

**State Data Table  
TOP20  
December 21, 2011**

## Introduction

The TOP20 table provides soils information and interpretations that many GIS users require on a regular basis. Much of the information in the TOP20 table is derived from the NRCS National Soils Information System (NASIS) database. Other sources of soils information for the TOP20 include state reports such as "2008 Soil Suitability Groups for Soil-based Residential Wastewater Disposal Systems in Vermont", revised January, 2008, and "Farmland Classification Systems for Vermont Soils", revised June 2006, and the NRCS Electronic Field Office Technical Guide (eFOTG).

NOTE: All 14 counties in Vermont now have digital soils maps and have a corresponding top20 table.

The eFOTG - Section II is the primary scientific reference within NRCS for soil and site information. This information is now accessible to outside users over the worldwide web. It provides data as Adobe Acrobat .pdf files, for link to eFOTG see Web site below.

See the Soils section of the Vermont NRCS Web page under "Soils Databases and Reports" for complete information on sources of soils data in both report and database format.

<http://www.vt.nrcs.usda.gov/Soils/index.html>

SSURGO NOTE: Complete attribute datasets are available in Microsoft Access format. These are in the new "SSURGO-2" format. A Microsoft Access template is also available for viewing the complete SSURGO-2 datasets. These are the full set of over sixty tables as opposed to the condensed TOP20 table.

The TOP20 table has one record for each MUKEY/MUID, creating a 1:1 relationship between the tabular and spatial data.

Comments, questions and suggestions concerning the TOP20 Table should be sent to Martha Stuart, NRCS soil scientist (email: <mailto:martha.stuart@vt.usda.gov> or phone: 802-295-7942 ext 28).

## Field Names and Short Definitions

<u>Field</u>	<u>Length</u>	<u>Type</u>	<u>Short definition</u>
STSSAID	5	char	State abbreviation concatenated with the county FIPS code.
SSAID	3	char	County FIPS code.
MUKEY	16	char	Unique linking element between the spatial and attribute data.
MUID	7	char	Map unit symbol, concatenation of the county FIPS code with the soil map unit symbol (MUSYM). Was formerly used to link spatial and attribute data.
MUSYM	6	char	Map unit symbol.
MUNAME	90	char	Map unit name.
MUKIND	1	char	Map unit type.
AGVAL	5	char	Vermont agricultural value group (1-12), footnote (d,e).
FLOOD	11	char	Flooding frequency of the map unit. "None" if none of the major (named) components are subject to flooding.
FORSTGRP	1	char	Vermont forest land value groups (1-8).
FORSTVAL	3	int	Relative forest value of the map unit on a scale of 0 to 100, with 100 denoting the highest forest value.
FROSTACTIO	11	char	Potential frost action of the <u>dominant component</u> in the map unit. Column

			alias is FROSTACTION.
GRAVEL	11	char	Potential source for gravel, "good" or "fair" if <u>at least one major component</u> is a potential source for gravel.
HELCLASS	35	char	Highly erodible land classification.
HYDRIC	1	char	Hydric soils present in the map unit, "Y" if <u>at least one major component</u> is a hydric soil.
HYDROGROUP	11	char	Hydrologic soil group of the <u>dominant component</u> in the map unit.
ONSITE	6	char	2007 Septic system class number (I-V), footnote (a-h).
PARENT	9	char	Overall category of parent material of the major components.
PARENTSUB	15	char	More detailed breakdown of parent material category(s) of the major components.
PRIME	22	char	Prime farmland class, (Prime, Statewide, Local, NPSL, Not rated, footnote (a,b,c,f).
ROCKSHALLO	4	int	Shallow end of the range in depth to bedrock of <u>all major components</u> of the map unit, in inches. Column alias is ROCKSHALLOW.
ROCKDEEP	4	int	Deep end of the range in depth to bedrock of <u>all major components</u> of the map unit, in inches.
SAND	11	char	Potential source for sand, "good" or "fair" if <u>at least one component</u> is a potential source for sand.
SLOPELOW	4	int	Low end of the range in slope of the <u>dominant component</u> in the map unit, in percent.
SLOPEHIGH	4	int	Steeper end of the range in slope of the <u>dominant component</u> in the map unit, in percent.
WATERSHALLO	4	float	Shallow end of range in depth to seasonal high water table of <u>all major components</u> in the map unit, in feet to 1 decimal place. Column alias is WATERSHALLOW.
WATERDEEP	4	float	Deep end of range in depth to seasonal high water table of <u>all major components</u> in the map unit, in feet to 1 decimal place.
WATERKIND	11	char	Kind of seasonal high water table, (PERCH, APPAR, or NONE).
DATE	11	char	Date of download from NASIS. (mm/dd/yyyy).

