Sewage Disposal Onsite Septic Ratings (VT)

Chittenden County, Vermont

[These ratings are based on a review of criteria set forth in the Vermont 2002 Environmental Protection Rules]

On-site class	Map symbol	Soil map unit name
Ia	AdA	Adams and Windsor loamy sands, 0 to 5 percent slopes
Ia	AdB	Adams and Windsor loamy sands, 5 to 12 percent slopes
Ib	AdD	Adams and Windsor loamy sands, 12 to 30 percent slopes
IIe	AdE	Adams and Windsor loamy sands, 30 to 60 percent slopes
Ia	AgA	Agawam fine sandy loam, 0 to 5 percent slopes
Ib	AgD	Agawam fine sandy loam, 12 to 30 percent slopes
IIe	AgE	Agawam fine sandy loam, 30 to 60 percent slopes
V	An	Alluvial land
IIIc	Au	Au Gres fine sandy loam
V	Be	Beaches
IIIc	BlA	Belgrade and Eldridge soils, 0 to 3 percent slopes
IIIc	BlB	Belgrade and Eldridge soils, 3 to 8 percent slopes
IIId	BlC	Belgrade and Eldridge soils, 8 to 15 percent slopes
IIIe	BlD	Belgrade and Eldridge soils, 15 to 25 percent slopes
V	Bo	Blown-out land
V	Br	Borrow pits
IVa	CaA	Cabot stony silt loam, 0 to 3 percent slopes
IIId	CaC	Cabot stony silt loam, 3 to 15 percent slopes
IVa	CbA	Cabot extremely stony silt loam, 0 to 3 percent slopes
IIIe	CbD	Cabot extremely stony silt loam, 3 to 25 percent slopes
Ia	CoA	Colton gravelly loamy sand, 0 to 5 percent slopes
Ia	CoB	Colton gravelly loamy sand, 5 to 12 percent slopes
Ia	CoC	Colton gravelly loamy sand, 12 to 20 percent slopes
IIe	CsD	Colton and Stetson soils, 20 to 30 percent slopes
IIe	CsE	Colton and Stetson soils, 30 to 60 percent slopes
IVa	Cv	Covington silty clay
IIh	DdA	Duane and Deerfield soils, 0 to 5 percent slopes
IIh	DdB	Duane and Deerfield soils, 5 to 12 percent slopes
IIh	DdC	Duane and Deerfield soils, 12 to 20 percent slopes
IVa	EwA	Enosburg and Whately soils, 0 to 3 percent slopes
IVa	EwB	Enosburg and Whately soils, 3 to 8 percent slopes
IVc	FaC	Farmington extremely rocky loam, 5 to 20 percent slopes
IVb	FaE	Farmington extremely rocky loam, 20 to 60 percent slopes
IIIa	FsB	Farmington-Stockbridge rocky loams, 5 to 12 percent slopes
IIIa	FsC	Farmington-Stockbridge rocky loams, 12 to 20 percent slopes

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On-site class	Map symbol	Soil map unit name
IVb	FsE	Farmington-Stockbridge rocky loams, 20 to 60 percent slopes
V	Fu	Fill land
V	Fw	Fresh water marsh
IIh	GeB	Georgia stony loam, 3 to 8 percent slopes
IIh	GeC	Georgia stony loam, 8 to 15 percent slopes
IIh	GgC	Georgia extremely stony loam, 0 to 15 percent slopes
IIIe	GgE	Georgia extremely stony loam, 15 to 60 percent slopes
V	Gpi	Pits, sand and Pits, gravel
Ia	GrA	Groton gravelly fine sandy loam, 0 to 5 percent slopes
Ia	GrB	Groton gravelly fine sandy loam, 5 to 12 percent slopes
Ia	GrC	Groton gravelly fine sandy loam, 12 to 20 percent slopes
IIe	GrD	Groton gravelly fine sandy loam, 20 to 30 percent slopes
IIe	GrE	Groton gravelly fine sandy loam, 30 to 60 percent slopes
IIg	Hf	Hadley very fine sandy loam
IIg	Hh	Hadley very fine sandy loam, frequently flooded
IIa	HlB	Hartland very fine sandy loam, 2 to 6 percent slopes
IIa	HlC	Hartland very fine sandy loam, 6 to 12 percent slopes
IIb	HlD	Hartland very fine sandy loam, 12 to 25 percent slopes
IVd	HlE	Hartland very fine sandy loam, 25 to 60 percent slopes
IIh	HnA	Hinesburg fine sandy loam, 0 to 3 percent slopes
IIh	HnB	Hinesburg fine sandy loam, 3 to 8 percent slopes
IIh	HnC	Hinesburg fine sandy loam, 8 to 15 percent slopes
IIIe	HnD	Hinesburg fine sandy loam, 15 to 25 percent slopes
IVd	HnE	Hinesburg fine sandy loam, 25 to 60 percent slopes
IVa	Le	Limerick silt loam
IVa	Lf	Limerick silt loam, very wet
IVa	Lh	Livingston clay
IVa	Lk	Livingston silty clay, occasionally flooded
IIIf	LmB	Lyman-Marlow rocky loams, 5 to 12 percent slopes
IIIf	LmC	Lyman-Marlow rocky loams, 12 to 20 percent slopes
V	Lss	Limit of detailed soil survey
IIIf	LyD	Lyman-Marlow very rocky loams, 5 to 30 percent slopes
IVb	LyE	Lyman-Marlow very rocky loams, 30 to 60 percent slopes
IIh	MaB	Marlow stony loam, 5 to 12 percent slopes
IIh	MaC	Marlow stony loam, 12 to 20 percent slopes
IVd	MaD	Marlow stony loam, 20 to 30 percent slopes

