Soil Survey Evaluation for Addison County, VT
Vermont NRCS
2010

This report contains general information about the history of the soil survey and an evaluation of the available soil survey information, for use in planning for maintenance and updates to the soil survey.

General Information

A. State Soil Survey Area ID (STSSAID)	VT001
B. Acres (from NRI)	
Total land acres in the survey area	494,600
Total census water in the survey area	22,100
Total Surface area	516,700
Approximate acres within **MLRA 142** (as of 1996)	306,100
Approximate acres within **MLRA 143** (as of 1996)	200,300
Approximate acres within **MLRA 144B** (as of 1996)	10,200
Approximate acres within the Green Mountain National Forest (as of 1997)	90,174

Correlation

A. Correlation date	May 1967
B. Correlation Amendment Dates	
First	December 2000

Initial Soil Survey

A. Publication date	November 1971
B. Publication scale	1:15,840
C. Photobase	Mosaic
D. Mapping order	2
E. Field Mapping scale	1:15,840
F. Field Mapping	
Started	1941
Completed	1964
G. Current Status	Out-of-Date

Digital Soil Survey

A. Date survey digitized (UVM)	1990
B. SSURGO base map	VT Orthos (SPM)
C. SSURGO Digitizing Scale	1:20,000
D. Date of SSURGO Certification	2001

2. Quality of the Existing Soil Survey

Published Soil Survey

Initial soil mapping was focused on providing detail in agricultural areas. Open areas were mapped by a detailed traversing of the landscape with some photo interpretation. Wooded areas were mapped mainly by photo interpretation with some traversing. The line work generally conforms to large landforms in MLRA 142, but not in MLRA 143 and 144B. Map unit polygons in wooded areas in these MLRAs are much larger than those in open areas and include areas that could be mapped separately based on current standards.

Soil names and descriptions were approved in 1967. Unless otherwise stated, statements in the published soil survey refer to conditions in the soil survey area in 1964. The soil maps were map finished using overlays of compiled soil maps, drainage, and cultural features.

Soil Maps

Soil maps in the published soil survey are no longer certified for any official uses. Officially certified soil maps derived from SSURGO data are available on: 1) the Web Soil Survey, and 2) the Soil Data Mart.

Taxonomic and Map Unit Names and Descriptions

The following is a summary of the taxonomic unit issues and concerns:

1. Taxonomic descriptions do not meet current standards for horizon designations, description of stoniness and rockiness of the surface layer, description of redoximorphic features, the depth to which the profile is described, and other items.
2. The morphology, identification, and classification of many series are uncertain due to the limited depth of the taxonomic unit description.
3. Taxonomic units (soil series) no longer classify correctly. Classification was done using the 7th approximation of Soil Taxonomy.

The composition of the map units is poorly described. The very brief map unit use paragraphs do not meet the needs of users. The following is a summary of the map unit issues and concerns sorted by MLRA:

Map Unit Issues and Concerns by MLRA – see legend below for individual map units

MLRA 142

142-A. The description of stoniness and/or rockiness for this unit is out of date. The degree of stoniness appears to be inaccurate, based on observations made during field office site visits.

142-B. The morphology, identification, and classification of this series and map unit is uncertain, due to limited information provided in the taxonomic unit description.

142-F. This series was classified as having a fragipan. The concept is no longer valid in Vermont. This series is now considered to have a densic contact over densic materials.

142-FX. Consociations of shallow soils may be complexes with moderately deep or very shallow series.

142-G. This flooded phase of a clayey soil series may be a new series, not just a map unit phase.

142-H. Fresh water marsh map units (and other units with this note) may contain significant areas of subaqueous soils.