**Caution:** The MUKEY should always be used to relate tabular data from TOP20 to SSURGO certified spatial data. The MUSYM could be used if you are only using data from one county, but the same MUSYM can represent totally different soils in different counties. For example, BeB represents Belgrade soil in Franklin County and Berkshire soil in Lamoille County.

## Data Record Identifiers

**STSSAID** - identifies the county. It is the combination of the state abbreviation plus the county FIPS code. For example, STSSAID "VT001" identifies Addison County.

**SSAID** - identifies the county. It is the county FIPS code. For example, SSAID "001" identifies Addison County.

**MUKEY** - is a unique map unit identifier that is the new official linking element between the spatial and attributes data. It should be used when working with the data from more than one survey.

**MUID** - is a unique (within Vermont) map unit designator that was formerly used to link the spatial and attribute data. It is a combination of the county FIPS code and a map unit symbol. For example, MUID "001AdA" identifies map unit AdA in Addison County.

**MUSYM** - is a map unit symbol that should only be used when working with the data from 1 survey. An MUSYM may be used in more than one County. In each case it represents a different map unit, with different soil

characteristics and interpretations. For example, MUSYM “AdA” identifies map unit AdA in Addison County and also map unit AdA in Chittenden County. In some counties, map units have numerical MUSYM s (e.g. 19B).

**MUNAME** - is the map unit name. For example, the MUNAME for map unit AdA in Addison County is “Adams loamy fine sand, 0 to 5 percent slopes”.

**MUKIND** - identifies the type of map unit: consociation (C), complex (X), association (A), or undifferentiated unit (U). If the MUKIND is “C” for consociation, there is only one major soil or component in the map unit. Map units with a MUKIND that is **not** “C” have 2 or 3 components.

A **soil complex** consists of two or more soils in such an intricate pattern or in such small areas that they cannot be shown separately on the soil maps. The pattern and proportion of the soils are somewhat similar in all areas. An **association** is similar to a complex.

An **undifferentiated group** is made up of two or more soils that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils in the mapped areas are not uniform. An area can be made up of only one of the major soils, or it can be made up of all of them.

## Data Columns

### AGVAL

- This information comes from the report titled “Farmland Classification Systems for Vermont Soils”, dated June, 2006. This document can be found in the supporting documentation folder.
- These Ag Value Groups are unique to Vermont.

**Group 1-** These soil map units have an Important Farmland rating of Prime. Most of the soil map units are in Land Capability Class 1 or 2. Their relative value is 100.

**Group 2-** These soil map units have an Important Farmland rating of Statewide. Most of the soil map units are in Land Capability Class 2. Their relative value is 95.

**Group 3-** These soil map units have an Important Farmland rating of Prime. Most of the soil map units are in Land Capability Class 2 or 3. Their relative value is 83.

**Group 4-** These soil map units have an Important Farmland rating of Statewide. Most of the soil map units are in Land Capability Class 2, 3, or 4. Their relative value is 82.

**Group 5-** These soil map units have an Important Farmland rating of Statewide. Most of the soil map units are in Land Capability Class 3. Their relative value is 65.

