Soil-based Residential Wastewater Disposal Ratings (VT)

Rutland County, Vermont

[These ratings are based on a review of criteria set forth in the Vermont 2007 Environmental Protection Rules]

Suitability subgroup	Map symbol	Soil map unit name
IIh	1B	Marlow fine sandy loam, 3 to 8 percent slopes
IIh	1C	Marlow fine sandy loam, 8 to 15 percent slopes
IIIe	1D	Marlow fine sandy loam, 15 to 25 percent slopes
IIh	2C	Marlow fine sandy loam, 8 to 15 percent slopes, very stony
IIIe	2D	Marlow fine sandy loam, 15 to 35 percent slopes, very stony
IVd	2E	Marlow fine sandy loam, 35 to 60 percent slopes, very stony
IIh	3B	Peru gravelly fine sandy loam, 3 to 8 percent slopes
IIh	3C	Peru gravelly fine sandy loam, 8 to 15 percent slopes
IIh	4B	Peru gravelly fine sandy loam, 3 to 8 percent slopes, very stony
IIh	4C	Peru gravelly fine sandy loam, 8 to 15 percent slopes, very stony
IIIe	4D	Peru gravelly fine sandy loam, 15 to 25 percent slopes, very stony
IVa	6A	Cabot gravelly fine sandy loam, 0 to 8 percent slopes, very stony
IIId	7C	Brayton loam, 8 to 15 percent slopes, very stony
V	9	Pits-Dumps complex
IVc	11C	Taconic-Hubbardton complex, 8 to 25 percent slopes, very rocky
IVb	12F	Taconic-Hubbardton-Macomber complex, 25 to 80 percent slopes, very rocky
Ia	13B	Hinckley gravelly loamy fine sand, 0 to 8 percent slopes
Ia	13C	Hinckley gravelly loamy fine sand, 8 to 15 percent slopes
Ib	13D	Hinckley gravelly loamy fine sand, 15 to 25 percent slopes
IIe	13E	Hinckley gravelly loamy fine sand, 25 to 40 percent slopes
IIh	14A	Sudbury fine sandy loam, 0 to 3 percent slopes
IIh	14B	Sudbury fine sandy loam, 3 to 8 percent slopes
IVa	15A	Walpole fine sandy loam, 0 to 5 percent slopes
Ia	18B	Windsor loamy sand, 3 to 8 percent slopes
Ia	18C	Windsor loamy sand, 8 to 15 percent slopes
Ib	18D	Windsor loamy sand, 15 to 25 percent slopes
IIe	18E	Windsor loamy sand, 25 to 60 percent slopes
IVa	21	Rippowam fine sandy loam
IVa	22	Saco mucky silt loam
IVa	23	Adrian muck
IVa	24	Pinnebog muck
IIIc	25A	Belgrade silt loam, 0 to 3 percent slopes
IIIc	25B	Belgrade silt loam, 3 to 8 percent slopes
IIId	25C	Belgrade silt loam, 8 to 15 percent slopes
IVa	26A	Raynham silt loam, 0 to 4 percent slopes

Soil-based Residential Wastewater Disposal Ratings (VT)