142-J. Field Office employees have complained that this clayey soil has mappable areas of sandy soils and/or sandy surface textures that aren't listed in map unit description or in NASIS component table.
142-K. This unit may include significant areas of the somewhat poorly drained, non-hydric Kingsbury series, which was not mapped within the catena of clay soils in the county.
142-MF. This mesic floodplain unit was mapped throughout the county across the mesic and frigid temperature zones. In addition, soil series in other textural families besides coarse-silty were included in this unit. They were not mapped in the county, although they were mapped in nearby counties.
142-O. This broadly defined organic soil unit was mapped throughout county across mesic and frigid temperature zones. There are no series identified, and very few interpretations are available.
142-P. This is the only map unit with the Panton series as a major component in Vermont. Should review data to confirm this series should be correlated in state.
142-R. This rocky unit was mapped on various bedrock types, included series are not identified, slopes are not identified, and there are very few interpretations are available.
142-SL. Out of date slope classes were used for this map unit. They have poor interpretative value.
142-SP. One or more of the series in this map unit were classified as Spodosols, but are currently classified within other Orders.
142-T. This series was mapped throughout the county across the mesic and frigid temperature zones. It should be confined to the appropriate temperature zone within county. Other series are needed on the legend to map in other temperature zone areas. Related to this issue, some series are mapped only in the mesic region, but are now classified as having a frigid temperature class.
142-UD. This unit is an undifferentiated unit. However, there may be significant interpretive and morphological differences between the major soils to justify separating them into consociations.
142-V. This soil is identified as a Variant. It should be established as new series, correlated with an existing series, or included with other soils on the legend.
142-X. This unit is a complex of soils and rock outcrops. The percentages of individual soils and outcrops are not detailed in the map unit description.
142-Y. This is the only county in the state where this series (or one of the series in a complex) is mapped.

MLRA 143

143-A. The description of stoniness and/or rockiness for this unit is out of date. The degree of stoniness appears to be inaccurate, based on observations made during field office site visits.
143-CRY. Based on the landforms and elevations at which it was mapped, this unit appears to have many included soils that have a significant mappable extent in the county, including high elevation cryic soil temperature soil series, "superspodics" or Humods (such as the Rawsonville, Houghtonville, Hogback, and Mundal series), and even the Lyman and Tunbridge series in some counties. These soil series and catenas were not mapped in county.
143-F. This series was classified as having a fragipan. The concept is no longer valid in Vermont. This series is now considered to have a densic contact over densic materials.
143-MF. This mesic floodplain unit was mapped throughout the county across the mesic and frigid temperature zones. In addition, soil series in other textural families besides coarse-silty were included in this unit. They were not mapped in the county, although they were mapped in nearby counties.

143-O. This broadly defined organic soil unit was mapped throughout county across mesic and frigid temperature zones. There are no series identified, and very few interpretations are available.
143-OR3. This map unit appears to be mapped at the Order 3 level in many areas, with poor line placement and very large polygon size.
143-R. This rocky unit was mapped on various bedrock types, included series are not identified, slopes are not identified, and there are very few interpretations are available.
143-SL. Out of date slope classes were used for this map unit. They have poor interpretative value.
143-SPI. Based on observations made during site visits and other various field work, this Spodosol map unit may include significant mappable areas of frigid Inceptisols.
143-SPX. This series does not meet current taxonomic classification requirements for Spodosols.
143-T. This series was mapped throughout the county across the mesic and frigid temperature zones. It should be confined to the appropriate temperature zone within county. Other series are needed on the legend to map in other temperature zone areas. Related to this issue, some series are mapped only in the mesic region, but are now classified as having a frigid temperature class.
143-UD. This unit is an undifferentiated unit. However, there may be significant interpretive and morphological differences between the major soils to justify separating them into consociations.
143-X. This unit is a complex of soils and rock outcrops. The percentages of individual soils and outcrops are not detailed in the map unit description.

MLRA 144B

144B-A. The description of stoniness for this unit is out of date and the degree of stoniness appears to be inaccurate, based on observations made during field office site visits.
144B-F. This series was classified as having a fragipan. The concept is no longer valid in Vermont. This series is now considered to have a densic contact over densic materials.
144B-IA. This series is inactive. A search on the Official Series Descriptions database results in the message: “The series name ----- does not exist.” Need new series identified and correlated. There are poor interpretations currently available.
144B-SL. Out of date slope classes were used for this map unit. They have poor interpretative value.
144B-SP. One or more of the series in this map unit were classified as Spodosols, but are currently classified within other Orders.
144B-T. This series was mapped throughout the county across the mesic and frigid temperature zones. It should be confined to the appropriate temperature zone within county. Other series are needed on the legend to map in other temperature zone areas. Related to this issue, some series are mapped only in the mesic region, but are now classified as having a frigid temperature class.
144B-UD. This unit is an undifferentiated unit. However, there may be significant interpretive and morphological differences between the major soils to justify separating them into consociations.

