Soil Survey Evaluation for Windham 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.

1. General Information

A. State Soil Survey Area ID (STSSAID)	VT025
B. Acres (from NRI)	
Total land acres in the survey area	503,500
Total census water in the survey area	7,500
Total Surface area	511,000
Approximate acres within MLRA **143** (as of 1996)	128,900
Approximate acres within MLRA **144B** (as of 1996)	338,100
Approximate acres within MLRA **145** (as of 1996)	44,000
Approximate acres within the Green Mountain National Forest (as of 1997)	32,482

Correlation

A. Correlation date	1983
B. Correlation Amendment Dates	
First	

Initial Soil Survey

A. Publication date	1987
B. Publication scale	1:20,000
C. Photobase	VT Orthos
D. Mapping order	2
E. Field Mapping scale	1:20,000
F. Field Mapping	
Started	1974
Completed	1982
G. Soil Survey Status	Maintenance needed

Digital Soil Survey

A. Date survey digitized	1990
B. Digitizing base map	VT Orthos (SPM)
C. Digitizing Scale	1:20,000
D. Date of SSURGO Certification	1996

2. Quality of the Existing Soil Survey

Published Soil Survey

Soil names and descriptions were approved in 1982. Unless otherwise stated, statements in the published soil survey refer to conditions in the soil survey area in 1982. 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 taxonomic and map unit names and descriptions do not meet current standards. Most of the taxonomic units no longer classify correctly because they are based on an outdated edition of Soil Taxonomy. The composition of the map units is poorly described. The map unit use paragraphs do not meet the needs of many users.

List of Map Unit Concerns by MLRA – see legend below for concerns for individual map units

MLRA 143

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 The concept is no longer valid in Vermont.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-HO. Houghtonville, Hogback, Mundal, and Rawsonville series appear to be mapped in some areas that better fit Berkshire, Lyman, Marlow, and Tunbridge series (that have a thinner spodic horizon).

143-LR. Londonderry map units include areas of Ricker series, which is not on county soils legend.

143-ML. Markey and Lupton soils are not currently mapped in this part of Region R. Pondicherry and Bucksport series are better choices for these soil conditions.

143-MWD. Moderately well drained soils with densic contact not mapped in this MLRA within county. These soils were included in well drained Marlow and somewhat poorly drained Westbury map units. Need other series and map units to represent moderately well soils in this catena.

143-SL. Out of date slope classes were used for this map unit. They have poor interpretative value.

143-SPR. This Spodosol series classification needs to be updated.

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-Y. This is the only county in the state where this series (or one of the series in a complex) is mapped.

143-Z. This is the only map unit of this series in Vermont.

MLRA 144B

144B-BR. Brayton map unit includes areas of Cabot series, which is not on county soils legend. The Cabot series has darker topsoil and is grey in the subsoil and substratum to 30 inches and is "Typic," while Brayton is "Aeric." This one map unit may also contain areas of A and C slopes.

144B-DM. Dummerston map units include areas of Shelburne series, which is not on county soils legend. Shelburne series has a densic contact and is underlain by dense till, while the Dummerston series is underlain by friable till.

144B-ML. Markey and Lupton soils are not currently mapped in this part of Region R. Pondicherry and Bucksport series are better choices for these soil conditions.

144B-SL. Out of date slope classes were used for this map unit. They have poor interpretative value.

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, in some counties, some series are mapped only in the mesic region, but are now classified as having a frigid temperature class.

MLRA 145

145-MFA. Mesic and frigid floodplain series and map units are mapped intermingled throughout the county across mesic and frigid temperature zones. For example, frigid floodplain soil series are mapped adjacent to mesic floodplain soil series in the mesic Connecticut River valley. Need to geographically separate mesic and frigid alluvial areas and use appropriate soil series in each area.

145-RA. Raynham series (poorly drained silty lacustrine soil) is not on county soils legend - areas may be included in moderately well drained Belgrade map unit.

145-SL. Out of date slope classes were used for this map unit. They have poor interpretative value.

145-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.

145-UDS. "Udorthents, steep" map unit should be reviewed and established as new series or incorporated into existing series, such as Unadilla, Hitchcock, Warwick, Quonset or Windsor series. Also, no slope range is given for this map unit.