Rutland County, Vermont

Suitability subgroup	Map symbol	Soil map unit name
V	28	Udifluvents and Fluvaquents, nearly level
V	29	Histosols and Aquents, ponded
IIh	30B	Paxton fine sandy loam, 2 to 8 percent slopes
IIh	30C	Paxton fine sandy loam, 8 to 15 percent slopes
IIIe	30D	Paxton fine sandy loam, 15 to 25 percent slopes
IIh	31B	Paxton fine sandy loam, 2 to 8 percent slopes, very stony
IIh	31C	Paxton fine sandy loam, 8 to 15 percent slopes, very stony
IIIe	31D	Paxton fine sandy loam, 15 to 25 percent slopes, very stony
IVd	31E	Paxton fine sandy loam, 25 to 35 percent slopes, very stony
IIh	38A	Tisbury silt loam, 0 to 3 percent slopes
IIc	39B	Galway-Nellis-Farmington complex, 3 to 8 percent slopes
IIc	40C	Galway-Nellis-Farmington complex, 8 to 15 percent slopes, rocky
IId	40D	Galway-Nellis-Farmington complex, 15 to 25 percent slopes, rocky
IIIa	41C	Farmington-Galway-Galoo complex, 5 to 25 percent slopes, very rocky
IVb	41E	Farmington-Galway-Galoo complex, 25 to 50 percent slopes, very rocky
IIc	42C	Macomber-Taconic complex, 8 to 15 percent slopes, rocky
IId	42D	Macomber-Taconic complex, 15 to 25 percent slopes, rocky
IVb	42F	Macomber-Taconic complex, 25 to 80 percent slopes, rocky
IIIa	43C	Taconic-Macomber complex, 8 to 25 percent slopes, very rocky
Ic	44B	Dutchess silt loam, 3 to 8 percent slopes
Ic	44C	Dutchess silt loam, 8 to 15 percent slopes
Id	44D	Dutchess silt loam, 15 to 25 percent slopes
Ic	47B	Dutchess silt loam, 3 to 8 percent slopes, very stony
Ic	47C	Dutchess silt loam, 8 to 15 percent slopes, very stony
Id	47D	Dutchess silt loam, 15 to 25 percent slopes, very stony
IIf	47E	Dutchess silt loam, 25 to 60 percent slopes, very stony
IIIc	50A	Massena silt loam, 0 to 8 percent slopes
IIc	52B	Macomber-Dutchess complex, 3 to 8 percent slopes
IVa	53	Elvers silt loam
IIh	54A	Ninigret fine sandy loam, 0 to 4 percent slopes
Ia	56B	Colton-Duxbury complex, 2 to 8 percent slopes, very stony
Ia	56C	Colton-Duxbury complex, 8 to 15 percent slopes, very stony
Ib	56D	Colton-Duxbury complex, 15 to 25 percent slopes, very stony
IIe	56E	Colton-Duxbury complex, 25 to 50 percent slopes, very stony
Ia	57B	Duxbury-Colton complex, 2 to 8 percent slopes
Ia	58C	Colton-Duxbury complex, 8 to 15 percent slopes

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Suitability subgroup	Map symbol	Soil map unit name
Ib	58D	Colton-Duxbury complex, 15 to 25 percent slopes
IIh	59A	Deerfield loamy sand, 0 to 4 percent slopes
IIIc	61A	Eldridge fine sandy loam, 0 to 3 percent slopes
IIIc	61B	Eldridge fine sandy loam, 3 to 8 percent slopes
IVa	62	Enosburg loamy fine sand
IIa	64B	Stockbridge gravelly silt loam, 3 to 8 percent slopes
IIa	64C	Stockbridge gravelly silt loam, 8 to 15 percent slopes
IIb	64D	Stockbridge gravelly silt loam, 15 to 25 percent slopes
IIa	65B	Stockbridge gravelly silt loam, 3 to 8 percent slopes, very stony
IIa	65C	Stockbridge gravelly silt loam, 8 to 15 percent slopes, very stony
IIb	65D	Stockbridge gravelly silt loam, 15 to 25 percent slopes, very stony
IVd	65E	Stockbridge gravelly silt loam, 25 to 45 percent slopes, very stony
IIh	66B	Georgia and Amenia soils, 3 to 8 percent slopes
IIh	66C	Georgia and Amenia soils, 8 to 15 percent slopes
IIh	67B	Georgia and Amenia soils, 3 to 8 percent slopes, very stony
IIh	67C	Georgia and Amenia soils, 8 to 15 percent slopes, very stony
IIIe	67D	Georgia and Amenia soils, 15 to 25 percent slopes, very stony
IIIc	68A	Massena silt loam, 0 to 8 percent slopes, very stony
IIh	71A	Castile gravelly fine sandy loam, 0 to 3 percent slopes
IIIc	72A	Fredon gravelly loam, 0 to 3 percent slopes
IVa	73	Scarboro muck
IVa	80A	Kingsbury silty clay loam, 0 to 3 percent slopes
IVa	80B	Kingsbury silty clay loam, 3 to 8 percent slopes
IVa	81	Livingston silty clay loam
IIIc	82B	Vergennes clay, 3 to 8 percent slopes
IIId	82C	Vergennes clay, 8 to 15 percent slopes
IIIe	82D	Vergennes clay, 15 to 25 percent slopes
IVd	82E	Vergennes clay, 25 to 50 percent slopes
IVa	86	Linwood muck
IVa	88	Birdsall muck
IIa	90B	Hartland silt loam, 3 to 8 percent slopes
IIa	90C	Hartland silt loam, 8 to 15 percent slopes
IIb	90D	Hartland silt loam, 15 to 25 percent slopes
V	95	Udorthents loamy
V	96	Udipsamments, nearly level
Ia	97A	Warwick-Quonset complex, 0 to 3 percent slopes

