

Forest Value Groups (VT)

Chittenden 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
AdA	Adams and Windsor loamy sands, 0 to 5 percent slopes	2	83
AdB	Adams and Windsor loamy sands, 5 to 12 percent slopes	2	83
AdD	Adams and Windsor loamy sands, 12 to 30 percent slopes	3	74
AdE	Adams and Windsor loamy sands, 30 to 60 percent slopes	3	74
AgA	Agawam fine sandy loam, 0 to 5 percent slopes	2	83
AgD	Agawam fine sandy loam, 12 to 30 percent slopes	3	74
AgE	Agawam fine sandy loam, 30 to 60 percent slopes	4	63
An	Alluvial land	7	0
Au	Au Gres fine sandy loam	5	51
Be	Beaches	7	0
BIA	Belgrade and Eldridge soils, 0 to 3 percent slopes	3	74
BIB	Belgrade and Eldridge soils, 3 to 8 percent slopes	3	74
BIC	Belgrade and Eldridge soils, 8 to 15 percent slopes	3	74
BID	Belgrade and Eldridge soils, 15 to 25 percent slopes	3	74
Bo	Blown-out land	7	0
Br	Borrow pits	7	0
CaA	Cabot stony silt loam, 0 to 3 percent slopes	5	51
CaC	Cabot stony silt loam, 3 to 15 percent slopes	5	51
CbA	Cabot extremely stony silt loam, 0 to 3 percent slopes	6	31
CbD	Cabot extremely stony silt loam, 3 to 25 percent slopes	6	31
CoA	Colton gravelly loamy sand, 0 to 5 percent slopes	2	83
CoB	Colton gravelly loamy sand, 5 to 12 percent slopes	2	83
CoC	Colton gravelly loamy sand, 12 to 20 percent slopes	3	74
CsD	Colton and Stetson soils, 20 to 30 percent slopes	2	83
CsE	Colton and Stetson soils, 30 to 60 percent slopes	3	74
Cv	Covington silty clay	6	31
DdA	Duane and Deerfield soils, 0 to 5 percent slopes	1	100
DdB	Duane and Deerfield soils, 5 to 12 percent slopes	1	100
DdC	Duane and Deerfield soils, 12 to 20 percent slopes	2	83
EwA	Enosburg and Whately soils, 0 to 3 percent slopes	5	51
EwB	Enosburg and Whately soils, 3 to 8 percent slopes	5	51
FaC	Farmington extremely rocky loam, 5 to 20 percent slopes	6	31
FaE	Farmington extremely rocky loam, 20 to 60 percent slopes	6	31
FsB	Farmington-Stockbridge rocky loams, 5 to 12 percent slopes	3	74
FsC	Farmington-Stockbridge rocky loams, 12 to 20 percent slopes	3	74
FsE	Farmington-Stockbridge rocky loams, 20 to 60 percent slopes	5	51
Fu	Fill land	7	0
Fw	Fresh water marsh	7	0
GeB	Georgia stony loam, 3 to 8 percent slopes	3	74
GeC	Georgia stony loam, 8 to 15 percent slopes	3	74
GgC	Georgia extremely stony loam, 0 to 15 percent slopes	4	63
GgE	Georgia extremely stony loam, 15 to 60 percent slopes	5	51
Gpi	Pits, sand and Pits, gravel	7	0
GrA	Groton gravelly fine sandy loam, 0 to 5 percent slopes	2	83