**Group 6-** These soil map units have an Important Farmland rating of Statewide. Most of the soil map units are in Land Capability Class 2, 3, or 4. Their relative value is 63.

**Group 7-** These soil map units have an Important Farmland rating of Statewide. Most of the soil map units are in Land Capability Class 3. Their relative value is 57.

**Group 8-** Most of the soil map units are in Land Capability Class 4 or 6. Low crop yields, low available water capacity, and erosion hazard tend to be the major limitations. This group includes a few soil map units that have an Important Farmland rating of Local. Their relative value is 50.

**Group 9-** These soil map units have limitations and are usually considered to be unsuitable for crop production. Limiting factors can include but are not limited to slope, wetness, surface stones, and bedrock outcrops. On-site investigations are strongly recommended to determine the feasibility of installing corrective measures and using these soils for crop production. Most of the soil map units are in Land Capability Class 5, 6, or 7. Their relative value is 40.

**Group 10-** These soil map units have limitations and are usually considered to be unsuitable for crop production. Limiting factors can include but are not limited to slope, wetness, surface stones, and bedrock outcrops. On-site investigations are strongly recommended to determine feasibility of installing corrective measures and using these soils for crop production. Most of the soil map units are in Land Capability Class 5, 6, or 7. Their relative value is 26.

**Group 11-** These soil map units are considered to have very limited potential for crop production. Most of the soil map units are in Land Capability Class 7 or 8. Only in rare situations, and usually after great expense, are these soil map units converted for crop production. Their relative value is 0.

**Group 12-** These soil map units are areas within a digitized or published soil survey that have never been mapped because of restricted access or the policy on mapping urban areas that was in place at the time. An onsite should be conducted to determine if areas of these soil map units should be assigned to a different Agricultural Value Group. No relative value is assigned.

- The numerical rating of map units with more than one major component (complexes, associations and undifferentiated units) will depend on the proportion of the different components that comprise them.
- FOOTNOTE “d”- The soils in this soil map unit have a wetness limitation that may not be feasible to overcome. Areas of this soil map unit, where artificial drainage is not feasible should be placed in Agricultural Value Group 11.
- FOOTNOTE “e”- Bedrock outcrops cover more than 2 percent of the surface. Areas of this soil map unit should be placed in Agricultural Value Group 11, if bedrock outcrops are extensive enough to prohibit efficient farming.

## FLOOD

- This information can be used to determine if flooding may be a concern in the map unit.
- It was derived from the Flooding Frequency column in the comonth table in the SSURGO-2 dataset.
- The frequency of flooding is displayed as :
  - frequent** – greater than 50 times in 100 years
  - occasional** – 5 to 50 times in 100 years
  - rare**– 1 to 5 times in 100 years
  - none** – no reasonable chance of flooding (less than 1 time in 500 years)
  - not rated** – used for miscellaneous land types that cannot be rated
  - water** – water body or double line stream

## FORSTGRP and FORSTVAL

- This information is unique to Vermont.
- FORSTGRP refers to Vermont forest land value groups (1-8).
- FORSTVAL is the relative forest value of the map unit on a scale of 0 to 100, with 100 denoting the highest forest value.

- The group assignments and value ratings are based on “Soil Potential Study and Forest Land Value Groups for Vermont Soils”, revised, December 12, 2003. For a copy of this report, contact Steve Gourley, State Soil Scientist (email: [steve.gourley@vt.usda.gov](mailto:steve.gourley@vt.usda.gov) or 802-951-6796 x236).
- The numerical rating of map units with more than one major component (complexes, associations and undifferentiated units) will depend on the proportion of the different components that comprise them.
- FORSTGRP “1” - Map unit has a relative forest value of 100 on a scale of 0 to 100.
- FORSTGRP “2” - Map unit has a relative forest value of 83 on a scale of 0 to 100.
- FORSTGRP “3” - Map unit has a relative forest value of 74 on a scale of 0 to 100.
- FORSTGRP “4” - Map unit has a relative forest value of 63 on a scale of 0 to 100.
- FORSTGRP “5” - Map unit has a relative forest value of 51 on a scale of 0 to 100.
- FORSTGRP “6” - Map unit has a relative forest value of 31 on a scale of 0 to 100.
- FORSTGRP “7” - Map unit has a relative forest value of 0 on a scale of 0 to 100.
- FORSTGRP “8” - Map unit has an undetermined relative forest value.