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Rutland County, Vermont

Suitability subgroup	Map symbol	Soil map unit name
Ia	97B	Warwick-Quonset complex, 3 to 8 percent slopes
Ia	97C	Warwick-Quonset complex, 8 to 15 percent slopes
Ib	97D	Warwick-Quonset complex, 15 to 25 percent slopes
IIe	98E	Quonset-Warwick complex, 25 to 45 percent slopes
Ia	99B	Copake gravelly fine sandy loam, 2 to 8 percent slopes
Ia	104B	Groton gravelly loam, 2 to 8 percent slopes
IIIg	105	Tioga fine sandy loam
IIIb	106	Middlebury loam
IIIg	108	Hamlin silt loam
IIIb	109	Teel silt loam, sandy substratum
IVa	110	Limerick silt loam
IVa	111	Livingston silty clay loam, frequently flooded
Ia	118C	Adams loamy fine sand, 8 to 15 percent slopes
IVa	122B	Lyme fine sandy loam, 2 to 8 percent slopes, very stony
IIId	122C	Lyme fine sandy loam, 8 to 15 percent slopes, very stony
IIh	123B	Sheepscot fine sandy loam, 2 to 8 percent slopes
IIh	123C	Sheepscot fine sandy loam, 8 to 15 percent slopes
IIh	124B	Sunapee fine sandy loam, 3 to 8 percent slopes, very stony
IIh	124C	Sunapee fine sandy loam, 8 to 15 percent slopes, very stony
IIIe	124D	Sunapee fine sandy loam, 15 to 35 percent slopes, very stony
IVd	124E	Sunapee fine sandy loam, 35 to 50 percent slopes, very stony
Ic	125B	Berkshire gravelly fine sandy loam, 3 to 8 percent slopes, very stony
Ic	125C	Berkshire gravelly fine sandy loam, 8 to 15 percent slopes, very stony
Id	125D	Berkshire gravelly fine sandy loam, 15 to 35 percent slopes, very stony
IIf	125E	Berkshire gravelly fine sandy loam, 35 to 50 percent slopes, very stony
Ic	127C	Houghtonville gravelly fine sandy loam, 8 to 15 percent slopes, very stony
Id	127D	Houghtonville gravelly fine sandy loam, 15 to 35 percent slopes, very stony
IIf	127E	Houghtonville gravelly fine sandy loam, 35 to 60 percent slopes, very stony
IIc	128C	Rawsonville-Houghtonville complex, 8 to 15 percent slopes, rocky
IId	128D	Rawsonville-Houghtonville complex, 15 to 35 percent slopes, rocky
IVb	128E	Rawsonville-Houghtonville complex, 35 to 60 percent slopes, rocky
IIIa	129D	Killington-Rawsonville complex, 15 to 35 percent slopes, very rocky
IVb	129F	Killington-Rawsonville complex, 35 to 70 percent slopes, very rocky
IIc	130B	Tunbridge-Berkshire complex, 3 to 8 percent slopes, rocky
IIc	130C	Tunbridge-Berkshire complex, 8 to 15 percent slopes, rocky
IId	130D	Tunbridge-Berkshire complex, 15 to 35 percent slopes, rocky

