as to consociations.

<sup>1</sup> Some soil consociations may be less than one-half the named soil if most of the remainder of the map unit consists of two or more soils that are similar to the named soil. The unit is named for the dominant soil.

## NAMING CONVENTIONS FOR STATE LEGEND MAP UNITS

In cases where a soil series name for a soil map unit concept does not exist and the Soil Map Unit Name listed in the NH State-Wide Numerical Soil Legend needs to be defined in relationship to an existing soil series, the description is written in technical terms for the Soil Science professional. Examples of these technical terms are frigid, Dystrudepts, and coarse-loamy over sandy or sandy-skeletal. The NH State-Wide Numerical Soil Legend has a broad audience, but the legend itself is intended to be used by Soil Science professionals. Therefore, technical terms have been used in the map unit names, such as Dixfield Variant (Dystrudepts). A non-technical user of the NH State-Wide Numerical Soil Legend would not necessarily know what Dystrudepts means, but would know that the soil is similar to the Dixfield soil. The professional Soil Scientist and the non-technical user alike know that when they see the map unit symbol “4” that the concept for that soil is Pootatuck, occasionally flooded. The integrity of the State Legend remains intact as long as one State Legend number represents only one unique soil map unit concept. No two state legend numbers will ever represent the same soil.

In order to accommodate correlation decisions in Carroll County, it has been necessary to recognize both technical and non-technical names for the same soil or the same state legend number. An example is state legend number 245: Hermon Variant (Dystrudepts), very stony. During a NRCS maintenance evaluation of the existing Carroll County soil survey legend, (completed in 2005) it was decided to use a less technical name for use by the general public, and identify this map unit as Gloucester (cool phase), very stony. The two soil names identify the same soil properties and thus carry the same state legend number: 245. When this soil concept is officially approved within the National Cooperative Soil Survey, it will receive a unique name, other than Hermon Variant or Gloucester (cool phase), and will be referred to by the new name in all future soil survey documents. The old names of Herman Variant and Gloucester (cool phase) will be retained in archived files as a permanent record.

Some soil series are officially defined and described as spanning two drainage classes. When mapping at the site-specific level, it is important to differentiate the two classes of drainage. To accommodate this situation, two state legend numbers have been assigned to a single soil series and the map unit name has been expanded to identify the drainage class unique to that state legend number. For example:

32 Boxford (moderately well drained)  
953 Boxford (somewhat poorly drained)

When official soil series descriptions (OSD) become redefined to represent only one drainage class, the obsolete drainage class will be removed, labeled as obsolete and will no longer be officially recognized in New Hampshire. The other map unit name will be changed accordingly. Once State Legend numbers become obsolete, they are archived and never used again to represent another concept. This insures the integrity of the number whenever reference is made to old mapping or outdated soil map products.

## **NAMING CONVENTIONS FOR STATE LEGEND MAP UNITS (continued)**

Any map unit terminology in parenthesis is not an official part of the map unit name; however, it adds clarity to the map unit concept or provides differentiation from a similar named map unit. For example:

161 Lyman-Tunbridge-Rock outcrop complex  
820 Lyman-Tunbridge-Rock outcrop complex (association)

In the example above, due to previous naming conventions when Rock outcrop is part of the map unit name, both map units are identified as a soil complex. However, map unit 820 is strictly an order 3 map unit and, therefore, is an association. The word association in parenthesis differentiates these two map units. More information on naming map units is located in Part 627 of the National Soil Survey Handbook (NSSH; Soil Survey Staff, 2007) and the Soil Survey Manual (SSM; Soil Survey Staff, 1993).

If the term in parenthesis applies to only one component of the map unit, the term will come directly after the component name. If the term in parenthesis applies to the entire map unit then it will occur directly after all of the component names or in the case of a consociation, after the one component name, and before any phase terms.

## STATUS OF SOIL SURVEY PUBLICATIONS

All of the private land in New Hampshire has been mapped and the official data is available through the following NRCS websites:

- Soil Data Mart (SDM): <http://soildatamart.nrcs.usda.gov>
- Web Soil Survey (WSS): <http://websoilsurvey.nrcs.usda.gov>

Note: Mapping for the White Mountain National Forest is currently in progress by the U.S. Forest Service and NRCS.

**The following is a listing of NRCS soil survey areas in New Hampshire, their publication date, and availability.**

<u>Survey Area</u>	<u>Publication Date</u>	<u>Availability</u>
Belknap County	1968	Publication is out-of-print and out-of-date. Updated soil survey information is available (see MBSS) in SDM and WSS.
Carroll County	1977	The 1977 survey is out-of date. A maintenance project was conducted and SSURGO certified in 2006. Available in SDM and WSS. Update pending.
Cheshire County	1989	Modern published soil survey, available in hard copy, digital, SDM and WSS.
Coos County	2008 - SSURGO certified	Soil survey mapping is complete. Publication is pending. Available in SDM and WSS.
Grafton County	1999	Modern published soil survey, available in hard copy, digital, SDM and WSS.
Hillsborough County, Eastern Part	1981	Modern published soil survey, available in hard copy, digital, SDM and WSS.
Hillsborough County, Western Part	1985	Modern published soil survey, available in hard copy, digital, SDM and WSS.
Merrimack County	1965	Publication is out-of-print and out-of-date. Updated soil survey information is available (see MBSS) in SDM and WSS.
Merrimack and Belknap Counties Update (MBSS)	2007- SSURGO certified	SSURGO certified in September 2007. Correlation is in progress. Available in SDM and WSS.
Rockingham County	1994	Modern published soil survey, available in hard copy, digital, SDM and WSS.
Strafford County	1973	The 1973 survey is out-of date. Available in SDM and WSS. Update pending.
Sullivan County	1983	Modern published soil survey, available in hard copy, digital, SDM and WSS.

## MAPPING ORDERS

All soil surveys are made by examining, describing and classifying soils in the field, and delineating their areas on maps. Some surveys are made to accommodate users who need precise, detailed information, while other surveys are made for users who need a broad perspective of heterogeneous but distinctive areas.

The elements of a soil survey can be adjusted to provide the most useful product for the principal intended purposes. Different intensities of field study, different degrees of detail in mapping, different phases or levels of abstraction in defining and naming map units produce a wide range of soil surveys. Adjustments in these elements form the basis for differentiating three orders of soil mapping in New Hampshire under the standards of the National Cooperative Soil Survey. The NH State-Wide Numerical Soil Legend has been designed to accommodate the Order 1, Order 2, and Order 3 level of mapping intensities.

Recognition of these different levels of mapping intensities is helpful for communicating about soil survey maps although the levels cannot be sharply separated from each other. The mapping orders are intended to aid in the identification of the operational procedures and level of precision used to conduct the soil survey.

- **Order 1** soil surveys are made for very intensive land uses requiring very detailed information about soils. The information can be used in planning subdivisions, intensive agricultural uses, and other uses that require a detailed and very precise knowledge of the soils and their variability. Typical map units in an Order 1 survey are but not limited to: consociations; some complexes; and miscellaneous areas. The base map scale is generally 1:15,840 or larger.
- **Order 2** soil surveys are made for intensive land uses that require detailed information about soil resources for making predictions of suitability for use and treatment needs. Information can be used for community planning, agriculture, highway construction, and other similar uses that require precise knowledge of the soils and their variability. The base map scale generally ranges from 1:12,000 to 1:31,680; however, historically in New Hampshire, the scale used for Order 2 mapping has been 1:15,840, 1:20,000 or 1:24,000.
- **Order 3** soil surveys are made for extensive land uses that do not require precise knowledge of small areas or detailed soils information. Information can be used for forest management, recreational uses, wildlife habitat suitability, and other similar extensive land uses. The base map scale generally ranges from 1:24,000 to 1:250,000, however, in New Hampshire, the base map is typically 1:24,000

**MAPPING ORDERS** (continued)

The following table is a guide to map scales, mapping orders, and the size of a square delineation that is 1/4 inch on a side (1/16 sq. in.).

<b><u>Map Scale</u></b>	<b><u>Typical Mapping Order</u></b>	<b><u>Acres in 1/4" Delineation</u></b>
1:500	Order 1	0.0025
1:2,000	Order 1	0.04
1:5,000	Order 1	0.25
1:7,920	Order 1	0.62
1:10,000	Order 1	1.00
1:12,000	Order 1 or Order 2	1.43
1:15,840	Order 1 or Order 2	2.5
1:20,000	Order 2	4.0
1:24,000	Order 2 or Order 3	5.7
1:31,680	Order 2 or Order 3	10.0
1:63,360	Order 3	40.0
1:100,000	Order 3	100.0
1:250,000	Order 3	623.0

## SLOPE PHASES

Slope phases of soil map units are not included in this Numerical Soil Legend or identified in the alpha conversion legend. However, in the National Soil Information System (NASIS) database (<http://soils.usda.gov/technical/nasis/>), the slope phases and other major phases are identified. Symbols used to identify slope range are always a capital letter and will occur immediately after a numerical map unit symbol, or as the third entry of an alpha map unit symbol. The capital letter identifying slope has a standard range as used in the New Hampshire Cooperative Soil Survey Program, but on occasion when landscape patterns dictate, the capital letter will represent a narrower or broader slope range from the standard. In any case, for each soil mapping order there are specified defined slope limits that are allowed for any particular letter indicator. Soil map symbols that do not have a slope letter indicates the slope of the map unit is generally less than three percent, or the map unit identifies a miscellaneous land type such as dumps, or rock outcrop. To be certain of the slope range represented by any map unit symbol, one needs to read the map unit description.