## FROSTACTION

- This information identifies the potential frost action of the dominant component in the map unit.
- The classes are “**low**”, “**moderate**”, “**high**”, and “**not rated**”. Musym of “W” will yield a value of “water”.
- This data resides in the Frost Action column of the SSURGO-2 dataset.

## GRAVEL

- This information can be used to determine if the map unit may be a potential source for gravel.
- If GRAVEL equals “**good**” or “**fair**” then at least one of the major components in the map unit may be a potential source of gravel. If GRAVEL equals “**poor**” then none of the major components in the map unit are a potential source for gravel. Musym of “W” will yield a value of “water”.
- This good-fair-poor rating system replaces the old probable-improbable rating system.

## HELCLASS

- The purpose of this classification is to identify areas on which erosion control efforts should be concentrated.
- The definition is based on Erosion Indexes derived from certain variables of the Universal Soil Loss Equation. The indexes are the quotient of tons of soil loss by erosion predicted for bare ground divided by the sustainable soil loss (T factor). T factor resides in the “T” column of the component table in the SSURGO-2 datasets, and can also be viewed through the eFOTG in the statewide section.
- The classifications are:
  - **Not highly erodible land**
  - **Potentially highly erodible land**
  - **Highly erodible land**
  - not rated
  - water
- This same information was previously available in the table titled helclass.dbf. The HEL classification now resides in the HEL Water column of the mapunit table of the SSURGO-2 dataset.

## HYDRIC

- This information can be used to determine if hydric soils are present in the map unit.
- This information comes from the Hydric Rating column of the component table of the SSURGO-2 dataset.
- If HYDRIC equals “**Y**” at least one of the major components in the map unit is a hydric soil.

- It also indicates that wetlands might be present. Vegetation and hydrology must also be considered when making a wetland determination.
- If HYDRIC equals “**N**” none of the major components in the map unit is a hydric soil.
- If HYDRIC equals “**U**” all of the major components are miscellaneous land types and the map unit is unranked. Musym of “W” will yield a value of “water”.

## HYDROGROUP

- This information identifies the hydrologic soil group of the dominant component in the map unit.
- Hydrologic soil groups were revised in Vermont in 2003.
- The value in HYDROGROUP comes from the Hydrologic Group column in the component table of the SSURGO-2 dataset.
- The groups are:
  - Hydrologic Soil Group A** – Soils that are
    1. Well drained to excessively drained **and** moderately deep to very deep **and** sandy or sandy-skeletal, OR
    2. Well drained to excessively drained **and** moderately deep to very deep **and** loamy-skeletal with a sandy loam or fine sandy loam cap over a sandy or gravelly substratum.

### Hydrologic Soil Group B – Soils that are

1. Moderately well drained to somewhat poorly drained **and** moderately deep to very deep **and** sandy or sandy-skeletal or loamy-skeletal, OR
2. Well drained to moderately well drained **and** deep to very deep to bedrock **and** do not have a densic contact **and** have permeability of moderate or moderately rapid and are coarse-loamy or coarse-silty, OR
3. Well drained to moderately well drained **and** deep to very deep to bedrock **and** do not have a densic contact **and** have permeability of moderate or moderately rapid in the upper part **and** are coarse-loamy or coarse-silty over sandy or sandy-skeletal.