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GrB	Groton gravelly fine sandy loam, 5 to 12 percent slopes	2	83
GrC	Groton gravelly fine sandy loam, 12 to 20 percent slopes	3	74
GrD	Groton gravelly fine sandy loam, 20 to 30 percent slopes	3	74
GrE	Groton gravelly fine sandy loam, 30 to 60 percent slopes	3	74
Hf	Hadley very fine sandy loam	1	100
Hh	Hadley very fine sandy loam, frequently flooded	1	100
HIB	Hartland very fine sandy loam, 2 to 6 percent slopes	1	100
HIC	Hartland very fine sandy loam, 6 to 12 percent slopes	1	100
HID	Hartland very fine sandy loam, 12 to 25 percent slopes	2	83
HIE	Hartland very fine sandy loam, 25 to 60 percent slopes	3	74
HnA	Hinesburg fine sandy loam, 0 to 3 percent slopes	1	100
HnB	Hinesburg fine sandy loam, 3 to 8 percent slopes	1	100
HnC	Hinesburg fine sandy loam, 8 to 15 percent slopes	1	100
HnD	Hinesburg fine sandy loam, 15 to 25 percent slopes	2	83
HnE	Hinesburg fine sandy loam, 25 to 60 percent slopes	3	74
Le	Limerick silt loam	6	31
Lf	Limerick silt loam, very wet	6	31
Lh	Livingston clay	7	0
Lk	Livingston silty clay, occasionally flooded	7	0
LmB	Lyman-Marlow rocky loams, 5 to 12 percent slopes	4	63
LmC	Lyman-Marlow rocky loams, 12 to 20 percent slopes	5	51
Lss	Limit of detailed soil survey	7	0
LyD	Lyman-Marlow very rocky loams, 5 to 30 percent slopes	5	51
LyE	Lyman-Marlow very rocky loams, 30 to 60 percent slopes	6	31
MaB	Marlow stony loam, 5 to 12 percent slopes	3	74
MaC	Marlow stony loam, 12 to 20 percent slopes	3	74
MaD	Marlow stony loam, 20 to 30 percent slopes	3	74
MeC	Marlow extremely stony loam, 5 to 20 percent slopes	4	63
MeE	Marlow extremely stony loam, 20 to 60 percent slopes	6	31
MnC	Massena stony silt loam, 0 to 15 percent slopes	4	63
MoC	Massena extremely stony silt loam, 0 to 15 percent slopes	5	51
Mp	Muck and Peat	7	0
MuD	Munson and Belgrade silt loams, 12 to 25 percent slopes	5	51
MyB	Munson and Raynham silt loams, 2 to 6 percent slopes	5	51
MyC	Munson and Raynham silt loams, 6 to 12 percent slopes	5	51
PaB	Palatine silt loam, 3 to 8 percent slopes	1	100
PaC	Palatine silt loam, 8 to 15 percent slopes	1	100
PaD	Palatine silt loam, 15 to 25 percent slopes	2	83
PaE	Palatine silt loam, 25 to 60 percent slopes	3	74
Pc	Peacham stony silt loam	7	0
PeA	Peru stony loam, 0 to 5 percent slopes	3	74
PeB	Peru stony loam, 5 to 12 percent slopes	3	74
PeC	Peru stony loam, 12 to 20 percent slopes	3	74
PeD	Peru stony loam, 20 to 30 percent slopes	3	74
PsC	Peru extremely stony loam, 0 to 20 percent slopes	4	63
PsE	Peru extremely stony loam, 20 to 60 percent slopes	5	51

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Map symbol	Soil map unit name	Vermont Forest Value Group	Relative value
Qd	Quarries	7	0
Rk	Rock land	7	0
ScA	Scantic silt loam, 0 to 2 percent slopes	6	31
ScB	Scantic silt loam, 2 to 6 percent slopes	6	31
Sd	Scarboro loam	7	0
StA	Stetson gravelly fine sandy loam, 0 to 5 percent slopes	1	100
StB	Stetson gravelly fine sandy loam, 5 to 12 percent slopes	1	100
StC	Stetson gravelly fine sandy loam, 12 to 20 percent slopes	1	100
SuB	Stockbridge and Nellis stony loams, 3 to 8 percent slopes	1	100
SuC	Stockbridge and Nellis stony loams, 8 to 15 percent slopes	1	100
SuD	Stockbridge and Nellis stony loams, 15 to 25 percent slopes	2	83
SxC	Stockbridge and Nellis extremely stony loams, 3 to 15 percent slopes	3	74
SxE	Stockbridge and Nellis extremely stony loams, 15 to 60 percent slopes	4	63
TeE	Terrace escarpments, silty and clayey	7	0
VeB	Vergennes clay, 2 to 6 percent slopes	3	74
VeC	Vergennes clay, 6 to 12 percent slopes	3	74
VeD	Vergennes clay, 12 to 25 percent slopes	4	63
VeE	Vergennes clay, 25 to 60 percent slopes	4	63
W	Water	7	0
Wo	Winooski very fine sandy loam	1	100

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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.