145-UN. Unadilla series and map units include areas of Hitchcock series. All Unadilla series map units may be better correlated as Hitchcock series map units. The Unadilla series is rated as a probable source for sand and gravel, while the Hitchcock series is not.

145-Y. This is the only county in the state where this series (or one of the series in a complex) is mapped.

Map Unit Symbol and Map Unit Name		Map Unit Issues by MLRA-Concern Number (see above)			
1A Unadilla silt loam, 0 to 3 percent slopes		145-UN	145-Y		
1B Unadilla silt loam, 3 to 8 percent slopes		145-UN	145-Y		
1C Unadilla silt loam, 8 to 15 percent slopes		145-UN	145-Y		

1D Unadilla silt loam, 15 to 25 percent slopes		145-UN	145-Y		
1E Udorthents, steep		145-UDS	145-SL		
2A Belgrade silt loam, 0 to 3 percent slopes		145-RA			
3B Quonset and Warwick soils, 2 to 8 percent slopes		145-SL	145-UD		
3C Quonset and Warwick soils, 8 to 15 percent slopes		145-UD			
3D Quonset and Warwick soils, 15 to 25 percent slopes		145-UD			
3E Quonset and Warwick soils, 25 to 70 percent slopes		145-UDS	145-UD		
5B Windsor loamy fine sand, 2 to 8 percent slopes		145-SL			
5C Windsor loamy fine sand, 8 to 15 percent slopes					
5D Windsor loamy fine sand, 15 to 25 percent slopes					
5E Windsor loamy fine sand, 25 to 60 percent slopes		145-UDS			
9B Deerfield fine sandy loam, 2 to 8 percent slopes		145-SL			
10A Agawam very fine sandy loam, 0 to 3 percent slopes					
10B Agawam very fine sandy loam, 3 to 8 percent slopes					
11B Berkshire and Monadnock fine sandy loams, 3 to 8 percent slopes					
11C Berkshire and Monadnock fine sandy loams, 8 to 15 percent slopes					
11D Berkshire and Monadnock fine sandy loams, 15 to 25 percent slopes					
12C Stratton-Glebe complex, 8 to 15 percent slopes, very rocky		143-SPR			
12D Stratton-Glebe complex, 15 to 25 percent slopes, very rocky		143-SPR			
12E Stratton-Glebe complex, 25 to 50 percent slopes, very rocky		143-SPR			
16B Adams loamy fine sand, 2 to 8 percent slopes		143-SPR	143-SL		
16C Adams loamy fine sand, 8 to 15 percent slopes		143-SPR			
16D Adams loamy fine sand, 15 to 25 percent slopes		143-SPR			
16E Adams loamy fine sand, 25 to 50 percent slopes		143-SPR			
17B Worden loam, 3 to 8 percent slopes		143-Y			
17C Worden loam, 8 to 15 percent slopes		143-Y			
18B Worden loam, 3 to 8 percent slopes, very bouldery		143-Y			
18C Worden loam, 8 to 15 percent slopes, very bouldery		143-Y			
18D Worden loam, 15 to 25 percent slopes, very bouldery		143-Y			
20B Tunbridge-Lyman fine sandy loams, 3 to 8 percent slopes, very rocky					
20C Tunbridge-Lyman fine sandy loams, 8 to 15 percent slopes, very rocky					
20D Tunbridge-Lyman fine sandy loams, 15 to 25 percent slopes, very rocky					
20E Tunbridge-Lyman fine sandy loams, 25 to 50 percent slopes, very rocky					
21B Marlow fine sandy loam, 3 to 8 percent slopes		143-MWD	143-SPR		
21C Marlow fine sandy loam, 8 to 15 percent slopes		143-MWD	143-SPR		
21D Marlow fine sandy loam, 15 to 25 percent slopes		143-MWD	143-SPR		
22B Marlow fine sandy loam, 3 to 8 percent slopes, very stony		143-MWD	143-SPR		
22C Marlow fine sandy loam, 8 to 15 percent slopes, very stony		143-MWD	143-SPR		
22D Marlow fine sandy loam, 15 to 25 percent slopes, very stony		143-MWD	143-SPR		