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Suitability subgroup	Map symbol	Soil map unit name
IVb	130E	Tunbridge-Berkshire complex, 35 to 60 percent slopes, rocky
IIIa	131D	Lyman-Tunbridge-Rock outcrop complex, 15 to 35 percent slopes, very stony
IVb	131E	Lyman-Tunbridge-Rock outcrop complex, 35 to 60 percent slopes, very stony
IId	132C	Glebe-Stratton complex, 8 to 25 percent slopes, very stony
IVb	132E	Glebe-Stratton complex, 25 to 60 percent slopes, very stony
IVc	134F	Stratton-Londonderry-Ricker complex, 15 to 80 percent slopes, very rocky
IIIe	135D	Mundal loam, 15 to 35 percent slopes, very stony
IVd	135E	Mundal loam, 35 to 60 percent slopes, very stony
Ic	138C	Berkshire gravelly fine sandy loam, 8 to 15 percent slopes
IIh	139B	Sunapee fine sandy loam, 3 to 8 percent slopes
IIh	139C	Sunapee fine sandy loam, 8 to 15 percent slopes
IVc	140C	Benson very channery loam, 3 to 15 percent slopes
IVc	140D	Benson very channery loam, 15 to 25 percent slopes
IVb	140E	Benson very channery loam, 25 to 50 percent slopes
IIh	148B	Bomoseen and Pittstown soils, 2 to 8 percent slopes
IIh	148C	Bomoseen and Pittstown soils, 8 to 15 percent slopes
IIIe	148D	Bomoseen and Pittstown soils, 15 to 25 percent slopes
IIh	149B	Bomoseen and Pittstown soils, 3 to 8 percent slopes, very stony
IIh	149C	Bomoseen and Pittstown soils, 8 to 15 percent slopes, very stony
IIIe	149D	Bomoseen and Pittstown soils, 15 to 25 percent slopes, very stony
IVd	149E	Bomoseen and Pittstown soils, 25 to 40 percent slopes, very stony
IVa	150A	Peacham muck, 0 to 8 percent slopes
IVa	152	Lyons silt loam
IIh	161A	Elmridge sandy loam, 0 to 3 percent slopes
IIh	161B	Elmridge sandy loam, 3 to 8 percent slopes
IVa	163	Canandaigua silt loam
IIIg	175	Wappinger silt loam
IIIb	177	Pawling silt loam
IVb	202E	Rawsonville-Killington association, very hilly, very rocky
IIIe	203D	Peru-Marlow association, hilly, very stony
IIIf	205D	Tunbridge-Berkshire-Marlow association, hilly, rocky
IVb	213E	Glebe-Stratton association, very hilly, very rocky
IVb	221F	Tunbridge-Berkshire association, very steep, very stony
IId	402D	Tunbridge-Lyman association, hilly, rocky
IIId	403C	Brayton-Cabot-Pinnebog association, rolling, very stony
IId	405D	Tunbridge-Berkshire association, hilly, very rocky

Soil-based Residential Wastewater Disposal Ratings (VT)

Rutland County, Vermont

Suitability subgroup	Map symbol	Soil map unit name
Id	505D	Berkshire-Colton association, hilly, stony
IVb	702F	Killington-Ricker-Rock outcrop association, very steep, very stony
IIIe	703D	Mundal-Cabot association, hilly, very stony
IId	705D	Rawsonville-Houghtonville association, hilly, rocky
V	W	Water

Soil-based Residential Wastewater Disposal Ratings (VT)

This table indicates the suitability of the soils in the survey area for residential onsite waste disposal systems. The ratings in the table are based on the 2007 Vermont Environmental Protection Rules (Vermont Department of Environmental Conservation, Agency of Natural Resources). This rating system replaces that in the publication “Ancillary Soil Interpretation Ratings for On-site Sewage Disposal in Vermont,” published in January 1997 by the Natural Resources Conservation Service.

Included in onsite waste disposal systems are absorption fields, also known as leach fields, or trenches in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. There must be unsaturated soil material beneath the absorption field to filter the effluent effectively. Unsatisfactory performance, including excessively slow absorption of effluent, surfacing of effluent, and hillside seepage, can affect public health.

The ratings are represented by symbols for five interpretive groups and their subgroups. These groups and subgroups are described in the following paragraphs.

Group I soils are well suited to soil-based wastewater disposal systems. Good performance and low maintenance can be expected. The soils in this group are sandy and gravelly soils that formed in outwash and that have rapid permeability in the substratum and well drained soils that formed in till and that have a friable substratum with moderate permeability. Slopes generally are less than 20 percent.

• Map units in subgroup Ia have rapid permeability and slopes of less than 20 percent.

• Map units in subgroup Ib have rapid permeability and have slopes that range to more than 20 percent.