The following is a list of capital letters used to designate slope range, their standard, and their maximum limits. The slope ranges, standards and limits are found in the Soil Survey Manual (SSM; Soil Survey Staff, 1993). The conventions for ranges in slope limits used in New Hampshire do not exactly follow the guidelines in the Soil Survey Manual. Instead, they were modified in some cases to conform to and represent local landscapes.

### For Order 1 and Order 2 mapping:

<u>SLOPE SYMBOL</u>	<u>STANDARD RANGE</u>	<u>LOWER LIMIT</u>	<u>UPPER LIMIT</u>
A	0-3%	0%	1-3%
B	3-8%	1-3%	5-8%
C	8-15%	4-8%	8-16%
D	15-25%	10-16%	18-35%
E	25-50%	20-35%	35-60%
F & G	50%+	45-65%	none

### For Order 3 Mapping:

<u>SLOPE SYMBOL</u>	<u>STANDARD RANGE</u>
A	0-8%
B	0-15%
C	0-35%
D	15-35%
E	35-60%
F & G	35-80%

## MAP UNIT VARIANTS

Map unit variants are used to distinguish differences in soil properties, significant to use and management, that are currently outside the range in characteristics of any known series. Soil variants are unnamed soils and are potential new series. The term “variant” is used only as a temporary measure. "Variants differed enough in one or more properties from the series for which they were named that major interpretations for comparable phases were different" (Soil Survey Manual, page 21; Soil Survey Staff, 1993). Significant differences in soil properties are commonly reflected in soil morphology and are distinguished at the series level (Soil Survey Manual, page 17; Soil Survey Staff, 1993).

Before October 1988, the National Cooperative Soil Survey recognized small areas of unique soils (less than 2,000 acres) as variants. Although variants of soil series are no longer correlated within the National Cooperative Soil Survey, the term “variant” is used in the New Hampshire State-Wide Numerical Soil Legend for the convenience of keeping map unit names as short as practical. Variants are temporary map unit names and will be replaced with a new soil series name when sufficient acreage has been mapped and sufficient pedons described. Pedon descriptions are needed to properly identify the range in physical and chemical properties of the soil to adequately determine behavioral characteristics under various kinds of use and management (discussion with the Soil Survey Quality Assurance Staff, May 2, 1994).

Since soil variants represent a temporary means of recognizing a unique set of soil properties, the National Cooperative Soil Survey no longer provides official interpretations. However, the referenced series name, along with the properties that justified the recognition of a variant, are sufficient for a Professional Soil Scientist to provide adequate land use interpretations for the proposed use. Each soil variant in the state legend has descriptive terms in parenthesis that differentiates the soil from the others with the same series reference name. The descriptive terms in parenthesis are not an official part of the map unit name.

It is recommended that when Professional Soil Scientists recognize and map soil variants in New Hampshire that profile descriptions are taken, and documentation collected as to the extent of the map unit, the range in characteristics and kinds and types of map unit inclusions. This information should be forwarded to the NRCS Assistant State Soil Scientist when using or establishing a new soil variant. When sufficient data has accumulated a new soil series may be established.

Some examples of variants currently recognized in the NH State-Wide Numerical Soil Legend are:

- 189 Chatfield Variant (moderately well drained)
- 961 Pillsbury Variant (moderately deep)

## **MAP UNIT VARIANTS** (continued)

The naming of new soil variants and use of referenced series names will be based on conversation between the State Soil Scientist or representative and the mapper (Professional Soil Scientist). Documentation will be provided by the soil scientist for the new soil variant. The recognition of new variants that may overlap physical properties of previously established variants will be avoided to the fullest extent possible. For example, since Chatfield Variant (moderately well drained) has been already established in the legend, NH NRCS will not recognize or establish a Sutton Variant (moderately deep) as they represent the same conceptual catena placement. By definition, Chatfield is moderately deep and Sutton is moderately well drained.

Any additions or changes to the NH State-Wide Legend must be approved by the Assistant State Soil Scientist, with the appropriate documentation (see page 39 of the Site Specific Soil Mapping Standards for New Hampshire and Vermont, SSSNNE Publication No. 3, dated December 2006).

## SURFACE TEXTURE

During a typical soil survey correlation, soil map units are not separated on the basis of surface texture unless there is sufficient variability to affect use and management of the soil within the survey area. Although a specific taxonomic unit may have a wide range in allowable surface textures, only one texture is selected for a given soil that represents the dominant surface texture for the survey area. A representative soil is described and the corresponding map unit named, based on the surface texture (e.g., Hinckley loamy sand). Additional surface textures for Hinckley soils are allowed and handled as map unit inclusions. According to the Hinckley official series description, these textures include: loamy coarse sand, loamy fine sand, coarse sandy loam, sandy loam, fine sandy loam, very fine sandy loam, and their gravelly analogs.

In some soil surveys, a particular soil will have two dominant and contrasting surface textures each covering extensive areas and each having substantially different interpretations for use and management. Typically, the two surface textures occur on different landscape settings or in separate geomorphic regions within the survey area. In these situations, both surface textures are recognized and identified in the soil survey legend as separate map units. The separate map units have different map unit symbols and different interpretations described in the soil survey report (e.g., 12-Hinckley loamy sand; and 212-Hinckley gravelly sandy loam).

In this Soil Legend, surface textures are used as part of the taxonomic name only when necessary to separate soils that have been correlated with two different surface textures. Occasionally, taxonomic units are separated only on the basis of the surface textural modifier that affects use and management (e.g., gravelly versus non-gravelly).

## STONY PHASES

Stony phases, and the naming of the map unit, have always been an area of much confusion over the years. Early soil survey publications indicated stoniness as a surface texture modifier (e.g., Paxton very stony fine sandy loam) when in actuality it was meant to be a map unit phase (e.g., Paxton fine sandy loam, very stony). The more recent soil survey publications have map units named correctly as a map unit phase. The phase “nonstony” is not part of the map unit name.

This Soil Legend separates soil taxonomic units based on four phases of stoniness listed in the table below. The phases describe the amount of rock fragments on the surface of the soil that has important effects on soil use and management. The map unit phases are separated based on rock fragments that are 10 to 24 inches (250-600 mm) in diameter including both those that lie on the surface and those that are partly within the soil but protrude above the ground. The following table lists the four classes of stoniness, phase terminology, and the general guidelines used to define range in percent surface cover and distance between the stones.

<u>STONY CLASS</u>	<u>PHASE</u>	<u>PERCENT SURFACE COVER</u>	<u>DISTANCE BETWEEN STONES*</u>
-	nonstony	<.01%	
1	stony	.01-1.0%	≥ 8 m apart
2	very stony	1.0-3.0%	1 – 8 m apart
3	extremely stony	3.0-15.0%	0.5 – 1 m apart

*\*The actual distance between stones for a given percentage of surface cover will vary depending upon the size of the stones (Soil Survey Manual page 144 and Table 3-12; Soil Survey Staff, 1993).*

Bouldery phases are also recognized in this Legend for areas with rock fragments greater than 24 inches (250 mm) in diameter with similar ranges in percent surface cover.

The conversion legend in this document for published soil surveys with an alpha legend takes into consideration the historical variability in describing stony and bouldery phases (yellow section). However, one should always refer to the description of the map unit in the soil survey publication to get an accurate evaluation of percent rock cover and the affect on use and management.

## MAP SYMBOL DENOMINATORS

The New Hampshire State-Wide Numerical Soil Legend is used in the naming of soil map units identified under the Site-Specific Soil Mapping Standards of New Hampshire and Vermont (SSSNNE Special Publication #3, Dec. 2006 and subsequent updates). The map symbol is composed of 1, 2, 3, or 4 digits followed by a capitol letter designating slope. An optional map symbol denominator is available for use by municipalities that wish to have immediate identification of specific soil properties when viewing a site-specific soils map. The soil properties identified include: poorly drained soils; very poorly drained soils; and soils that are shallow (less than 20 inches or less than 50 cm) to bedrock.

The map symbol denominator is identified in the column labeled "Denominator" in the Properties and Interpretations table (orange sheets) of this document. Use of the denominator is at the discretion of the soil scientist or when identified by a municipality as a requirement in site plan reviews.