22E Marlow fine sandy loam, 25 to 50 percent slopes, very stony		143-MWD	143-SPR		
23 Ondawa fine sandy loam		145-MFA			
24 Podunk fine sandy loam		145-MFA			
25B Westbury fine sandy loam, 3 to 8 percent slopes		143-F	143-MWD		
25C Westbury fine sandy loam, 8 to 15 percent slopes		143-F	143-MWD		
26B Westbury fine sandy loam, 3 to 8 percent slopes, very stony		143-F	143-MWD		
26C Westbury fine sandy loam, 8 to 15 percent slopes, very stony		143-F	143-MWD		
26D Westbury fine sandy loam, 15 to 25 percent slopes, very stony		143-F	143-MWD		
29 Walpole fine sandy loam		143-T	143-SL	145-SL	144B-T
31B Wilmington very fine sandy loam, 2 to 8 percent slopes, very stony		143-SL			
33 Rumney fine sandy loam		145-MFA			
34C Lyman-Rock outcrop complex, 8 to 15 percent slopes					
34D Lyman-Rock outcrop complex, 15 to 25 percent slopes					
34E Lyman-Rock outcrop complex, 25 to 50 percent slopes					
37 Hadley silt loam		145-MFA			
39 Winooski silt loam		145-MFA			
40 Limerick silt loam		145-MFA			
41D Londonderry-Stratton silt loams, 8 to 25 percent slopes, very rocky		143-SPX	143-LR	143-SPR	
41E Londonderry-Stratton silt loams, 25 to 70 percent slopes, very rocky		143-SPX	143-LR	143-SPR	
43B Mundal fine sandy loam, 3 to 8 percent slopes		143-HO			
43C Mundal fine sandy loam, 8 to 15 percent slopes		143-HO			
43D Mundal fine sandy loam, 15 to 25 percent slopes		143-HO			
44B Mundal fine sandy loam, 3 to 8 percent slopes, very stony		143-HO			
44C Mundal fine sandy loam, 8 to 15 percent slopes, very stony		143-HO			
44D Mundal fine sandy loam, 15 to 25 percent slopes, very stony		143-HO			
44E Mundal fine sandy loam, 25 to 50 percent slopes, very stony		143-HO			
46B Berkshire and Monadnock fine sandy loams, 3 to 8 percent slopes, very stony					
46C Berkshire and Monadnock fine sandy loams, 8 to 15 percent slopes, very stony					
46D Berkshire and Monadnock fine sandy loams, 15 to 25 percent slopes, very stony					
46E Berkshire and Monadnock fine sandy loams, 25 to 50 percent slopes, very stony					
47 Lupton mucky peat		143-ML	144B-ML	143-Z	
48B Rawsonville-Hogback fine sandy loams, 3 to 8 percent slopes rocky		143-HO	143-SPR		
48C Rawsonville-Hogback fine sandy loams, 8 to 15 percent slopes, rocky		143-HO	143-SPR		
48D Rawsonville-Hogback fine sandy loams, 15 to 25 percent slopes, rocky		143-HO	143-SPR		
48E Rawsonville-Hogback fine sandy loams, 25 to 50 percent slopes, rocky		143-HO	143-SPR		
49B Houghtonville-Rawsonville fine sandy loams, 3 to 8 percent slopes, very bouldery		143-HO	143-SPR		
49C Houghtonville-Rawsonville fine sandy loams, 8 to 15 percent slopes, very bouldery		143-HO	143-SPR		