Map Unit Symbol and Name		Map Unit Issues by MLRA-Concern Number (see above)							
AdA ADAMS LOAMY FINE SAND, 0 TO 5 PERCENT SLOPES		142-SL	142-SP	142-T	143-SL	143-SPX	143-T		
AdB ADAMS LOAMY FINE SAND, 5 TO 12 PERCENT SLOPES		142-SL	142-SP	142-T	143-SL	143-SPX	143-T		
AdD ADAMS LOAMY FINE SAND, 12 TO 30 PERCENT SLOPES		142-SL	142-SP	142-T	143-SL	143-SPX	143-T		
AdE ADAMS LOAMY FINE SAND, 30 TO 50 PERCENT SLOPES		142-SL	142-SP	142-T	143-SL	143-SPX	143-T		

AsC AMENIA EXTREMELY STONY LOAM, 0 TO 15 PERCENT SLOPES		142-SL	142-B	142-A					
AsD AMENIA EXTREMELY STONY LOAM, 15 TO 25 PERCENT SLOPES		142-SL	142-B	142-A					
AmB AMENIA STONY LOAM, 0 TO 8 PERCENT SLOPES		142-SL	142-B	142-A					
AmC AMENIA STONY LOAM, 8 TO 15 PERCENT SLOPES		142-B	142-A						
BeA BERKSHIRE AND MARLOW STONY LOAMS, 0 TO 3 PERCENT SLOPES		142-T	143-F	143-A	143-UD	143-SPI			
BeB BERKSHIRE AND MARLOW STONY LOAMS, 3 TO 12 PERCENT SLOPES		142-T	143-CRY	143-SL	143-F	143-A	143-UD	143-SPI	
BeC BERKSHIRE AND MARLOW STONY LOAMS, 12 TO 25 PERCENT SLOPES		142-T	143-CRY	143-SL	143-F	143-A	143-UD	143-SPI	
BsC BERKSHIRE AND MARLOW EXTREMELY STONY LOAMS, 3 TO 20 PERCENT SLOPES		142-T	143-CRY	143-SL	143-OR3	143-F	143-A	143-UD	143-SPI
BsE BERKSHIRE AND MARLOW EXTREMELY STONY LOAMS, 20 TO 50 PERCENT SLOPES		142-T	143-CRY	143-SL	143-OR3	143-F	143-A	143-UD	143-SPI
BuC BUCKLAND EXTREMELY STONY LOAM, 3 TO 15 PERCENT SLOPES		144B-F	144B-SP	144B-A					
BuD BUCKLAND EXTREMELY STONY LOAM, 15 TO 25 PERCENT SLOPES		144B-F	144B-SP	144B-A					
CaB CABOT STONY LOAM, 0 TO 8 PERCENT SLOPES		142-T	143-F	143-A	144B-A				
CbC CABOT EXTREMELY STONY LOAM, 0 TO 15 PERCENT SLOPES		142-T	143-F	143-A	144B-A				
ClC CALAIS AND GLOVER SOILS, 5 TO 20 PERCENT SLOPES		144B-SL	144B-F	144B-SP	144B-IA	144B-UD			
ClE CALAIS AND GLOVER SOILS, 20 TO 50 PERCENT SLOPES		144B-SL	144B-F	144B-SP	144B-IA	144B-UD			
Cn CANANDAIGUA SILT LOAM									
Co COBBLY ALLUVIAL LAND		142-MF	143-MF						
CtA COLTON GRAVELLY SANDY LOAM, 0 TO 5 PERCENT SLOPES		142-T	143-SL	143-T					
CtB COLTON GRAVELLY SANDY LOAM, 5 TO 12 PERCENT SLOPES		142-T	143-SL	143-T					
CtD COLTON GRAVELLY SANDY LOAM, 12 TO 30 PERCENT SLOPES		142-T	143-SL	143-T					
CtE COLTON GRAVELLY SANDY LOAM, 30 TO 50 PERCENT SLOPES		142-T	143-SL	143-T					
Cv COVINGTON SILTY CLAY, FLOODED		142-G							
Cw COVINGTON AND PANTON SILTY CLAYS		142-K	142-D	142-P					