When shown, the denominator should be used in the following manner:

- a. Poorly drained map units will contain a "P" in the denominator, to be shown as follows:

656B

P

*(Included are map unit complexes where at least one component is poorly drained, but none are very poorly drained.)*

- b. Very poorly drained map units will contain a "VP" in the denominator, to be shown as follows: 731A

VP

*(Included are map unit complexes where at least one component is very poorly drained. Other components may be poorly drained.)*

- c. Map units that are shallow to bedrock will contain an "Rk" in the denominator, to be shown as follows: 85C

Rk

*(Included are map unit complexes where at least one component is shallow to bedrock.)*

## HYDRIC SOILS

The hydric A or B determination listing was deleted from this document with version #6 in 2003. Instead, the drainage class designation is used to replace hydric A or B used by the State of New Hampshire Department of Environmental Services for the permitting process of subsurface wastewater treatment under the proposed changes in the NH Code of Administrative Rules Env-Ws 1000. Soil series identified as being hydric (*poorly or very poorly drained*) are based on the criteria that was developed by the National Technical Committee for Hydric Soils and the definition for hydric soils (Federal Register, July 13, 1994). Only poorly drained and very poorly drained soils are considered hydric in New Hampshire. All of the hydric soils in New Hampshire qualify as hydric due to wetness indicators below the soil surface except for map unit 7, Fluvaquents, which qualifies due to frequent flooding. There are no other soils currently recognized in New Hampshire that meet the hydric criteria solely on the basis of flooding or ponding during the growing season.

The USDA/NRCS Field Indicators of Hydric Soils in the United States, Version 7.0 (2010) and subsequent amendments are used to determine the hydric soils in NH for NRCS and NH regulatory purposes. Field Indicators for Identifying Hydric Soils in New England, Version 3, (April 2004) are used as a support tool to the Field Indicators of Hydric Soils in the United States.

## DRAINAGE CLASS

The natural soil drainage class refers to the frequency and duration of wet periods under conditions similar to those under which the soil developed. Alteration of the water regime by man, either through drainage or irrigation, is not a consideration unless the alterations have significantly changed the morphology of the soil. Drainage class, by definition, is an agricultural interpretation, assigned by the USDA Natural Resources Conservation Service (see page 98 of the Soil Survey Manual). As such, drainage class interpretations cannot be specifically and consistently identified in the field for regulatory purposes.

For this reason, interpretive limits were established by the Society of Soil Scientist of Northern New England (SSSNNE), to allow the soil scientist to identify precise soil drainage boundaries in the field in NH. (Site-Specific Soil Mapping Standards for New Hampshire and Vermont, Version 3.0, December 2006, SSSNNE Special Publication No. 3). These interpretive limits identify a specific range of allowable, observable, and measurable features in the soil profile that specifically identify the drainage class of the series.

Drainage class is assigned by a representative of the National Cooperative Soil Survey to a series once it is established. (A soil series is a group of soils that have horizons similar in arrangement and in differentiating characteristics, with a relatively narrow range of properties.)

The drainage class for each map unit is listed in the properties and interpretations table (Orange). Where there are map units with more than one component, the drainage class can be determined by referring to each individual soil series name. There are many map units in the legend that are made up of two or more major components and some of these map units may be made up of hydric or non-hydric components.

## DUAL DRAINAGE CLASS SOIL SERIES

During the process of converting soils data to the National Soil Information System (NASIS) data structure, map units previously identified with dual drainage classes were redefined with a single drainage class. The drainage class selected best represents the mapping concept within a specific survey area. For complexes and associations where one or more components have a dual drainage class, the official drainage class specified in NASIS was used unless otherwise specified. The official drainage class appears in parenthesis after the soil name. For soil series that require the recognition of both drainage classes in New Hampshire, new state legend numbers will be assigned as needed.

The following is a list of official soil series that allow a range in drainage class. The allowable range in drainage class is listed in the second column and the third column identifies the drainage class currently being recognized in the New Hampshire NASIS database.

<b><u>Soil Name</u></b>	<b><u>Allowed Drainage Class</u></b>	<b><u>Used Currently</u></b>
Adams	somewhat exc. and exc.	somewhat excessively
Boscawen	somewhat exc. and exc.	excessively
Boxford	moderately well and somewhat poorly	moderately well
Champlain	well and somewhat excessively	somewhat excessively
Chatfield	well and somewhat excessively	well
Dixmont	moderately well and somewhat poorly	moderately well
Grange	somewhat poorly and poorly	poorly
Hollis	well and somewhat excessively	well
Madawaska	moderately well and somewhat poorly	moderately well
Millsite	well and somewhat excessively	somewhat excessively
Moosilauke	somewhat poorly and poorly	poorly
Naumburg	somewhat poorly and poorly	poorly
Pillsbury	somewhat poorly and poorly	poorly
Raynham	somewhat poorly and poorly	poorly
Ricker	well, somewhat exc. and exc.	well
Ridgebury	somewhat poorly and poorly	poorly
Roundabout	somewhat poorly and poorly	poorly
Stetson	well and somewhat excessively	well
Sudbury	moderately well and somewhat poorly	moderately well
Surplus	moderately well and somewhat poorly	moderately well
Swanton	somewhat poorly and poorly	poorly
Wareham	somewhat poorly and poorly	poorly

## Disturbed Map Units

This edition of the New Hampshire State-Wide Numerical Soil Legend contains eleven distinct map units used for identifying areas of soils altered or disturbed by human influence and the addition of one naturally formed map unit. These map units were designed for the Order 2 and Order 3 levels of mapping intensity, but can be used in Order 1 mapping if appropriate.

The definition of disturbed map units is intentionally brief and vague. Classification at the Great Group level allows for a wide range in soil properties and behavioral characteristics. The variability in soil properties typically requires on-site investigations before any interpretation can be developed. The map unit descriptions are intended to provide guidance in differentiating map units. The author of the soil map is expected to provide additional information to reflect the nature of the disturbed areas within the survey area.

### I. Excavated land

#### **300 Udipsamments**

This map unit is characterized by soil textures of loamy fine sand to sand and gravel throughout the entire particle-size class control section (25 - 100 cm or 10 - 40 inches). Saturated hydraulic conductivity ( $K_{sat}$ ) is high or very high. Drainage class ranges from excessively drained to well drained. The Hydrologic Soil Group (HSG) is A. Typical sand pit.

#### **350 Udipsamments, wet substratum**

This map unit is characterized by soil textures of loamy fine sand to sand and gravel throughout the entire particle-size class control section (25 - 100 cm or 10 - 40 inches). Saturated hydraulic conductivity ( $K_{sat}$ ) is high or very high. Drainage class ranges from moderately well drained to somewhat poorly drained.

#### **400 Udorthents, sandy or gravelly**

This map unit typically includes the following concepts: 1) very gravelly (> 35%) sand or very gravelly loamy sand; Or 2) sand or loamy sand textures that may have lenses of loamy very fine sand or finer somewhere in the particle-size class control section (25 - 100 cm or 10 - 40"). Saturated hydraulic conductivity ( $K_{sat}$ ) is high or very high. Drainage class ranges from excessively drained to somewhat poorly drained. Typical gravel pit.

## **Disturbed Map Units** (continued)

### **500 Udorthents, loamy**

This map unit is characterized typically by soil textures that are sandy loam, loam, or silt loam within the particle size control section (25 – 100cm or 10 – 40”). Saturated hydraulic conductivity ( $K_{sat}$ ) is low through high. Drainage class ranges from well drained to somewhat poorly drained. These areas typically represent excavated glacial till or perhaps areas where sand and gravel was excavated down to the loamy underlying material.

### **550 Udorthents, Bedrock substratum**

This map unit is characterized by soil textures of sandy loam, loam, or silt loam within the particle-size class control section (25 - 100 cm or 10 - 40 inches). These areas typically represent excavated soil materials where the range in depth to bedrock is 10 - 60 inches (25 - 152 cm). Saturated hydraulic conductivity ( $K_{sat}$ ) is low through high. Drainage class ranges from somewhat excessively drained to somewhat poorly drained.

### **600 Endoaquents, loamy**

This map unit represents areas where soil material was excavated down to, or near the water table. Soil material is typically sandy loam, loam or silt loam within the particle-size class control section (25 - 100 cm or 10 - 40 inches). Saturated hydraulic conductivity ( $K_{sat}$ ) is low through high. Drainage class is poorly or very poorly drained. The Hydrologic Soil Group (HSG) is D.

### **900 Endoaquents, sandy or gravelly**

This map unit represents areas where soil material was excavated down to / near the water table. This map unit is characterized typically by soil textures of: 1) very gravelly (> 35% gravel) sand or very gravelly loamy sand or; 2) sand or loamy sand textures that may have lenses of loamy very fine sand or finer somewhere in the particle-size class control section (25 - 100 cm or 10 - 40"). Saturated hydraulic conductivity ( $K_{sat}$ ) is high or very high. Drainage class is poorly or very poorly drained. The Hydrologic Soil Group (HSG) is D. Typical gravel pit dug down to or close to the water table.

## **Disturbed Map Units** (continued)

### **II. Filled land**

#### **100 Udorthents, wet substratum**

This map unit represents areas that have been filled and leveled over what were originally hydric soils.

#### **199 Dumps, bark chips, and organic material**

This map unit consists of man-made deposits of bark, wood chips, sawdust, paper mill sludge, cinders, waste paper, ashes, and other similar refuse from the operation of paper mills and sawmills.

#### **200 Udorthents, refuse substratum**

This map unit represents alternating layers of soil and refuse such as in sanitary landfills. Closed landfills typically have 2 feet of loamy material capping the area.

#### **299 Udorthents, smoothed**

This map unit represents areas that have been cut and filled to create a large level or nearly level area. Soil material making up the map units typically came from the immediate area. School athletic fields are an example (unless they were created on hydric soils – see Map Unit 100).