• Map units in subgroup Ic have moderate permeability and slopes of less than 20 percent.

• Map units in subgroup Id have moderate permeability and have slopes that range to more than 20 percent.

Group II soils are moderately suited to soil-based wastewater disposal systems. The group includes soils with moderately slow to very slow permeability; complexes in which one or more of the soils have bedrock at a moderate depth (20 to 40 inches); soils that would qualify for inclusion in group I but have slopes of more than 20 percent; soils that are subject to flooding; and soils that have a seasonal high water table at a depth of 18 inches or more.

• Map units in subgroup IIa have moderately slow to very slow permeability and slopes of less than 20 percent.

• Map units in subgroup IIb have moderately slow to very slow permeability and have slopes that range to more than 20 percent.

• Map units in subgroup IIc have bedrock at a moderate depth (20 to 40 inches) in some areas and have slopes of less than 20 percent.

• Map units in subgroup IId have bedrock at a moderate depth (20 to 40 inches) and have slopes that range to more than 20 percent.

• Map units in subgroup IIe have rapid permeability and slopes of more than 20 percent.

• Map units in subgroup IIf have moderate permeability and slopes of more than 20 percent.

• Map units previously assigned to subgroup IIg have been re-assigned to subgroup IIIg.

• Map units in subgroup IIh have a seasonal high water table at a depth of 18 inches or more and have slopes of less than 20 percent.

Group III map units are marginally suited to soil-based wastewater disposal systems. Intensive onsite investigation may be needed to locate suitable areas, or special design, extra maintenance, or costly alteration may be needed to overcome the soil-related limitations. In areas where the water table is at a shallow depth, seasonal onsite monitoring of the water table may be needed to determine whether the site is suitable. Some areas of any of the map units in group III may not be suitable for onsite waste disposal systems.

• Map units in subgroup IIIa have bedrock at a depth of less than 10 inches in some areas. Some map units are limited by slopes that range to more than 20 percent.

• Map units in subgroup IIIb are subject to flooding and have a seasonal high water table at a moderate depth.

• Map units in subgroup IIIc have a seasonal high water table at a depth of 1 foot or less and have slopes of 8 percent or less.

• Map units in subgroup IIId have a seasonal high water table at a depth of 1 foot or less and have slopes of 8 to 20 percent.

• Map units in subgroup IIIe generally have a seasonal high water table within a depth of 2 feet and have slopes that range to more than 20 percent.

• Map units in subgroup IIIf have a seasonal high water table and limited depth to bedrock. Some map units have slopes that range to more than 20 percent.

• Map units in subgroup IIIg are subject to flooding.

Group IV map units are not suited to soil-based wastewater disposal systems because of such limitations as wetness, depth to bedrock, restricted permeability, or slope.

• Map units in subgroup IVa are subject to excessive wetness.

• Map units in subgroup IVb are limited by the depth to bedrock and by slopes of more than 20 percent.

• Map units in subgroup IVc are not suited because of a very limited depth to bedrock and the slope.

• Map units in subgroup IVd have moderately slow to very slow permeability and have slopes of more than 20 percent. Some map units have a seasonal high water table.

Group V map units are not rated for soil-based wastewater disposal systems. This group includes miscellaneous areas that have been filled, excavated, regraded, or otherwise disturbed by human activities; areas that are mapped above the series level, such as Udorthents; and areas of water. The miscellaneous areas and the areas mapped above the series level have a wide range of soil properties. Onsite investigation is needed to determine the suitability of these areas for onsite waste disposal.

The ratings in this report are based on the installation of a new septic system for a new single-family home on a lot subdivided on or after June 14, 2002, in a municipality that has planning and zoning bylaws. The ratings do not necessarily apply to the siting of a replacement system for an existing residence. The ratings for lots subdivided before June 14, 2002, are based on a slope limitation of 30 percent, whereas the ratings in this table are based on a slope limitation of 20 percent. The ratings in this table do not take into consideration some site factors that can affect the placement of septic systems, such as wellhead and source protection areas, isolation distances, and the size of the parcel.

This table is intended for general planning purposes only and is not intended to replace or supercede an onsite soil investigation. These ratings apply only to land within the State of Vermont.