DaA DUANE FINE SANDY LOAM, 0 TO 5 PERCENT SLOPES		142-SL	142-T	143-SPX	143-T				
DaB DUANE FINE SANDY LOAM, 5 TO 12 PERCENT SLOPES		142-SL	142-T	143-SPX	143-T				
DcB DUTCHESS STONY LOAM, 3 TO 8 PERCENT SLOPES		142-SP	142-A						
DcC DUTCHESS STONY LOAM, 8 TO 15 PERCENT SLOPES		142-SP	142-A						
DcD DUTCHESS STONY LOAM, 15 TO 25 PERCENT SLOPES		142-SP	142-A						
DsC DUTCHESS EXTREMELY STONY LOAM, 3 TO 15 PERCENT SLOPES		142-SP	142-A						
DsE DUTCHESS EXTREMELY STONY LOAM, 15 TO 50 PERCENT SLOPES		142-SL	142-SP	142-A					
ElB ELMWOOD FINE SANDY LOAM, COARSE VARIANT, 0 TO 8 PERCENT SLOPES		142-SP	142-T	142-V					
ElC ELMWOOD FINE SANDY LOAM, COARSE VARIANT, 8 TO 15 PERCENT SLOPES		142-SP	142-T	142-V					
FaC FARMINGTON EXTREMELY ROCKY SILT LOAM, 5 TO 20 PERCENT SLOPES		142-SL	142-T	143-T	142-A	142-FX			
FaE FARMINGTON EXTREMELY ROCKY SILT LOAM, 20 TO 50 PERCENT SLOPES		142-SL	142-T	143-T	142-A	142-FX			
FdB FARMINGTON STONY SILT LOAM, MODERATELY DEEP VARIANT, 3 TO 8 PERCENT SLOPES		142-T	142-V	143-T	142-A				
FdC FARMINGTON STONY SILT LOAM, MODERATELY DEEP VARIANT, 8 TO 15 PERCENT SLOPES		142-T	142-V	143-T	142-A				
FdD FARMINGTON STONY SILT LOAM, MODERATELY DEEP VARIANT, 15 TO 25 PERCENT SLOPES		142-T	142-V	143-T	142-A				
FdE FARMINGTON STONY SILT LOAM, MODERATELY DEEP VARIANT, 25 TO 50 PERCENT SLOPES		142-T	142-V	143-T	142-A				
FnB FARMINGTON-NELLIS ROCKY COMPLEX, 5 TO 12 PERCENT SLOPES		142-SL	142-T	143-T	142-X				
FnC FARMINGTON-NELLIS ROCKY COMPLEX, 12 TO 20 PERCENT SLOPES		142-SL	142-T	143-T	142-X				
FnD FARMINGTON-NELLIS ROCKY COMPLEX, 20 TO 30 PERCENT SLOPES		142-SL	142-T	143-T	142-X				
Fw FRESH WATER MARSH		142-H							
Gp GRAVEL PITS									
Hf HADLEY VERY FINE SANDY LOAM		142-MF	143-MF						
Hh HADLEY VERY FINE SANDY LOAM, FREQUENTLY FLOODED		142-MF	143-MF						
Le LIMERICK SILT LOAM		142-MF	143-MF						