### **III. Bottom Land**

#### **7 Fluvaquents**

This map unit represents areas of various kinds of soil materials on the bottom lands of streams and rivers. The soil material ranges in texture from silt loam to sand and gravel within the particle-size class control section (25 - 100 cm or 10 - 40 inches). Drainage class is poorly or very poorly drained. The Hydrologic Soil Group (HSG) is D.

### Disturbed Map Units (continued)

#### Catena Key for Excavated & Bottom Land

Disturbed Map Units	Map Unit						
	Drainage Class						
	Excessively Drained	Somewhat Excessively Drained	Well Drained	Moderately Well Drained	Somewhat Poorly Drained	Poorly Drained	Very Poorly Drained
<i>Parent Material</i>							
<b>I. Excavated Land</b>							
<i>Typically sands</i>	<b>300</b> Udipsamments nearly level	<b>300</b> Udipsamments nearly level	<b>300</b> Udipsamment nearly level	<b>350</b> Udipsamments wet substratum	<b>350</b> Udipsamments wet substratum	<b>900</b> Endoaquents sandy or gravelly	<b>900</b> Endoaquents, sandy or gravelly
<i>Typically gravels</i>	<b>400</b> Udorthents, sandy or gravelly	<b>400</b> Udorthents, sandy or gravelly	<b>400</b> Udorthents, sandy or gravelly	<b>400</b> Udorthents, sandy or gravelly	<b>400</b> Udorthents, sandy or gravelly	<b>900</b> Endoaquents sandy or gravelly	<b>900</b> Endoaquent, sandy or gravelly
<i>Typically loams</i>			<b>500</b> Udorthents, loamy	<b>500</b> Udorthents, loamy	<b>500</b> Udorthents, loamy	<b>600</b> Endoaquents loamy	<b>600</b> Endoaquent, loamy
<i>Bedrock controlled loams</i>		<b>550</b> Udorthents, Bedrock substratum	<b>550</b> Udorthents, Bedrock substratum	<b>550</b> Udorthents, Bedrock substratum	<b>550</b> Udorthents, Bedrock substratum	<b>600</b> Endoaquents loamy	<b>600</b> Endoaquent, loamy
<b>III. Bottom Land</b>							
<i>Typically silt loam to sands and gravels</i>						<b>7</b> Fluvaquents	<b>7</b> Fluvaquents

NOTE: Filled soils in Section II page 21 are too variable to place into the above key.

## **SERIES CLASSIFICATION**

The following table lists most of the soil series recognized throughout the New England States of New Hampshire, Maine, Massachusetts and Vermont, along with their recommended classification as of January, 2011. The “Status” column indicates whether the soil series is “I” inactive, or “T” tentative.

Soil taxonomy is continually being refined and modified with additional proposals being considered which may further affect the classification of soils recognized in the Northeast.

The most up-to-date series classification of any of the series listed can be found on the Official Series Description (OSD) at the following website address regardless of the current written description and/or profile description of the representative pedon:

<http://soils.usda.gov/technical/classification/osd/index.html>

If you have questions or concerns about the proposed classification of any soil series, please contact the New Hampshire State Soil Scientist (see page 3). One can also contact the Senior Regional Soil Scientist at the Soil Survey Regional Office in Amherst, MA, at (413) 253-4390.

**SERIES CLASSIFICATION (continued)**

<b>Status</b>	<b>Series</b>	<b>Soil Family</b>
	ABENAKI	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, FRIGID TYPIC DYSTRUDEPTS
	ABRAM	LOAMY, ISOTIC, FRIGID LITHIC HAPLORTHODS
	ACTON	SANDY-SKELETAL, MIXED, MESIC OXYAQUIC UDORTHENTS
	ADAMANT	COARSE-SILTY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	ADAMS	SANDY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	ADIRONDACK	COARSE-LOAMY, ISOTIC, FRIGID TYPIC ENDOAQUODS
	AGAWAM	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	ALLAGASH	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, ISOTIC, FRIGID TYPIC HAPLORTHODS
	AMENIA	COARSE-LOAMY, MIXED, ACTIVE, MESIC AQUIC EUTRUDEPTS
	AMOSTOWN	COARSE-LOAMY, MIXED, ACTIVE, MESIC OXYAQUIC DYSTRUDEPTS
	ANNISQUAM	LOAMY-SKELETAL, MIXED, ACTIVE, MESIC OXYAQUIC DYSTRUDEPTS
	ASHFIELD	COARSE-LOAMY, MIXED, ACTIVE, FRIGID AQUIC DYSTRUDEPTS
	ATHERTON	FINE-LOAMY, MIXED, ACTIVE, NONACID, MESIC AERIC ENDOAQUEPTS
	AURELIE	LOAMY, MIXED, ACTIVE, NONACID, FRIGID, SHALLOW AERIC ENDOAQUEPTS
	BANGOR	COARSE-LOAMY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	BARNSTABLE	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	BECKET	COARSE-LOAMY, ISOTIC, FRIGID OXYAQUIC HAPLORTHODS
	BELGRADE	COARSE-SILTY, MIXED, ACTIVE, MESIC AQUIC DYSTRIC EUTRUDEPTS
	BEMIS	COARSE-LOAMY, MIXED, ACTIVE, ACID, SHALLOW AERIC CRYAQUEPTS
	BENSON	LOAMY-SKELETAL, MIXED, ACTIVE, MESIC LITHIC EUTRUDEPTS
	BERKSHIRE	COARSE-LOAMY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	BERNARDSTON	COARSE-LOAMY, MIXED, ACTIVE, MESIC OXYAQUIC DYSTRUDEPTS
	BICE	COURSE-LOAMY, MIXED, ACTIVE, FRIGID TYPIC DYSTRUDEPTS
	BIDDEFORD	FINE, ILLITIC, NONACID, FRIGID HISTIC HUMAQUEPTS
	BINGHAMVILLE	COARSE-SILTY, MIXED, ACTIVE, NONACID, MESIC TYPIC EPIAQUEPTS
	BIRCHWOOD	MIXED, MESIC AQUIC UDIPSAMMENTS
	BIRDSALL	COARSE-SILTY, MIXED, ACTIVE, NONACID, MESIC TYPIC HUMAQUEPTS
	BOMOSEEN	COARSE-LOAMY, MIXED, ACTIVE, MESIC AQUIC DYSTRIC EUTRUDEPTS
	BOOTHBAY	FINE-SILTY, MIXED, SUPERACTIVE, FRIGID AQUIC DYSTRIC EUTRUDEPTS

**SERIES CLASSIFICATION (continued)**

<b>Status</b>	<b>Series</b>	<b>Soil Family</b>
	BOSCAWEN	SANDY-SKELETAL, MIXED, FRIGID TYPIC UDORTHENTS
	BOXFORD	FINE, MIXED, ACTIVE, MESIC AQUIC DYSTRIC EUTRUDEPTS
	BRAYTON	LOAMY, MIXED, ACTIVE, NONACID, FRIGID, SHALLOW AERIC ENDOAQUEPTS
	BRIMFIELD	LOAMY, PARASESQUIC, MESIC LITHIC DYSTRUDEPTS
	BROADBROOK	COARSE-LOAMY, MIXED, ACTIVE, MESIC OXYAQUIC DYSTRUDEPTS
	BROCKTON	SANDY, MIXED, MESIC TYPIC HUMAQUEPTS
	BROOKFIELD	COARSE-LOAMY, PARASESQUIC, MESIC TYPIC DYSTRUDEPTS
	BUCKLAND	COARSE-LOAMY, MIXED, SEMIACTIVE, FRIGID AQUIC DYSTRIC EUTRUDEPTS
	BUCKSPORT	EUIC, FRIGID TYPIC HAPLOSAPRISTS
	BURNHAM	LOAMY, MIXED, SUPERACTIVE, NONACID, FRIGID, SHALLOW HISTIC HUMAQUEPTS
	BUXTON	FINE, ILLITIC, FRIGID AQUIC DYSTRIC EUTRUDEPTS
	CABOT	LOAMY, MIXED, ACTIVE, NONACID, FRIGID, SHALLOW TYPIC HUMAQUEPTS
	CAESAR	MIXED, MESIC TYPIC UDIPSAMMENTS
	CANAAN	LOAMY-SKELETAL, ISOTIC, FRIGID LITHIC HAPLORTHODS
	CANANDAIGUA	FINE-SILTY, MIXED, ACTIVE, NONACID, MESIC MOLLIC ENDOAQUEPTS
T	CANTERBURY	COARSE-LOAMY, MIXED, ACTIVE, FRIGID OXYAQUIC DYSTRUDEPTS
	CANTON	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, SEMIACTIVE, MESIC TYPIC DYSTRUDEPTS
	CARDIGAN	COARSE-LOAMY, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	CARIBOU	FINE-LOAMY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	CARVER	MESIC, UNCOATED TYPIC QUARTZIPSAMMENTS
	CASTILE	LOAMY-SKELETAL, MIXED, ACTIVE, MESIC AQUIC DYSTRUDEPTS
	CATDEN	EUIC, MESIC TYPIC HAPLOSAPRISTS
	CHAMPLAIN	MIXED, FRIGID TYPIC UDIPSAMMENTS
	CHARLES	COARSE-SILTY, MIXED, SUPERACTIVE, NONACID, FRIGID AERIC FLUVAQUENTS
	CHARLTON	COARSE-LOAMY, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	CHATFIELD	COARSE-LOAMY, MIXED, SUPERACTIVE, MESIC TYPIC DYSTRUDEPTS
	CHESHIRE	COARSE-LOAMY, MIXED, SEMIACTIVE, MESIC TYPIC DYSTRUDEPTS
	CHESUNCOOK	COARSE-LOAMY, ISOTIC, FRIGID AQUIC HAPLORTHODS
T	CHICHESTER	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, SUPERACTIVE, FRIGID TYPIC DYSTRUDEPTS
	CHILMARK	FINE-LOAMY, MIXED, ACTIVE, MESIC OXYAQUIC HAPLUDULTS
	CHOCORUA	SANDY OR SANDY-SKELETAL, MIXED, DYSIC, FRIGID TERRIC HAPLOHEMISTS
	CLAVERACK	SANDY OVER CLAYEY, MIXED, SUPERACTIVE, NONACID, MESIC AQUIC UDORTHENTS

