

## Soil-based Residential Wastewater Disposal Ratings (VT)

Addison 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
Ia	AdA	Adams loamy fine sand, 0 to 5 percent slopes
Ia	AdB	Adams loamy fine sand, 5 to 12 percent slopes
Ib	AdD	Adams loamy fine sand, 12 to 30 percent slopes
IIe	AdE	Adams loamy fine sand, 30 to 50 percent slopes
IIh	AmB	Amenia stony loam, 0 to 8 percent slopes
IIh	AmC	Amenia stony loam, 8 to 15 percent slopes
IIh	AsC	Amenia extremely stony loam, 0 to 15 percent slopes
IIIe	AsD	Amenia extremely stony loam, 15 to 25 percent slopes
IIh	BeA	Berkshire and Marlow stony loams, 0 to 3 percent slopes
IIh	BeB	Berkshire and Marlow stony loams, 3 to 12 percent slopes
IIIe	BeC	Berkshire and Marlow stony loams, 12 to 25 percent slopes
IIh	BsC	Berkshire and Marlow extremely stony loams, 3 to 20 percent slopes
IVd	BsE	Berkshire and Marlow extremely stony loams, 20 to 50 percent slopes
IIId	BuC	Buckland extremely stony loam, 3 to 15 percent slopes
IIIe	BuD	Buckland extremely stony loam, 15 to 25 percent slopes
IVa	CaB	Cabot stony loam, 0 to 8 percent slopes
IIId	CbC	Cabot extremely stony loam, 0 to 15 percent slopes
IIIf	CIC	Calais and Glover soils, 5 to 20 percent slopes
IVb	CIE	Calais and Glover soils, 20 to 50 percent slopes
IVa	Cn	Canandaigua silt loam
V	Co	Cobbly alluvial land
Ia	CtA	Colton gravelly sandy loam, 0 to 5 percent slopes
Ia	CtB	Colton gravelly sandy loam, 5 to 12 percent slopes
Ib	CtD	Colton gravelly sandy loam, 12 to 30 percent slopes
IIe	CtE	Colton gravelly sandy loam, 30 to 50 percent slopes
IVa	Cv	Covington silty clay, flooded
IVa	Cw	Covington and Panton silty clays
IIh	DaA	Duane fine sandy loam, 0 to 5 percent slopes
IIh	DaB	Duane fine sandy loam, 5 to 12 percent slopes
Ic	DcB	Dutchess stony loam, 3 to 8 percent slopes
Ic	DcC	Dutchess stony loam, 8 to 15 percent slopes
Id	DcD	Dutchess stony loam, 15 to 25 percent slopes
Ic	DsC	Dutchess extremely stony loam, 3 to 15 percent slopes
Id	DsE	Dutchess extremely stony loam, 15 to 50 percent slopes
IIh	EIB	Elmwood fine sandy loam, coarse variant, 0 to 8 percent slopes