Lf LIMERICK SILT LOAM, VERY WET		142-MF	143-MF						
Lh LIVINGSTON CLAY									
Lk LIVINGSTON CLAY, FLOODED		142-G							
LmB LYMAN-BERKSHIRE ROCKY COMPLEX, 5 TO 12 PERCENT SLOPES		143-CRY	143-SL	143-X					
LmC LYMAN-BERKSHIRE ROCKY COMPLEX, 12 TO 20 PERCENT SLOPES		143-CRY	143-SL	143-X					
LxC LYMAN-BERKSHIRE VERY ROCKY COMPLEX, 5 TO 20 PERCENT SLOPES		143-CRY	143-SL	143-OR3	143-X				
LxE LYMAN-BERKSHIRE VERY ROCKY COMPLEX, 20 TO 50 PERCENT SLOPES		143-CRY	143-SL	143-OR3	143-X				
MaA MASSENA STONY SILT LOAM, 0 TO 3 PERCENT SLOPES		142-B	142-A						
MnB MASSENA EXTREMELY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES		142-B	142-A						
MrA MELROSE FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES		142-SP	142-T						
MrB MELROSE FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES		142-SP	142-T						
MrC MELROSE FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES		142-SP	142-T						
MrD MELROSE FINE SANDY LOAM, 15 TO 25 PERCENT SLOPES		142-SP	142-T						
MrE MELROSE FINE SANDY LOAM, 25 TO 50 PERCENT SLOPES		142-SP	142-T						
Mv MUCK AND PEAT		142-O	143-O	143-OR3					
NaB NASSAU-DUTCHESS ROCKY COMPLEX, 3 TO 8 PERCENT SLOPES		142-SP	142-X	142-Y					
NaC NASSAU-DUTCHESS ROCKY COMPLEX, 8 TO 15 PERCENT SLOPES		142-SP	142-X	142-Y					
NaD NASSAU-DUTCHESS ROCKY COMPLEX, 15 TO 25 PERCENT SLOPES		142-SP	142-X	142-Y					
NdC NASSAU EXTREMELY ROCKY SILT LOAM, 3 TO 25 PERCENT SLOPES		142-SL	142-SP	142-Y	142-FX				
NeB NELLIS STONY LOAM, 3 TO 8 PERCENT SLOPES		142-B	142-A						
NeC NELLIS STONY LOAM, 8 TO 15 PERCENT SLOPES		142-B	142-A						
NeD NELLIS STONY LOAM, 15 TO 25 PERCENT SLOPES		142-B	142-A						
NsC NELLIS EXTREMELY STONY LOAM, 3 TO 15 PERCENT SLOPES		142-SL	142-B	142-A					
NsD NELLIS EXTREMELY STONY LOAM, 15 TO 50 PERCENT SLOPES		142-SL	142-B	142-A					