**SERIES CLASSIFICATION (continued)**

<b>Status</b>	<b>Series</b>	<b>Soil Family</b>
	COHAS	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, NONACID, FRIGID AERIC ENDOAQUEPTS
	COLONEL	LOAMY, ISOTIC, FRIGID, SHALLOW AQUIC HAPLORTHODS
	COLRAIN	COARSE-LOAMY, MIXED, ACTIVE, FRIGID HUMIC DYSTRUDEPTS
	COLTON	SANDY-SKELETAL, ISOTIC, FRIGID TYPIC HAPLORTHODS
	CONANT	FINE-LOAMY, ISOTIC, FRIGID AQUIC HAPLORTHODS
	COPAKE	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, SEMIACTIVE, MESIC DYSTRIC EUTRUDEPTS
	CORNISH	COARSE-SILTY, MIXED, SUPERACTIVE, FRIGID FLUVAQUENTIC DYSTRUDEPTS
	COVINGTON	VERY-FINE, MIXED, ACTIVE, MESIC MOLLIC ENDOAQUALFS
	CREASEY	LOAMY, ISOTIC, FRIGID LITHIC HAPLORTHODS
	CROGHAN	SANDY, ISOTIC, FRIGID AQUIC HAPLORTHODS
	DAIGLE	LOAMY, MIXED, ACTIVE, FRIGID, SHALLOW AQUIC HAPLORTHODS
	DANFORTH	LOAMY-SKELETAL, ISOTIC, FRIGID TYPIC HAPLORTHODS
	DARTMOUTH	COARSE-SILTY, MIXED, ACTIVE, MESIC AQUIC DYSTRUDEPTS
	DEERFIELD	MIXED, MESIC AQUIC UDIPSAMMENTS
	DIXFIELD	COARSE-LOAMY, ISOTIC, FRIGID AQUIC HAPLORTHODS
	DIXMONT	COARSE-LOAMY, ISOTIC, FRIGID AQUIC HAPLORTHODS
	DUANE	SANDY-SKELETAL, MIXED, FRIGID, ORTSTEIN TYPIC HAPLORTHODS
	DUMMERSTON	COARSE-LOAMY, MIXED, ACTIVE, FRIGID TYPIC DYSTRUDEPTS
	DUTCHESS	COARSE-LOAMY, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	DUXBURY	SANDY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	EASTCHOP	MESIC, COATED TYPIC QUARTZIPSAMMENTS
	EASTON	FINE-LOAMY, MIXED, SUPERACTIVE, NONACID, FRIGID AERIC ENDOAQUEPTS
	ELDRIDGE	SANDY OVER LOAMY, MIXED, ACTIVE, NONACID, MESIC AQUIC UDORTHENTS
	ELLIOTTSVILLE	COARSE-LOAMY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	ELMRIDGE	COARSE-LOAMY OVER CLAYEY, MIXED, SEMIACTIVE, MESIC AQUIC DYSTRIC EUTRUDEPTS
	ELMWOOD	COARSE-LOAMY OVER CLAYEY, MIXED OVER ILLITIC, SUPERACTIVE, FRIGID AQUIC DYSTRIC EUTRUDEPTS
	ENCHANTED	LOAMY-SKELETAL, ISOTIC TYPIC HUMICRYODS
	ENFIELD	COARSE-SILTY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	ENOSBURG	SANDY OVER LOAMY, MIXED, ACTIVE, NONACID, MESIC AERIC EPIAQUENTS
	ESSEX	SANDY, MIXED, MESIC OXYAQUIC DYSTRUDEPTS
	FARMINGTON	LOAMY, MIXED, ACTIVE, MESIC LITHIC EUTRUDEPTS
	FREDON	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, NONACID, MESIC AERIC ENDOAQUEPTS

**SERIES CLASSIFICATION (continued)**

<b>Status</b>	<b>Series</b>	<b>Soil Family</b>
	FREETOWN	DYSIC, MESIC TYPIC HAPLOSAPRISTS
	FRYEBURG	COARSE-SILTY, MIXED, SUPERACTIVE, FRIGID FLUVENTIC DYSTRUDEPTS
	FULLAM	COARSE-LOAMY, MIXED, ACTIVE, FRIGID OXYAQUIC DYSTRUDEPTS
	GALOO	LOAMY, MIXED, NONACID, MESIC LITHIC UDORTHENTS
	GALWAY	COARSE-LOAMY, MIXED, SUPERACTIVE, MESIC TYPIC EUTRUDEPTS
	GEORGIA	COARSE-LOAMY, MIXED, SEMIACTIVE, MESIC AQUIC DYSTRIC EUTRUDEPTS
T	GILMANTON	COARSE-LOAMY, MIXED, ACTIVE, FRIGID AQUIC DYSTRUDEPTS
	GLEBE	COARSE-LOAMY, ISOTIC TYPIC HUMICRYODS
	GLOUCESTER	SANDY-SKELETAL, MIXED, MESIC TYPIC DYSTRUDEPTS
	GLOVER	LOAMY, MIXED, ACTIVE, FRIGID HUMIC LITHIC DYSTRUDEPTS
	GOULDSBORO	FINE-SILTY, MIXED, SUPERACTIVE, NONACID, FRIGID TYPIC SULFAQUENTS
	GRANGE	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, SUPERACTIVE, NONACID, FRIGID AERIC ENDOAQUEPTS
	GROTON	SANDY-SKELETAL, MIXED, MESIC TYPIC EUTRUDEPTS
	GROVETON	COARSE-LOAMY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	HADLEY	COARSE-SILTY, MIXED, SUPERACTIVE, NONACID, MESIC TYPIC UDIFLUVENTS
	HALSEY	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, NONACID, MESIC TYPIC HUMAQUEPTS
	HAMLIN	COARSE-SILTY, MIXED, ACTIVE, MESIC DYSTRIC FLUVENTIC EUTRUDEPTS
	HARTLAND	COARSE-SILTY, MIXED, ACTIVE, MESIC DYSTRIC EUTRUDEPTS
	HAVEN	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	HENNIKER	COARSE-LOAMY, MIXED, SEMIACTIVE, FRIGID OXYAQUIC DYSTRUDEPTS
	HERMON	SANDY-SKELETAL, ISOTIC, FRIGID TYPIC HAPLORTHODS
T	HERMON VARIANT	SANDY-SKELETAL, MIXED, FRIGID TYPIC UDORTHENTS
	HERO	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, SEMIACTIVE, MESIC AQUIC EUTRUDEPTS
	HINCKLEY	SANDY-SKELETAL, MIXED, MESIC TYPIC UDORTHENTS
	HINESBURG	SANDY OVER LOAMY, MIXED, ACTIVE, NONACID, MESIC TYPIC UDORTHENTS
	HITCHCOCK	COARSE-SILTY, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	HOGBACK	LOAMY, ISOTIC, FRIGID LITHIC HAPLOHUMODS
	HOLLIS	LOAMY, MIXED, ACTIVE, MESIC LITHIC DYSTRUDEPTS
	HOLYOKE	LOAMY, MIXED, SUPERACTIVE, MESIC LITHIC DYSTRUDEPTS
	HOOSIC	SANDY-SKELETAL, MIXED, MESIC TYPIC DYSTRUDEPTS
T	HOPKINTON	SANDY-SKELETAL, MIXED, FRIGID TYPIC UDORTHENTS