### Hydrologic Soil Group C – Soils that are

1. Poorly drained **and** very deep **and** sandy or sandy-skeletal, OR
2. Well drained or moderately well drained **and** have a fine or very fine particle size class substratum, OR
3. Well drained to poorly drained **and** moderately deep (or shallow to moderately deep) to a densic contact or to a layer with moderately slow to slow permeability, OR
4. Somewhat poorly drained to poorly drained **and** very deep **and** do not have a densic contact **and** are coarse-loamy, coarse-silty, or loamy-skeletal in at least the upper part, OR
5. Well drained to moderately well drained **and** moderately deep to bedrock **and** do not have a densic contact **and** are coarse-loamy, coarse-silty, or loamy-skeletal in at least the upper part.

### Hydrologic Soil Group D – Soils that are

1. Very poorly drained, OR
2. Very shallow or shallow to bedrock, OR
3. In the fine or very fine particle size family class, OR
4. Somewhat poorly drained or poorly drained **and** have textures in the substratum that are in the fine or very fine particle size class, OR
5. Very shallow or shallow to a densic contact or to a layer with slow to very slow permeability.

Musym of “W” will yield a value of “water”.

## ONSITE

- This information identifies the new onsite sewage disposal class and footnote of the map unit.

- Ratings are based on the 2007 Vermont Environmental Protection Rules, based on 20% maximum slope – for lots created on or after June 14, 2002. More detailed information can be found in the pdf file titled “2008 Soil Suitability Groups for Soil-based Residential Wastewater Disposal Systems in Vermont”, in the supporting documentation folder.

- It doesn't replace onsite investigation.
- These are the five major classes.

Class I - WELL SUITED  
Class II - MODERATELY SUITED  
Class III - MARGINALLY SUITED  
Class IV - NOT SUITED  
Class V - NOT RATED

- The combination of class and footnote provides information on the major soil properties affecting the class assignment. A brief summary of the ratings groups follows.

Ia - WELL SUITED - Soil map units with rapid permeability  
Ib - WELL SUITED - Soil map units with rapid permeability and limited slope  
Ic - WELL SUITED - Soil map units with moderate permeability  
Id - WELL SUITED - Soil map units with moderate permeability and limited slope

IIa - MODERATELY SUITED - Soil map units with slow permeability  
IIb - MODERATELY SUITED - Soil map units with slow permeability and limited slope  
IIc - MODERATELY SUITED - Soil map units with moderate depth to bedrock  
IId - MODERATELY SUITED - Soil map units with moderate depth to bedrock and limited slope  
IIe - MODERATELY SUITED - Soil map units with rapid permeability and steep slope  
II f - MODERATELY SUITED - Soil map units with moderate permeability and steep slope  
IIg – no longer used (this group has become IIIg)  
IIh - MODERATELY SUITED - Soil map units with moderate depth to seasonal high water table (SHWT)

IIIa - MARGINALLY SUITED - Soil map units with marginal depth to bedrock  
IIIb - MARGINALLY SUITED - Soil map units with flooding limitation and moderate depth to SHWT  
IIIc - MARGINALLY SUITED - Soil map units with marginal depth to SHWT and gentle slope  
IIId - MARGINALLY SUITED - Soil map units with marginal depth to SHWT and moderate slope  
IIIe - MARGINALLY SUITED - Soil map units with marginal depth to SHWT and limited slope  
III f - MARGINALLY SUITED - Soil map units with SHWT and depth to bedrock limitation  
IIIg - MARGINALLY SUITED - Soil map units with flooding limitation

IVa - NOT SUITED - Soil map units generally not suited due to excessive wetness  
IVb - NOT SUITED - Soil map units generally not suited due to limited depth to bedrock and steep slope  
IVc - NOT SUITED - Soil map units generally not suited due to very limited depth to bedrock on moderate slopes  
IVd - NOT SUITED - Soil map units not generally suited due to slow permeability and steep slope

v - NOT RATED MAP UNITS

## PARENT

- This information comes from the official soil series descriptions.
- PARENT shows the broad category(s) of parent material of the major component(s) in the mapunit.
- The “/” can be read as “and”, meaning that both parent materials are present in the map unit.
- The following codes (listed alphabetically) are used:

