Forest Value Groups (VT)

Grand Isle County, Vermont

[These ratings are based on the report "Forest Value Groups and Forest Soil Potential Study for Vermont Soils", revised December 12, 2003, by the USDA-NRCS. This report is available in the Statewide folder under Soils Information in Section II of the Vermont electronic Field Office Technical Guide (eFOTG). Website www.nrcs.usda.gov/technical/efotg/]

Map symbol	Soil map unit name	Vermont Forest Value Group	Relative value
AaA	Amenia silt loam, 0 to 3 percent slopes	1	100
AaB	Amenia silt loam, 3 to 8 percent slopes	1	100
AaC	Amenia silt loam, 8 to 15 percent slopes	1	100
AbA	Amenia very stony silt loam, 0 to 3 percent slopes	2	83
AbB	Amenia very stony silt loam, 3 to 8 percent slopes	2	83
AbC	Amenia very stony silt loam, 8 to 15 percent slopes	2	83
BaA	Balch peat	7	0
Bb	Beach and Dune sand	7	0
BcA	Benson rocky loam, over massive limestone, 0 to 3 percent slopes	6	31
BcB	Benson rocky loam, over massive limestone, 3 to 8 percent slopes	6	31
BcC	Benson rocky loam, over massive limestone, 8 to 15 percent slopes	6	31
BdA	Benson very rocky loam, over massive limestone, 0 to 3 percent slopes	6	31
BdB	Benson very rocky loam, over massive limestone, 3 to 8 percent slopes	6	31
BdC	Benson very rocky loam, over massive limestone, 8 to 15 percent slopes	6	31
BdD	Benson very rocky loam, over massive limestone, 15 to 25 percent slopes	6	31
BdE	Benson very rocky loam, over massive limestone, 25 to 35 percent slopes	6	31
BeA	Benson rocky silt loam, over shaly limestone, 0 to 3 percent slopes	6	31
BeB	Benson rocky silt loam, over shaly limestone, 3 to 8 percent slopes	6	31
BeC	Benson rocky silt loam, over shaly limestone, 8 to 15 percent slopes	6	31
BeD	Benson rocky silt loam, over shaly limestone, 15 to 25 percent slopes	6	31
BeE	Benson rocky silt loam, over shaly limestone, 25 to 35 percent slopes	6	31
BeF	Benson rocky silt loam, over shaly limestone, 35 to 50 percent slopes	6	31
BfB	Benson very rocky silt loam, over shaly limestone, 3 to 8 percent slopes	6	31
BfC	Benson very rocky silt loam, over shaly limestone, 8 to 15 percent slopes	6	31
BfD	Benson very rocky silt loam, over shaly limestone, 15 to 25 percent slopes	6	31
BfE	Benson very rocky silt loam, over shaly limestone, 25 to 50 percent slopes	6	31
CaA	Carlisle muck	7	0
CbA	Covington silty clay loam, 0 to 3 percent slopes	6	31
CbB	Covington silty clay loam, 3 to 8 percent slopes	6	31
EaA	Elmwood fine sandy loam, 0 to 3 percent slopes	2	83
EaB	Elmwood fine sandy loam, 3 to 8 percent slopes	2	83
FaA	Fresh water marsh	7	0
Gr	Pits, Sand, and Pits, gravel	7	0
KaA	Kars fine sandy loam, 0 to 3 percent slopes	2	83
KaB	Kars fine sandy loam, 3 to 8 percent slopes	2	83
KaC	Kars fine sandy loam, 8 to 15 percent slopes	2	83
KaD	Kars fine sandy loam, 15 to 25 percent slopes	3	74
KaE	Kars fine sandy loam, 25 to 50 percent slopes	4	63
KbA	Kendaia silt loam, 0 to 3 percent slopes	5	51
KbB	Kendaia silt loam, 3 to 8 percent slopes	5	51
KcA	Kendaia very stony silt loam, 0 to 3 percent slopes	5	51
KcB	Kendaia very stony silt loam, 3 to 8 percent slopes	5	51
LaA	Livingston silty clay loam, 0 to 3 percent slopes	7	0
LbA	Lyons silt loam, 0 to 3 percent slopes	6	31