**SERIES CLASSIFICATION (continued)**

<b>Status</b>	<b>Series</b>	<b>Soil Family</b>
	HOUGHTONVILLE	COARSE-LOAMY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	HOWLAND	COARSE-LOAMY, ISOTIC, FRIGID AQUIC HAPLORTHODS
	HUBBARDTON	LOAMY-SKELETAL, MIXED, ACTIVE, ACID, FRIGID LITHIC UDORTHENTS
	IPSWICH	EUIC, MESIC TYPIC SULFIHEMISTS
T	IRASBURG	SANDY OVER LOAMY, MIXED, ACTIVE, NONACID, FRIGID AQUIC UDORTHENTS
	KARS	LOAMY-SKELETAL, MIXED, ACTIVE, MESIC GLOSSIC HAPLUDALFS
	KATAMA	SANDY, MIXED, MESIC HUMIC DYSTRUDEPTS
	KEARSARGE	LOAMY, MIXED, ACTIVE, MESIC LITHIC DYSTRUDEPTS
	KENDAIA	FINE-LOAMY, MIXED, ACTIVE, NONACID, MESIC AERIC ENDOAQUEPTS
T	KENDUSKEAG	COARSE-LOAMY, ISOTIC, FRIGID AQUIC DYSTRIC EUTRUDEPTS
	KILLINGTON	LOAMY-SKELETAL, ISOTIC, FRIGID LITHIC HAPLORTHODS
	KINGSBURY	VERY-FINE, MIXED, ACTIVE, MESIC AERIC ENDOAQUALFS
	KINSMAN	SANDY, ISOTIC, FRIGID TYPIC ENDOAQUODS
	LAMOINE	FINE, ILLITIC, NONACID, FRIGID AERIC EPIAQUEPTS
	LANESBORO	COARSE-LOAMY, MIXED, ACTIVE, FRIGID OXYAQUIC DYSTRUDEPTS
	LEICESTER	COARSE-LOAMY, MIXED, ACTIVE, ACID, MESIC AERIC ENDOAQUEPTS
T	LILLE	COARSE-SILTY, MIXED, SUPERACTIVE, ACID, FRIGID TYPIC UDIFLUVENTS
	LIM	COARSE-LOAMY, MIXED, SUPERACTIVE, NONACID, MESIC FLUVAQUENTIC ENDOAQUEPTS
	LIMERICK	COARSE-SILTY, MIXED, ACTIVE, NONACID, MESIC FLUVAQUENTIC ENDOAQUEPTS
	LINNEUS	COARSE-LOAMY, ISOTIC, FRIGID DYSTRIC EUTRUDEPTS
	LIVINGSTON	VERY-FINE, MIXED, ACTIVE, NONACID, MESIC MOLLIC ENDOAQUEPTS
	LOMBARD	COARSE-LOAMY, MIXED, ACTIVE, FRIGID TYPIC DYSTRUDEPTS
	LONDONDERRY	LOAMY, MIXED, ACTIVE, ACID LITHIC CRYORTHENTS
	LORDSTOWN	COARSE-LOAMY, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	LOVEWELL	COARSE-SILTY, MIXED, SUPERACTIVE, FRIGID FLUVAQUENTIC DYSTRUDEPTS
	LUDLOW	COARSE-LOAMY, MIXED, SEMIACTIVE, MESIC AQUIC DYSTRUDEPTS
	LYMAN	LOAMY, ISOTIC, FRIGID LITHIC HAPLORTHODS
	LYME	COARSE-LOAMY, MIXED, ACTIVE, ACID, FRIGID AERIC ENDOAQUEPTS
	LYONS	FINE-LOAMY, MIXED, ACTIVE, NONACID, MESIC MOLLIC ENDOAQUEPTS
	MACHIAS	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, ISOTIC, FRIGID AQUIC HAPLORTHODS
	MACOMBER	LOAMY-SKELETAL, MIXED, ACTIVE, FRIGID TYPIC DYSTRUDEPTS

**SERIES CLASSIFICATION (continued)**

<b>Status</b>	<b>Series</b>	<b>Soil Family</b>
	MADAWASKA	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, ISOTIC, FRIGID AQUIC HAPLORTHODS
	MAHOOSUC	DYSIC TYPIC CRYOFOLISTS
	MANSFIELD	COARSE-LOAMY, MIXED, ACTIVE, NONACID, MESIC TYPIC HUMAQUEPTS
	MAPLETON	FINE-LOAMY, MIXED, SUPERACTIVE, FRIGID DYSTRIC EUTRUDEPTS
	MARLOW	COARSE-LOAMY, ISOTIC, FRIGID OXYAQUIC HAPLORTHODS
T	MARLOW VARIANT	COARSE-LOAMY, MIXED, ACTIVE, FRIGID OXYAQUIC DYSTRUDEPTS
	MASARDIS	SANDY-SKELETAL, ISOTIC, FRIGID TYPIC HAPLORTHODS
T	MASHPEE	SANDY, ISOTIC, MESIC TYPIC ENDOAQUODS
T	MASSASECUM	COARSE-LOAMY, MIXED, SUPERACTIVE, FRIGID OXYAQUIC DYSTRUDEPTS
T	MASSASOIT	SANDY, ISOTIC, MESIC, SHALLOW, ORTSTEIN TYPIC DURAQUODS
	MASSENA	COARSE-LOAMY, MIXED, ACTIVE, NONACID, MESIC AERIC ENDOAQUEPTS
T	MATTAPOISETT	SANDY, MIXED, MESIC, ORTSTEIN TYPIC EPIAQUODS
	MATUNUCK	SANDY, MIXED, MESIC HISTIC SULFAQUENTS
	MAYBID	FINE, MIXED, SEMIACTIVE, NONACID, MESIC TYPIC HUMAQUEPTS
T	MEADOWSEDGE	EUIC, FRIGID TYPIC HAPLOHEMISTS
	MEDOMAK	COARSE-SILTY, MIXED, SUPERACTIVE, NONACID, FRIGID FLUVAQUENTIC HUMAQUEPTS
	MELROSE	COARSE-LOAMY OVER CLAYEY, MIXED OVER ILLITIC, SUPERACTIVE, FRIGID OXYAQUIC DYSTRUDEPTS
	MERRIMAC	SANDY, MIXED, MESIC TYPIC DYSTRUDEPTS
	METACOMET	COARSE-LOAMY, MIXED, ACTIVE, FRIGID AQUIC DYSTRUDEPTS
	METALLAK	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, FRIGID AQUIC DYSTRUDEPTS
	MIDDLEBURY	COARSE-LOAMY, MIXED, SUPERACTIVE, MESIC FLUVAQUENTIC EUTRUDEPTS
	MILLIS	COARSE-LOAMY, ISOTIC, FRIGID EN TIC FRAGIORTHODS
	MILLSITE	COARSE-LOAMY, MIXED, ACTIVE, FRIGID TYPIC DYSTRUDEPTS
	MISSISQUOI	SANDY, ISOTIC, FRIGID EN TIC HAPLORTHODS
	MONADNOCK	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, ISOTIC, FRIGID TYPIC HAPLORTHODS
T	MONADNOCK VARIANT	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, SUPERACTIVE, FRIGID SPODIC DYSTRUDEPTS
	MONARDA	LOAMY, MIXED, ACTIVE, ACID, FRIGID, SHALLOW AERIC ENDOAQUEPTS
	MONSON	LOAMY, ISOTIC, FRIGID LITHIC HAPLORTHODS
	MONTAUK	COARSE-LOAMY, MIXED, SUBACTIVE, MESIC OXYAQUIC DYSTRUDEPTS
	MOOSABEC	DYSIC, FRIGID TYPIC SPHAGNOFIBRISTS
	MOOSILAUKE	SANDY, MIXED, FRIGID AERIC ENDOAQUEPTS
	MOSHUP	FINE-LOAMY, MIXED, ACTIVE, MESIC AQUIC DYSTRUDEPTS

**SERIES CLASSIFICATION (continued)**

<b>Status</b>	<b>Series</b>	<b>Soil Family</b>
	MUNDAL	COARSE-LOAMY, ISOTIC, FRIGID OXYAQUIC HAPLORTHODS
	MUNSON	COARSE-SILTY OVER CLAYEY, MIXED, ACTIVE, NONACID, MESIC AERIC EPIAQUEPTS
	NANTUCKET	COARSE-LOAMY, MIXED, ACTIVE, MESIC OXYAQUIC DYSTRUDEPTS
	NARRAGANSETT	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	NASKEAG	SANDY, ISOTIC, FRIGID TYPIC ENDOAQUODS
T	NASMITH	SANDY OVER LOAMY, MIXED, ACTIVE, NONACID, FRIGID AERIC EPIAQUENTS
	NASSAU	LOAMY-SKELETAL, MIXED, ACTIVE, MESIC LITHIC DYSTRUDEPTS
	NATCHAUG	LOAMY, MIXED, EUIC, MESIC TERRIC HAPLOSAPRISTS
	NAUMBURG	SANDY, ISOTIC, FRIGID TYPIC ENDOAQUODS
	NELLIS	COARSE-LOAMY, MIXED, SUPERACTIVE, MESIC TYPIC EUTRUDEPTS
	NEWFIELDS	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, MESIC OXYAQUIC DYSTRUDEPTS
	NEWPORT	COARSE-LOAMY, MIXED, SUPERACTIVE, MESIC OXYAQUIC DYSTRUDEPTS
	NICHOLVILLE	COARSE-SILTY, ISOTIC, FRIGID AQUIC HAPLORTHODS
	NINIGRET	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, MESIC AQUIC DYSTRUDEPTS
T	NOKOMIS	FINE-LOAMY, MIXED, SUPERACTIVE, MESIC UDOLLIC ENDOAQUALFS
	NORWELL	SANDY, MIXED, MESIC, SHALLOW AERIC EPIAQUENTS
	OCCUM	COARSE-LOAMY, MIXED, SUPERACTIVE, MESIC FLUVENTIC DYSTRUDEPTS
	ONDAWA	COARSE-LOAMY, MIXED, ACTIVE, FRIGID FLUVENTIC DYSTRUDEPTS
	OSSIPEE	LOAMY, MIXED, DYSIC, FRIGID TERRIC HAPLOHEMISTS
	PALATINE	LOAMY-SKELETAL, MIXED, ACTIVE, MESIC TYPIC HAPLUDOLLS
	PANTON	VERY-FINE, ILLITIC, MESIC TYPIC EPIAQUALFS
	PAWCATUCK	SANDY OR SANDY-SKELETAL, MIXED, EUIC, MESIC TERRIC SULFIHEMISTS
	PAWLING	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, MESIC FLUVAQUENTIC EUTRUDEPTS
	PAXTON	COARSE-LOAMY, MIXED, ACTIVE, MESIC OXYAQUIC DYSTRUDEPTS
	PEACHAM	LOAMY, MIXED, ACTIVE, NONACID, FRIGID, SHALLOW HISTIC HUMAQUEPTS
	PEMI	COARSE-SILTY, MIXED, ACTIVE, NONACID, FRIGID TYPIC EPIAQUEPTS
	PENNICHUCK	LOAMY-SKELETAL, MIXED, ACTIVE, MESIC DYSTRIC EUTRUDEPTS
T	PENOBSCOTT	COARSE-LOAMY, ISOTIC, FRIGID TYPIC EUTRUDEPTS
	PENQUIS	COARSE-LOAMY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	PERHAM	FINE-LOAMY, MIXED, ACTIVE, FRIGID AQUIC HAPLORTHODS