A alluvial  
DT dense till

GF outwash  
GL lacustrine  
GT glacial till  
M miscellaneous units  
O organic deposits  
W water

## PARENTSUB

- This information comes from the official soil series descriptions.
- PARENTSUB shows a more detailed parent material breakdown than PARENT.
- The “\_” can be read as “over”, meaning that one type of material is on top of another type.
- The following codes (listed alphabetically) are used:

ADT	dense till with carbonates at less than 40 inches
AGT	glacial till with carbonates at less than 40 inches
BAGT	glacial till with bedrock and carbonates at less than 40 inches
BCGT	cryic glacial till with bedrock at less than 40 inches
BEGT	glacial till with bedrock at less than 40 inches and high base saturation
BGT	glacial till with bedrock at less than 40 inches
BSGT	spodic glacial till with bedrock at less than 40 inches
CDT	cryic dense till
CGL	clayey lacustrine deposits
CO	cryic organic deposits
DT	dense till
EDT	dense till with high base saturation
EGT	glacial till with high base saturation
GF	outwash
GGF	gravelly outwash
GL	lacustrine
GSGT	gravelly spodic glacial till
GT	glacial till
GT_R	glacial till over saprolite
M	miscellaneous units
MA	miscellaneous units, alluvial
MB	miscellaneous units, beaches
MFW	miscellaneous units, fresh water marsh
MG	miscellaneous units, gravel pits
MQ	miscellaneous units, quarries
O	organic deposits
O_BGT	organic layer over bedrock controlled glacial till
O_DT	organic deposits over dense till
O_GT	organic deposits over glacial till
O_SGF	organic deposits over sandy outwash
SDT	spodic dense till
SGF_SGL	sandy outwash over loamy or silty lacustrine deposits
SGF	sandy outwash
SGL	loamy or silty lacustrine deposits
SGT	spodic glacial till
SSGT	sandy spodic glacial till
W	water

## PRIME

- This information comes from the report titled "Farmland Classification Systems for Vermont Soils", revised June, 2006. This document can be found in the supporting documentation folder.
- The classes are:
  - **Prime, Statewide, Local, NPSL, Not rated.** (NPSL stands for "Not Prime, Statewide, or Local") Musym of "W" will yield a value of "water".
- The following footnotes are used:
  - FOOTNOTE "a" - For this soil map unit, one of two qualifications apply: 1) if the upper slope limit is between 9 and 15 percent, then the areas of the soil map unit that exceed 8 percent slope do not qualify as Prime Farmland or Farmland of Statewide Importance; or 2) if the upper slope limit exceeds 15 percent, then the areas of the soil map unit that exceed 15 percent slope do not qualify as Prime Farmland or Farmland of Statewide Importance.

FOOTNOTE "b" - One or more of the soils in this soil map unit have a severe wetness limitation due to the presence of a shallow water table during the cropping season. Areas of this soil map unit do not qualify as Prime Farmland or Farmland of Statewide Importance if artificial drainage is not installed.

FOOTNOTE "c" - Bedrock outcrops commonly cover more than 2 percent of the surface. Areas of this soil map unit will not qualify as Prime Farmland or Farmland of Statewide Importance if bedrock outcrops are extensive enough to prohibit efficient farming.

FOOTNOTE "f" - The soils in this soil map unit are frequently flooded. Flooding is likely to occur often under usual weather conditions, and there is more than a 50 percent chance of flooding in any year. Typically, however, flooding occurs outside of the growing season. During the growing season, flooding is expected infrequently under usual weather conditions, with a 5 to 50 percent chance of flooding in any year.