PeA PERU STONY LOAM, 0 TO 5 PERCENT SLOPES		143-SL	143-A	143-SPI					
PeB PERU STONY LOAM, 5 TO 12 PERCENT SLOPES		143-SL	143-F	143-A	143-SPI				
PeC PERU STONY LOAM, 12 TO 20 PERCENT SLOPES		143-SL	143-F	143-A	143-SPI				
PsC PERU EXTREMELY STONY LOAM, 0 TO 20 PERCENT SLOPES		143-SL	143-F	143-OR3	143-A	143-SPI			
PsD PERU EXTREMELY STONY LOAM, 20 TO 50 PERCENT SLOPES		143-SL	143-F	143-OR3	143-A	143-SPI			
Qu QUARRY									
RaB RAYNHAM SILT LOAM, 0 TO 6 PERCENT SLOPES		142-SL							
RaC RAYNHAM SILT LOAM, 6 TO 12 PERCENT SLOPES		142-SL							
RaD RAYNHAM SILT LOAM, 12 TO 25 PERCENT SLOPES		142-SL							
Rk ROCK LAND		142-R	143-R	143-CRY	143-OR3				
RL RUBBLE LAND									
SaB SALMON VERY FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES		143-SL	143-SPX						
SaC SALMON VERY FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES		143-SL	143-SPX						
SaE SALMON VERY FINE SANDY LOAM, 12 TO 50 PERCENT SLOPES		143-SL	143-SPX						
StA STETSON GRAVELLY FINE SANDY LOAM, 0 TO 5 PERCENT SLOPES		142-T	143-SL	143-T					
StB STETSON GRAVELLY FINE SANDY LOAM, 5 TO 12 PERCENT SLOPES		142-T	143-SL	143-T					
StD STETSON GRAVELLY FINE SANDY LOAM, 12 TO 30 PERCENT SLOPES		142-T	143-SL	143-T					
StE STETSON GRAVELLY FINE SANDY LOAM, 30 TO 50 PERCENT SLOPES		142-T	143-SL	143-T					
Sw SWANTON FINE SANDY LOAM		142-T	142-K						
VgB VERGENNES CLAY, 2 TO 6 PERCENT SLOPES		142-SL	142-K	142-J					
VgC VERGENNES CLAY, 6 TO 12 PERCENT SLOPES		142-SL	142-K	142-J					
VgD VERGENNES CLAY, 12 TO 25 PERCENT SLOPES		142-SL	142-K	142-J					
VgE VERGENNES CLAY, 25 TO 50 PERCENT SLOPES		142-SL	142-K	142-J					
VrB VERGENNES ROCKY CLAY, MODERATELY SHALLOW VARIANT, 2 TO 6 PERCENT SLOPES		142-SL	142-V	142-A	142-Y				
VrC VERGENNES ROCKY CLAY, MODERATELY SHALLOW VARIANT, 6 TO 12 PERCENT SLOPES		142-SL	142-V	142-A	142-Y				

VrD VERGENNES ROCKY CLAY, MODERATELY SHALLOW VARIANT, 12 TO 25 PERCENT SLOPES		142-SL	142-V	142-A	142-Y				
W WATER									
Wa WALPOLE SILT LOAM		143-T	144B-T						
Wo WINOOSKI VERY FINE SANDY LOAM		142-MF	143-MF						

Interpretations
Interpretations in the published soil survey no longer meet the needs of users. The interpretations were approved when the soil survey was correlated. Interpretations developed or revised since correlation are available or are referenced in the Field Office Technical Guide, Section II Part I, Soils Information, and on the Soil Data Mart.

3. Digital Soil Survey/Tabular Soil Survey Data
SSURGO-certified data is posted to the Soil Data Mart and Web Soil Survey.

4. Plans to update the Soil Survey
This section will be completed by the MLRA Soil Survey Office after a review of county SS evaluations.

5. Staff and Budget needed to update the Soil Survey
This section will be completed by the MLRA Soil Survey Office after a review of county SS evaluations.

This evaluation was conducted under the leadership and direction of the Vermont State Soil Scientist by members of the VT Soil Resource staff. It serves as an inventory and assessment of the non-MLRA soil survey area and includes documentation related to the current quantity and quality of the soil survey data. This evaluation will be provided to the MLRA SSO for integration into a Long-Range plan. The result of evaluations summarizing deficiencies and recommendations for improvement will be documented in the Long-Range Plan.

This evaluation is based on the following:

1. Comments from users of the data including NCSS cooperators, state and local government agencies, NRCS field office staff, Resource Soil Scientists, and Soil Scientists who worked in the survey area or in adjacent survey areas;

2. Evaluations of the validity and regional consistency of map unit concepts, including the extent of soil orders, soil temperature classes, slope and stoniness classes, and soil textural families and surface textures;

3. Evaluations of the kind and accuracy of soil interpretations. Consider interpretive results and relation of data entries to criteria;

4. Reviews and evaluations of the accuracy and consistency of data that exists in NASIS.

All evaluation notes are entered into NASIS Legend text and Mapunit Text tables. The NASIS national report *"MLRA -mgmt- Survey Evaluation notes for long-range planning"* compiles the evaluation notes for the soil survey legend. The report output should be used as a tool in the decision-making process for the survey areas within the MLRA SSO territory and can be used to write the Long-Range plan. A written summary of the evaluation must be a component of the process to allow development of conclusions and a comparison of situations among survey areas within an MLRA.