**SERIES CLASSIFICATION (continued)**

<b>Status</b>	<b>Series</b>	<b>Soil Family</b>
	PERU	COARSE-LOAMY, ISOTIC, FRIGID AQUIC HAPLORTHODS
	PILLSBURY	COARSE-LOAMY, MIXED, ACTIVE, ACID, FRIGID AERIC EPIAQUEPTS
	PITTSFIELD	COARSE-LOAMY, MIXED, ACTIVE, MESIC DYSTRIC EUTRUDEPTS
	PITTSTOWN	COARSE-LOAMY, MIXED, ACTIVE, MESIC AQUIC DYSTRUDEPTS
	PLAISTED	COARSE-LOAMY, ISOTIC, FRIGID OXYAQUIC HAPLORTHODS
	PLYMOUTH	MESIC, COATED TYPIC QUARTZIPSAMMENTS
	PODUNK	COARSE-LOAMY, MIXED, ACTIVE, FRIGID FLUVAQUENTIC DYSTRUDEPTS
	POLLUX	COARSE-LOAMY, MIXED, SEMIACTIVE, MESIC OXYAQUIC DYSTRUDEPTS
	POMFRET	SANDY, MIXED, FRIGID HUMIC DYSTRUDEPTS
	POMPTON	COARSE-LOAMY, MIXED, ACTIVE, MESIC AQUIC DYSTRUDEPTS
	PONDICHERRY	SANDY OR SANDY-SKELETAL, MIXED, EUIC, FRIGID TERRIC HAPLOSAPRISTS
	POOCHAM	COARSE-SILTY, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	POOTATUCK	COARSE-LOAMY, MIXED, ACTIVE, MESIC FLUVAQUENTIC DYSTRUDEPTS
	POQUONOCK	MIXED, MESIC TYPIC UDIPSAMMENTS
	POTSDAM	COARSE-LOAMY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	PUSHAW	FINE-SILTY, MIXED, SEMIACTIVE, NONACID, FRIGID AERIC EPIAQUEPTS
	QUONSET	SANDY-SKELETAL, MIXED, MESIC TYPIC UDORTHENTS
	RAINBOW	COARSE-LOAMY, MIXED, ACTIVE, MESIC AQUIC DYSTRUDEPTS
	RAWSONVILLE	COARSE-LOAMY, ISOTIC, FRIGID TYPIC HAPLOHUMODS
	RAYNHAM	COARSE-SILTY, MIXED, ACTIVE, NONACID, MESIC AERIC EPIAQUEPTS
	RAYPOL	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, ACID, MESIC AERIC ENDOAQUEPTS
	RED HOOK	COARSE-LOAMY, MIXED, SUPERACTIVE, NONACID, MESIC AERIC ENDOAQUEPTS
	REDSTONE	FRAGMENTAL, MIXED, FRIGID TYPIC HAPLORTHODS
	RICKER	DYSIC LITHIC CRYOFOLISTS
	RIDGEBURY	LOAMY, MIXED, ACTIVE, ACID, MESIC, SHALLOW AERIC ENDOAQUEPTS
	RIPPOWAM	COARSE-LOAMY, MIXED, SUPERACTIVE, NONACID, MESIC FLUVAQUENTIC ENDOAQUEPTS
	RIVERHEAD	COARSE-LOAMY, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	ROUNABOUT	COARSE-SILTY, MIXED, ACTIVE, NONACID, FRIGID AERIC EPIAQUEPTS
	RUMNEY	COARSE-LOAMY, MIXED, ACTIVE, NONACID, FRIGID FLUVAQUENTIC ENDOAQUEPTS
	SACO	COARSE-SILTY, MIXED, ACTIVE, NONACID, MESIC FLUVAQUENTIC HUMAQUEPTS

**SERIES CLASSIFICATION (continued)**

<b>Status</b>	<b>Series</b>	<b>Soil Family</b>
	SADDLEBACK	LOAMY, ISOTIC LITHIC HUMICRYODS
	SALMON	COARSE-SILTY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	SCANTIC	FINE, ILLITIC, NONACID, FRIGID TYPIC EPIAQUEPTS
	SCARBORO	SANDY, MIXED, MESIC HISTIC HUMAQUEPTS
	SCHOODIC	LOAMY-SKELETAL, MIXED, ACTIVE, ACID, FRIGID LITHIC UDORTHENTS
	SCIO	COARSE-SILTY, MIXED, ACTIVE, MESIC AQUIC DYSTRUDEPTS
	SCITICO	FINE, MIXED, SEMIACTIVE, NONACID, MESIC TYPIC ENDOAQUEPTS
	SCITUATE	COARSE-LOAMY, MIXED, ACTIVE, MESIC OXYAQUIC DYSTRUDEPTS
	SEARSPORT	SANDY, MIXED, FRIGID HISTIC HUMAQUEPTS
	SEBAGO	DYSIC, FRIGID FIBRIC HAPLOHEMISTS
T	SEBASTICOOK	COARSE-LOAMY, ISOTIC, FRIGID DYSTRIC EUTRUDEPTS
	SHAKER	COARSE-LOAMY OVER CLAYEY, MIXED, SEMIACTIVE, NONACID, MESIC AERIC EPIAQUEPTS
	SHEEPSCOT	SANDY-SKELETAL, ISOTIC, FRIGID AQUIC HAPLORTHODS
	SHELBURNE	COARSE-LOAMY, MIXED, ACTIVE, FRIGID OXYAQUIC DYSTRUDEPTS
T	SHIRLEY	LOAMY-SKELETAL, ISOTIC, FRIGID TYPIC ENDOAQUODS
	SISK	COARSE-LOAMY, ISOTIC OXYAQUIC HUMICRYODS
	SKERRY	COARSE-LOAMY, ISOTIC, FRIGID AQUIC HAPLORTHODS
	SKOWHEGAN	SANDY, ISOTIC, FRIGID AQUIC HAPLORTHODS
	SQUAMSCOTT	SANDY OVER LOAMY, MIXED, ACTIVE, MESIC TYPIC EPIAQUODS
	ST. ALBANS	COARSE-LOAMY, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	STETSON	SANDY-SKELETAL, ISOTIC, FRIGID TYPIC HAPLORTHODS
	STISSING	LOAMY, MIXED, SEMIACTIVE, ACID, MESIC, SHALLOW TYPIC EPIAQUEPTS
	STOCKBRIDGE	COARSE-LOAMY, MIXED, SEMIACTIVE, MESIC DYSTRIC EUTRUDEPTS
	STOWE	COARSE-LOAMY, MIXED, ACTIVE, FRIGID OXYAQUIC DYSTRUDEPTS
	STRATTON	LOAMY-SKELETAL, ISOTIC LITHIC HUMICRYODS
	SUCCESS	SANDY-SKELETAL, ISOTIC, FRIGID, ORTSTEIN TYPIC HAPLORTHODS
	SUDBURY	SANDY, MIXED, MESIC AQUIC DYSTRUDEPTS
	SUFFIELD	COARSE-SILTY OVER CLAYEY, MIXED, ACTIVE, MESIC DYSTRIC EUTRUDEPTS
	SUNAPEE	COARSE-LOAMY, ISOTIC, FRIGID AQUIC HAPLORTHODS
T	SUNAPEE VARIANT	COARSE-LOAMY, MIXED, SUPERACTIVE, FRIGID OXYAQUIC DYSTRUDEPTS
	SUNCOOK	MIXED, MESIC TYPIC UDIPSAMMENTS
	SUNDAY	MIXED, FRIGID TYPIC UDIPSAMMENTS