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IIh	EIC	Elmwood fine sandy loam, coarse variant, 8 to 15 percent slopes
IVc	FaC	Farmington extremely rocky silt loam, 5 to 20 percent slopes
IVb	FaE	Farmington extremely rocky silt loam, 20 to 50 percent slopes
IIc	FdB	Farmington stony silt loam, moderately deep variant, 3 to 8 percent slopes
IIc	FdC	Farmington stony silt loam, moderately deep variant, 8 to 15 percent slopes
IIId	FdD	Farmington stony silt loam, moderately deep variant, 15 to 25 percent slopes
IVb	FdE	Farmington stony silt loam, moderately deep variant, 25 to 50 percent slopes
IIIa	FnB	Farmington-Nellis rocky complex, 5 to 12 percent slopes
IIIa	FnC	Farmington-Nellis rocky complex, 12 to 20 percent slopes
IVb	FnD	Farmington-Nellis rocky complex, 20 to 30 percent slopes
V	Fw	Fresh water marsh
V	Gp	Gravel pits
IIIg	Hf	Hadley very fine sandy loam
IIIg	Hh	Hadley very fine sandy loam, frequently flooded
IVa	Le	Limerick silt loam
IVa	Lf	Limerick silt loam, very wet
IVa	Lh	Livingston clay
IVa	Lk	Livingston clay, flooded
IIIa	LmB	Lyman-Berkshire rocky complex, 5 to 12 percent slopes
IIIa	LmC	Lyman-Berkshire rocky complex, 12 to 20 percent slopes
IIIa	LxC	Lyman-Berkshire very rocky complex, 5 to 20 percent slopes
IVb	LxE	Lyman-Berkshire very rocky complex, 20 to 50 percent slopes
IIIc	MaA	Massena stony silt loam, 0 to 3 percent slopes
IIIc	MnB	Massena extremely stony silt loam, 0 to 8 percent slopes
IIa	MrA	Melrose fine sandy loam, 0 to 3 percent slopes
IIa	MrB	Melrose fine sandy loam, 3 to 8 percent slopes
IIa	MrC	Melrose fine sandy loam, 8 to 15 percent slopes
IIb	MrD	Melrose fine sandy loam, 15 to 25 percent slopes
IVd	MrE	Melrose fine sandy loam, 25 to 50 percent slopes
V	Mv	Muck and Peat
IIIa	NaB	Nassau-Dutchess rocky complex, 3 to 8 percent slopes
IIIa	NaC	Nassau-Dutchess rocky complex, 8 to 15 percent slopes
IIIa	NaD	Nassau-Dutchess rocky complex, 15 to 25 percent slopes
IVc	NdC	Nassau extremely rocky silt loam, 3 to 25 percent slopes
IIa	NeB	Nellis stony loam, 3 to 8 percent slopes
IIa	NeC	Nellis stony loam, 8 to 15 percent slopes

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IIb	NeD	Nellis stony loam, 15 to 25 percent slopes
IIa	NsC	Nellis extremely stony loam, 3 to 15 percent slopes
IIb	NsD	Nellis extremely stony loam, 15 to 50 percent slopes
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
IIh	PsC	Peru extremely stony loam, 0 to 20 percent slopes
IVd	PsD	Peru extremely stony loam, 20 to 50 percent slopes
V	Qu	Quarry
IVa	RaB	Raynham silt loam, 0 to 6 percent slopes
IIId	RaC	Raynham silt loam, 6 to 12 percent slopes
IIIe	RaD	Raynham silt loam, 12 to 25 percent slopes
V	Rk	Rock land
V	RL	Rubble land
Ic	SaB	Salmon very fine sandy loam, 2 to 6 percent slopes
Ic	SaC	Salmon very fine sandy loam, 6 to 12 percent slopes
Id	SaE	Salmon very fine sandy loam, 12 to 50 percent slopes
Ia	StA	Stetson gravelly fine sandy loam, 0 to 5 percent slopes
Ia	StB	Stetson gravelly fine sandy loam, 5 to 12 percent slopes
Ib	StD	Stetson gravelly fine sandy loam, 12 to 30 percent slopes
IIe	StE	Stetson gravelly fine sandy loam, 30 to 50 percent slopes
IVa	Sw	Swanton fine sandy loam
IIIc	VgB	Vergennes clay, 2 to 6 percent slopes
IIId	VgC	Vergennes clay, 6 to 12 percent slopes
IIIe	VgD	Vergennes clay, 12 to 25 percent slopes
IVd	VgE	Vergennes clay, 25 to 50 percent slopes
IIIf	VrB	Vergennes rocky clay, moderately shallow variant, 2 to 6 percent slopes
IIIf	VrC	Vergennes rocky clay, moderately shallow variant, 6 to 12 percent slopes
IIIf	VrD	Vergennes rocky clay, moderately shallow variant, 12 to 25 percent slopes
V	W	Water
IVa	Wa	Walpole silt loam
IIIb	Wo	Winooski very fine sandy loam

## 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.

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- 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.