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Map symbol	Soil map unit name	Vermont Forest Value Group	Relative value
LcA	Lyons very stony silt loam, 0 to 3 percent slopes	6	31
MaA	Melrose fine sandy loam, 0 to 3 percent slopes	4	63
MaB	Melrose fine sandy loam, 3 to 8 percent slopes	4	63
MaC	Melrose fine sandy loam, 8 to 15 percent slopes	4	63
MaD	Melrose fine sandy loam, 15 to 25 percent slopes	4	63
NaA	Nellis silt loam, 0 to 3 percent slopes	1	100
NaB	Nellis silt loam, 3 to 8 percent slopes	1	100
NaC	Nellis silt loam, 8 to 15 percent slopes	1	100
NaD	Nellis silt loam, 15 to 25 percent slopes	2	83
NbA	Nellis very stony silt loam, 0 to 3 percent slopes	2	83
NbB	Nellis very stony silt loam, 3 to 8 percent slopes	2	83
NbC	Nellis very stony silt loam, 8 to 15 percent slopes	2	83
NbD	Nellis very stony silt loam, 15 to 25 percent slopes	3	74
Qu	Pits, quarry	7	0
SaB	St. Albans-Dutchess loams, 3 to 8 percent slopes	3	74
SbB	St. Albans-Dutchess rocky loams, 3 to 8 percent slopes	3	74
SbC	St. Albans-Dutchess rocky loams, 8 to 15 percent slopes	3	74
ScB	St. Albans-Dutchess very rocky loams, 3 to 8 percent slopes	4	63
ScD	St. Albans-Dutchess very rocky loams, 15 to 25 percent slopes	5	51
SdA	Swanton fine sandy loam, 0 to 3 percent slopes	4	63
SdB	Swanton fine sandy loam, 3 to 8 percent slopes	4	63
VaA	Vergennes silty clay loam, 0 to 3 percent slopes	3	74
VaB	Vergennes silty clay loam, 3 to 8 percent slopes	3	74
W	Water	7	0
WaA	Whately loam, 0 to 3 percent slopes	6	31

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This table shows, for the map units in this survey area, the Vermont Forest Value Groups and relative values for woodland production and management. These groups are intended to provide information for planners and decision makers about the relative potential of individual soils for woodland management. Forest Value Group ratings do not constitute a recommendation for land use.

The potential for producing and harvesting timber is very high in Forest Value Group 1, high in Forest Value Group 2, moderate in Forest Value Group 3, moderately low in Forest Value Group 4, low in Forest Value Group 5, and very low in Forest Value Group 6. Forest Value Group 7 has very limited potential for commercial forestry.

The Forest Value Groups are based on index numbers called "relative values." These numbers do not represent dollar net returns for a given forestry use. They do not show the absolute profitability of woodland production on a specific map unit, but they can be used to compare the potential profitability of woodland production on different soils.

A forest soil potential study led by the Natural Resources Conservation Service (NRCS) and detailed in the report "Forest Value Groups and Forest Soil Potential Study for Vermont Soils" formed the basis for the development of the Forest Value Groups and relative values. This study determined the relative costs associated with overcoming various soil limitations as applied to woodland productivity and management. The criteria used in the study include the following:

• Sugar maple was used as the indicator species for northern hardwoods on most of the map units.

• For soils that formed in glaciofluvial deposits (generally sandy and/or gravelly soils), eastern white pine, which tends to dominate northern hardwoods, was used as the indicator species.

• Several hundred map units were considered to have very limited potential for commercial forestry. These map units were given a relative value of 0 and were assigned to Forest Value Group 7. When necessary, the potential of these map units should be evaluated on a case-by-case basis. The map units with a relative value of 0 are made up primarily of:

Organic soils (Histosols);
Soils with a cryic soil temperature regime (generally above an elevation of 2,500 to 3,000 feet);
Miscellaneous areas (e.g., urban land, quarries, sand pits, and gravel pits);
Very poorly drained mineral soils; and
Soils with slopes of more than 60 percent.

• The forest soil potential ratings are based on the integration of numerous data derived from the literature and from the technical expertise of specialists in the field of silviculture in Vermont. Some of these data are estimates. Potential yields on specific map units are examples of estimates used in the report. The forest soil potential ratings are only as accurate as the estimates used to derive them. The estimates and the ratings are subject to change as more precise data become available.

• Monetary benefits and costs associated with potential yields and corrective measures can change as a result of inflation, fluctuations in market value, or technological advances. Such changes can affect the forest soil potential ratings and thereby warrant an update of the study.

The Forest Value Group designations can be used for many resource management activities, including:

• Design and implementation of Forest Land Evaluation and Site Assessment (FLESA) systems;
• Evaluation of primary and secondary forest soils under criterion 9C of Vermont's Land Use and Development Law, Act 250;
• Rating of forest soils for appraisal under Vermont's Use Value Program of Agricultural and Forest Land;
• Assessment of forest soils by private land trusts, landowners, bankers, and real estate agents; and
• Broad resource planning by State agencies and town and regional planning commissions.

With the exception of broad planning activities, onsite investigations are recommended when the information in this table is used. These investigations are needed:

• to identify variations in site conditions (e.g., stoniness, aspect, rock outcrops, and wetness)within a map unit delineation that may affect tree growth;

• to identify areas within a map unit that may be unsuitable for timber harvesting because they have slopes of 25 to 60 percent;

• to identify the unique landscape characteristics of a map unit delineation. For example, there are numerous delineations of Lyman-Tunbridge complex, 3 to 8 percent slopes, throughout the State. In some instances, however, these delineations may be inaccessible because of irregular slope patterns or because of large streams and drainageways. These site characteristics can result in small, inefficient tract sizes; may hamper the use of logging equipment; and can make a site poorly suited to forestry without expensive land shaping.