## ROCKSHALLOW and ROCKDEEP

- This information identifies the range in the depth to bedrock (inches) of all of the major components in the map unit.
- It was derived from Top Depth-High Value and Top Depth-Low Value in the corestrictions table of the new SSURGO-2 dataset.
- The user can determine if bedrock is present in the map unit at or above a critical depth below the mineral soil surface by examining ROCKSHALLOW.
- The user can determine if bedrock is present in the map unit below a critical depth below the mineral soil surface by examining ROCKDEEP.
- If ROCKSHALLOW and ROCKDEEP equal "60" then the depth to bedrock for the map unit is greater than 60 inches.
- If ROCKSHALLOW is less than "60" and ROCKDEEP equals "60" then the depth to bedrock for the map unit ranges from ROCKSHALLOW to greater than 60 inches.
- If ROCKSHALLOW and ROCKDEEP equal "999" then the major components are miscellaneous land types and the map unit is unranked.

## SAND

- This information can be used to determine if the map unit may be a potential source for sand.

- If SAND equals “**probable**” then at least one of the components in the map unit may be a potential source of sand. Musym of “W” will yield a value of “water”.
- It is not currently in the new SSURGO-2 dataset.

### SLOPELOW and SLOPEHIGH

- This information identifies the range in %slope of the dominant component in the map unit and is identical to the slope range that appears in the map unit name.
- It was derived from Slope Gradient-Low Value and Slope Gradient-High Value the component table in the SSURGO-2 dataset.
- If SLOPELOW and SLOPEHIGH equal “999” then the major components are miscellaneous land types and the map unit is not assigned a slope range.

### WATERSHALLOW and WATERDEEP

- This information identifies the range in the depth (feet) to seasonal high water table of all of the major components in the map unit.
- It was derived from the Top Depth-High Value and Top Depth-Low Value in the cosoilmoist table.
- The user can determine if a water table may be present in some part of the map unit at or above a critical depth below the mineral soil surface.
- If WATERSHALLOW and WATERDEEP equal “6.00” then the depth to seasonal high water table for the map unit is greater than 6 feet.
- If WATERSHALLOW is a negative number, water is ponded on the surface (ie. “-1” indicates that the ponded water is 1 foot deep).
- If WATERSHALLOW is less than “6.00” and WATERDEEP equals “6.00” then the depth to the seasonal high water table for the map unit ranges from WATERSHALLOW to greater than 6 feet.
- If WATERSHALLOW and WATERDEEP equal “99.9” then the major components are miscellaneous land types and the map unit is unranked.

### WATERKIND

- This information identifies the type of seasonal high water table: apparent or perched.
- It was derived by analyzing the depth to the bottom of the WATERDEEP element above.
- If WATERKIND equals “**PERCH**” the water table is perched.
- If WATERKIND equals “**APPAR**” the water table is apparent.
- If WATERKIND equals “**NONE**” there is no water table within 6 feet.
- If WATERKIND equals “**not rated**” the major components are miscellaneous land types and the map unit is unranked. Musym of “W” will yield a value of “water”.

## CONTACT INFORMATION

If you have questions about the top20 table or soils tabular data, contact:

Martha H. Stuart  
Soil Scientist/Dataset Manager  
Natural Resources Conservation Service  
28 FarmVu Drive  
White River Junction, VT 05001  
(802)295-7942 x28  
[Martha.Stuart@vt.usda.gov](mailto:Martha.Stuart@vt.usda.gov)

If you have questions about Important Farmlands, Primary Agricultural Soils, Forest and Secondary Agricultural Soils, or Agricultural Value Groups contact:

Stephen H. Gourley, State Soil Scientist  
356 Mountain View Drive  
Suite 105  
Colchester, VT 05446  
802-951-6796 ext. 236  
[Steve.Gourley@vt.usda.gov](mailto:Steve.Gourley@vt.usda.gov)

For an update on the work in ongoing soil surveys and soil survey updates:

Robert F. Long  
59 Waterfront Plaza, Suite 12  
Newport, VT 05855-4877  
802-334-6090  
[Robert.Long@vt.usda.gov](mailto:Robert.Long@vt.usda.gov)