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On-site class	Map symbol	Soil map unit name
IIh	MeC	Marlow extremely stony loam, 5 to 20 percent slopes
IVd	MeE	Marlow extremely stony loam, 20 to 60 percent slopes
IIId	MnC	Massena stony silt loam, 0 to 15 percent slopes
IIId	MoC	Massena extremely stony silt loam, 0 to 15 percent slopes
V	Mp	Muck and Peat
IIIe	MuD	Munson and Belgrade silt loams, 12 to 25 percent slopes
IVa	MyB	Munson and Raynham silt loams, 2 to 6 percent slopes
IIId	MyC	Munson and Raynham silt loams, 6 to 12 percent slopes
IIc	PaB	Palatine silt loam, 3 to 8 percent slopes
IIc	PaC	Palatine silt loam, 8 to 15 percent slopes
IId	PaD	Palatine silt loam, 15 to 25 percent slopes
IVb	PaE	Palatine silt loam, 25 to 60 percent slopes
IVa	Pc	Peacham stony silt loam
IIh	PeA	Peru stony loam, 0 to 5 percent slopes
IIh	PeB	Peru stony loam, 5 to 12 percent slopes
IIh	PeC	Peru stony loam, 12 to 20 percent slopes
IVd	PeD	Peru stony loam, 20 to 30 percent slopes
IIh	PsC	Peru extremely stony loam, 0 to 20 percent slopes
IVd	PsE	Peru extremely stony loam, 20 to 60 percent slopes
V	Qd	Quarries
V	Rk	Rock land
IVa	ScA	Scantic silt loam, 0 to 2 percent slopes
IVa	ScB	Scantic silt loam, 2 to 6 percent slopes
IVa	Sd	Scarboro loam
Ia	StA	Stetson gravelly fine sandy loam, 0 to 5 percent slopes
Ia	StB	Stetson gravelly fine sandy loam, 5 to 12 percent slopes
Ia	StC	Stetson gravelly fine sandy loam, 12 to 20 percent slopes
IIa	SuB	Stockbridge and Nellis stony loams, 3 to 8 percent slopes
IIa	SuC	Stockbridge and Nellis stony loams, 8 to 15 percent slopes
IIb	SuD	Stockbridge and Nellis stony loams, 15 to 25 percent slopes
IIa	SxC	Stockbridge and Nellis extremely stony loams, 3 to 15 percent slopes
IIb	SxE	Stockbridge and Nellis extremely stony loams, 15 to 60 percent slopes
V	TeE	Terrace escarpments, silty and clayey
IIIc	VeB	Vergennes clay, 2 to 6 percent slopes
IIId	VeC	Vergennes clay, 6 to 12 percent slopes
IIIe	VeD	Vergennes clay, 12 to 25 percent slopes

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On-site class	Map symbol	Soil map unit name
IVd	VeE	Vergennes clay, 25 to 60 percent slopes
V	W	Water
IIIb	Wo	Winooski very fine sandy loam

Sewage Disposal Onsite Septic 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 2002 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 onsite waste 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 onsite waste 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 have slopes of more than 20 percent.
- Map units in subgroup IIf have moderate permeability and slopes of more than 20 percent.
- Map units in subgroup IIg are subject to flooding.
- 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 onsite waste 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.

Group IV map units are not suited to onsite waste 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.

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- 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 onsite waste 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.