**SERIES CLASSIFICATION (continued)**

<b>Status</b>	<b>Series</b>	<b>Soil Family</b>
	SUNNY	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, NONACID, FRIGID FLUVAQUENTIC ENDOAQUEPTS
	SURPLUS	COARSE-LOAMY, ISOTIC AQUIC HAPLOCRYODS
	SUTTON	COARSE-LOAMY, MIXED, ACTIVE, MESIC AQUIC DYSTRUDEPTS
	SWANSEA	SANDY OR SANDY-SKELETAL, MIXED, DYSIC, MESIC TERRIC HAPLOSAPRISTS
	SWANTON	COARSE-LOAMY OVER CLAYEY, MIXED OVER ILLITIC, SUPERACTIVE, NONACID, FRIGID AERIC EPIAQUEPTS
	SWANVILLE	FINE-SILTY, MIXED, ACTIVE, NONACID, FRIGID AERIC EPIAQUEPTS
	TACONIC	LOAMY-SKELETAL, MIXED ACTIVE, FRIGID LITHIC DYSTRUDEPTS
	TEAGO	MIXED, FRIGID HUMIC PSAMMENTIC DYSTRUDEPTS
	TEEL	COARSE-SILTY, MIXED, ACTIVE, MESIC FLUVAQUENTIC EUTRUDEPTS
	TELOS	LOAMY, ISOTIC, FRIGID, SHALLOW AQUIC HAPLORTHODS
	THORNDIKE	LOAMY-SKELETAL, ISOTIC, FRIGID LITHIC HAPLORTHODS
T	TIHONET	MIXED, MESIC TYPIC PSAMMAQUENTS
	TIMAKWA	SANDY OR SANDY-SKELETAL, MIXED, EUIC, MESIC TERRIC HAPLOSAPRISTS
	TIOGA	COARSE-LOAMY, MIXED, SUPERACTIVE, MESIC DYSTRIC FLUVENTIC EUTRUDEPTS
	TISBURY	COARSE-SILTY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, MESIC AQUIC DYSTRUDEPTS
	TOGUS	SANDY OR SANDY-SKELETAL, MIXED, EUIC, FRIGID TERRIC HAPLOFIBRISTS
	TUNBRIDGE	COARSE-LOAMY, ISOTIC, FRIGID TYPIC HAPLORTHODS
	UNADILLA	COARSE-SILTY, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	VASSALBORO	DYSIC, FRIGID TYPIC HAPLOFIBRISTS
	VERGENNES	VERY-FINE, MIXED, ACTIVE, MESIC GLOSSAQUIC HAPLUDALFS
	VERSHIRE	COARSE-LOAMY, MIXED, ACTIVE, FRIGID HUMIC DYSTRUDEPTS
	WAITSFIELD	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, FRIGID FLUVENTIC DYSTRUDEPTS
	WALLKILL	FINE-LOAMY, MIXED, SUPERACTIVE, NONACID, MESIC FLUVAQUENTIC HUMAQUEPTS
	WALPOLE	SANDY, MIXED, MESIC AERIC ENDOAQUEPTS
T	WAPANUCKET	MIXED, MESIC TYPIC UDIPSAMMENTS
	WAPPINGER	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, MESIC DYSTRIC FLUVENTIC EUTRUDEPTS
	WAREHAM	MIXED, MESIC HUMAQUEPTIC PSAMMAQUENTS
	WARWICK	LOAMY-SKELETAL, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS
	WAUMBEC	SANDY-SKELETAL, ISOTIC, FRIGID AQUIC HAPLORTHODS
	WEIDER	COARSE-LOAMY OVER SANDY OR SANDY-SKELETAL, MIXED, ACTIVE, FRIGID FLUVAQUENTIC DYSTRUDEPTS
T	WEWEANTIC	SANDY, MIXED, MESIC, ORTSTEIN TYPIC DURAQUODS
	WESTBROOK	LOAMY, MIXED, EUIC, MESIC TERRIC SULFIHEMISTS
	WESTBURY	COARSE-LOAMY, ISOTIC, FRIGID TYPIC FRAGIAQUODS

**SERIES CLASSIFICATION (continued)**

<b>Status</b>	<b>Series</b>	<b>Soil Family</b>
	WETHERSFIELD	COARSE-LOAMY, MIXED, ACTIVE, MESIC OXYAQUIC DYSTRUDEPTS
	WHATELY	COARSE-LOAMY OVER CLAYEY, MIXED OVER ILLITIC, SUPERACTIVE, NONACID, FRIGID MOLLIC EPIAQUEPTS
	WHITMAN	LOAMY, MIXED, ACTIVE, ACID, MESIC, SHALLOW TYPIC HUMAQUEPTS
	WILBRAHAM	COARSE-LOAMY, MIXED, ACTIVE, MESIC AQUIC DYSTRUDEPTS
	WILMINGTON	LOAMY, ISOTIC, FRIGID SHALLOW TYPIC ENDOAQUODS
	WINDSOR	MIXED, MESIC TYPIC UDIPSAMMENTS
	WINNECOOK	LOAMY-SKELETAL, ISOTIC, FRIGID TYPIC HAPLORTHODS
	WINOOSKI	COARSE-SILTY, MIXED, SUPERACTIVE, MESIC FLUVAQUENTIC DYSTRUDEPTS
	WONSQUEAK	LOAMY, MIXED, EUIC, FRIGID TERRIC HAPLOSAPRISTS
	WOODBIDGE	COARSE-LOAMY, MIXED, ACTIVE, MESIC AQUIC DYSTRUDEPTS
	WOODSTOCK	LOAMY, MIXED, ACTIVE, FRIGID LITHIC DYSTRUDEPTS
	WORDEN	COARSE-LOAMY, ISOTIC, FRIGID AQUIC HAPLORTHODS
	YALESVILLE	COARSE-LOAMY, MIXED, ACTIVE, MESIC TYPIC DYSTRUDEPTS

## RESOURCES

Soils information for New Hampshire County Soil Surveys are available through the NRCS Web Soil Survey, NRCS Soil Data Mart, NH Conservation District Offices, and NRCS Field Service Centers. Websites are listed below.

Web Soil Survey: <http://websoilsurvey.nrcs.usda.gov/app/>

Soil Data Mart: <http://soildatamart.nrcs.usda.gov/>

NH Conservation District Offices or NRCS Field Service Centers:

<http://www.nh.nrcs.usda.gov/contact/directory/offices.html>

Official Series Descriptions are available at the following website address;

<http://soils.usda.gov/technical/classification/osd/index.html>

Field Book for Describing and Sampling Soils: <http://soils.usda.gov/technical/fieldbook/>

## REFERENCES

NRCS National Soils Database (NASIS):

[Online] Available:

<http://soils.usda.gov/technical/nasis/>

Schoeneberger, P.J., Wysocki, D.A., Benham, E.C., and Broderson, W.D. (editors), 2002. Field Book for Describing and Sampling Soils, Version 2.0. Natural Resources Conservation Service, National Soil Survey Center, Lincoln, NE.

[Online] Available:

<http://soils.usda.gov/technical/fieldbook/>

Society of Soil Scientists of Northern New England. 2006. Site-Specific Mapping Standards for New Hampshire and Vermont, Version 3.0. SSSNNE Special Publication No. 3.

[Online] Available:

<http://www.sssnne.org/publications.html>

Soil Survey Division Staff. 1993. Soil Survey Manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

[Online] Available:

<http://soils.usda.gov/technical/manual/>

## REFERENCES (continued)

Soil Survey Staff. 1999. Soil Taxonomy, 2<sup>nd</sup> ed. USDA - Natural Resources Conservation Service, Agricultural Handbook No. 436, U.S. Gov. Print. Office, Washington, D.C.

[Online] Available:

**<http://soils.usda.gov/technical/classification/taxonomy/>**

Soil Survey Staff. 2010. Keys to Soil Taxonomy, 11<sup>th</sup> edition. USDA - Natural Resources Conservation Service, Washington, DC.

[Online] Available: **[http://soils.usda.gov/technical/classification/tax\\_keys/](http://soils.usda.gov/technical/classification/tax_keys/)**

United States Department of Agriculture, Natural Resources Conservation Service. 2010. Field Indicators of Hydric Soils in the United States, Version 7.0. G.W. Hurt and L.M. Vasilas (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

[Online] Available:

**[ftp://ftp-fc.sc.egov.usda.gov/NSSC/Hydric\\_Soils/FieldIndicators\\_v6\\_0.pdf](ftp://ftp-fc.sc.egov.usda.gov/NSSC/Hydric_Soils/FieldIndicators_v6_0.pdf)**

**[ERRATA: ftp://ftp-fc.sc.egov.usda.gov/NSSC/Hydric\\_Soils/errata.pdf](ftp://ftp-fc.sc.egov.usda.gov/NSSC/Hydric_Soils/errata.pdf)**

U.S. Department of Agriculture, Natural Resources Conservation Service. National Soil Survey Handbook, title 430-VI.

[Online] Available: **<http://soils.usda.gov/technical/handbook/>**

New England Hydric Soils Technical Committee. 2004. *Field Indicators for Identifying Hydric Soils in New England* (3rd ed.). New England Interstate Water Pollution Control Commission, Lowell, MA

[Online] Available: **<http://www.neiwpc.org/hydricsoils.asp>**