49D Houghtonville-Rawsonville fine sandy loams, 15 to 25 percent slopes, very bouldery		143-HO	143-SPR		
49E Houghtonville-Rawsonville fine sandy loams, 25 to 50 percent slopes, very bouldery		143-HO	143-SPR		
50B Colton loamy fine sand, 2 to 8 percent slopes		143-SL			
50C Colton loamy fine sand, 8 to 15 percent slopes					
50D Colton loamy fine sand, 15 to 25 percent slopes					
50E Colton loamy fine sand, 25 to 60 percent slopes					
52A Sheepscot fine sandy loam, 0 to 3 percent slopes					
52B Sheepscot fine sandy loam, 3 to 8 percent slopes					
56B Monadnock fine sandy loam, 3 to 8 percent slopes, very stony					
56C Monadnock fine sandy loam, 8 to 15 percent slopes, very stony					
56D Monadnock fine sandy loam, 15 to 25 percent slopes, very stony					
56E Monadnock fine sandy loam, 25 to 50 percent slopes, very stony					
60B Houghtonville fine sandy loam, 3 to 8 percent slopes		143-HO			
60C Houghtonville fine sandy loam, 8 to 15 percent slopes		143-HO			
60D Houghtonville fine sandy loam, 15 to 25 percent slopes		143-HO			
61B Houghtonville fine sandy loam, 3 to 8 percent slopes, very stony		143-HO			
61C Houghtonville fine sandy loam, 8 to 15 percent slopes, very stony		143-HO			
61D Houghtonville fine sandy loam, 15 to 25 percent slopes, very stony		143-HO			
61E Houghtonville fine sandy loam, 25 to 50 percent slopes, very stony		143-HO			
62 Markey muck		143-ML	144B-ML		
63C Berkshire-Tunbridge fine sandy loams, 8 to 15 percent slopes, very stony					
63D Berkshire-Tunbridge fine sandy loams, 15 to 25 percent slopes, very stony					
63E Berkshire-Tunbridge fine sandy loams, 25 to 50 percent slopes, very stony					
64 Udifluvents, loamy					
65C Hogback-Rawsonville fine sandy loams, 8 to 15 percent slopes, very rocky		143-HO	143-SPR		
65D Hogback-Rawsonville fine sandy loams, 15 to 25 percent slopes, very rocky		143-HO	143-SPR		
65E Hogback-Rawsonville fine sandy loams, 25 to 50 percent slopes, very rocky		143-HO	143-SPR		
66B Houghtonville-Rawsonville fine sandy loams, 3 to 8 percent slopes, rocky		143-HO	143-SPR		
66C Houghtonville-Rawsonville fine sandy loams, 8 to 15 percent slopes, rocky		143-HO	143-SPR		
67B Berkshire-Tunbridge fine sandy loams, 3 to 8 percent slopes, rocky					
67C Berkshire-Tunbridge fine sandy loams, 8 to 15 percent slopes, rocky					
68D Taconic-Hubbardton-Rock outcrop complex, 8 to 25 percent slopes		144B-SL			
68E Taconic-Hubbardton-Rock outcrop complex, 25 to 70 percent slopes					
69C Macomber-Taconic complex, 8 to 15 percent slopes, very rocky					
69D Macomber-Taconic complex, 15 to 25 percent slopes, very rocky					
69E Macomber-Taconic complex, 25 to 70 percent slopes, very rocky					
70C Dummerston-Macomber complex, 8 to 15 percent slopes, very stony					
70D Dummerston-Macomber complex, 15 to 25 percent slopes, very stony					

70E Dummerston-Macomber complex, 25 to 70 percent slopes very stony					
71B Dummerston silt loam, 3 to 8 percent slopes		144B-DM			
71C Dummerston silt loam, 8 to 15 percent slopes		144B-DM			
71D Dummerston silt loam, 15 to 25 percent slopes		144B-DM			
72C Dummerston silt loam, 8 to 15 percent slopes, very stony		144B-DM			
72D Dummerston silt loam, 15 to 25 percent slopes, very stony		144B-DM			
72E Dummerston silt loam, 25 to 70 percent slopes, very stony		144B-DM			
73B Fullam silt loam, 3 to 8 percent slopes					
73C Fullam silt loam, 8 to 15 percent slopes					
73D Fullam silt loam, 15 to 25 percent slopes					
74B Fullam silt loam, 3 to 8 percent slopes, very stony					
74C Fullam silt loam, 8 to 15 percent slopes, very stony					
74D Fullam silt loam, 15 to 25 percent slopes, very stony					
74E Fullam silt loam, 25 to 35 percent slopes, very stony					
75B Brayton silt loam, 2 to 8 percent slopes, very stony		144B-BR	143-SL	144B-SL	
76B Dummerston-Macomber complex, 3 to 8 percent slopes, rocky					
76C Dummerston-Macomber complex, 8 to 15 percent slopes, rocky					
W Water					

Interpretations
Interpretations in the published 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.