

Soil-based Residential Wastewater Disposal Ratings (VT)

Lamoille 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	AdB	Adams loamy fine sand, 2 to 8 percent slopes
Ia	AdC	Adams loamy fine sand, 8 to 15 percent slopes
Ib	AdD	Adams loamy fine sand, 15 to 25 percent slopes
Ile	AdE	Adams loamy fine sand, 25 to 50 percent slopes
Ilc	AeC	Adams-Adams variant loamy fine sands, rocky, 8 to 15 percent slopes
Ild	AeD	Adams-Adams variant loamy fine sands, rocky, 15 to 25 percent slopes
IVb	AeE	Adams-Adams variant loamy fine sands, rocky, 25 to 50 percent slopes
Ia	AgB	Allagash very fine sandy loam, 2 to 8 percent slopes
Ic	BeB	Berkshire fine sandy loam, 3 to 8 percent slopes
Ic	BeC	Berkshire fine sandy loam, 8 to 15 percent slopes
Id	BeD	Berkshire fine sandy loam, 15 to 25 percent slopes
Ic	BkB	Berkshire very stony fine sandy loam, 3 to 8 percent slopes
Ic	BkC	Berkshire very stony fine sandy loam, 8 to 15 percent slopes
Id	BkD	Berkshire very stony fine sandy loam, 15 to 25 percent slopes
Ilc	BrB	Berkshire-Tunbridge fine sandy loams, rocky, 3 to 8 percent slopes
Ilc	BrC	Berkshire-Tunbridge fine sandy loams, rocky, 8 to 15 percent slopes
Ild	BrD	Berkshire-Tunbridge fine sandy loams, rocky, 15 to 25 percent slopes
IVd	BtE	Berkshire and Marlow soils, 25 to 50 percent slopes
IIIc	BuB	Boothbay silt loam, 3 to 8 percent slopes
IIId	BuC	Boothbay silt loam, 8 to 15 percent slopes
IIIe	BuD	Boothbay silt loam, 15 to 25 percent slopes
V	Bx	Borohemists, deep
V	By	Borohemists, moderately deep over loamy substratum
Ia	CoB	Colton-Duxbury complex, 2 to 8 percent slopes
Ia	CoC	Colton-Duxbury complex, 8 to 15 percent slopes
Ib	CoD	Colton-Duxbury complex, 15 to 25 percent slopes
Ile	CoE	Colton-Duxbury complex, 25 to 50 percent slopes
IIh	CrB	Croghan loamy fine sand, 2 to 8 percent slopes
V	FrB	Fragiaquepts and Haplaquepts, 0 to 8 percent slopes
IIIg	Ha	Hamlin silt loam
V	Hs	Histic Fluvaquents, frequently flooded
IIIb	Le	Limerick variant silt loam
IVb	LoE	Londonderry-Stratton complex, 25 to 60 percent slopes
IIIa	LyB	Lyman-Tunbridge fine sandy loams, very rocky, 3 to 8 percent slopes
IIIa	LyC	Lyman-Tunbridge fine sandy loams, very rocky, 8 to 15 percent slopes

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IIIa	LyD	Lyman-Tunbridge fine sandy loams, very rocky, 15 to 25 percent slopes
IVb	LyE	Lyman-Tunbridge fine sandy loams, very rocky, 25 to 60 percent slopes
IIh	MaB	Marlow fine sandy loam, 3 to 8 percent slopes
IIh	MaC	Marlow fine sandy loam, 8 to 15 percent slopes
IIIe	MaD	Marlow fine sandy loam, 15 to 25 percent slopes
IIh	MrB	Marlow very stony fine sandy loam, 3 to 8 percent slopes
IIh	MrC	Marlow very stony fine sandy loam, 8 to 15 percent slopes
IIIe	MrD	Marlow very stony fine sandy loam, 15 to 25 percent slopes
IIIg	On	Ondawa fine sandy loam
IVa	PaA	Peacham stony muck, 0 to 5 percent slopes
IIh	PeB	Peru fine sandy loam, 3 to 8 percent slopes
IIh	PeC	Peru fine sandy loam, 8 to 15 percent slopes
IIIe	PeD	Peru fine sandy loam, 15 to 25 percent slopes
IIh	PfB	Peru very stony fine sandy loam, 3 to 8 percent slopes
IIh	PfC	Peru very stony fine sandy loam, 8 to 15 percent slopes
IIIe	PfD	Peru very stony fine sandy loam, 15 to 25 percent slopes
IIIb	Po	Podunk fine sandy loam
IIh	PtB	Potsdam silt loam, 3 to 8 percent slopes
IIh	PtC	Potsdam silt loam, 8 to 15 percent slopes
IIIe	PtD	Potsdam silt loam, 15 to 25 percent slopes
IVc	RkE	Ricker peat, very rocky, 15 to 80 percent slopes
IVa	Ru	Rumney fine sandy loam
Ic	SaB	Salmon very fine sandy loam, 3 to 8 percent slopes
Ic	SaB2	Salmon very fine sandy loam, 3 to 8 percent slopes, eroded
Ic	SaC	Salmon very fine sandy loam, 8 to 15 percent slopes
Ic	SaC2	Salmon very fine sandy loam, 8 to 15 percent slopes, eroded
Id	SaD	Salmon very fine sandy loam, 15 to 25 percent slopes
Id	SaD2	Salmon very fine sandy loam, 15 to 25 percent slopes, eroded
IIf	SaE2	Salmon very fine sandy loam, 25 to 50 percent slopes, eroded
IIc	SdC	Salmon variant-Salmon very fine sandy loams, rocky, 8 to 15 percent slopes
IIc	SdD	Salmon variant-Salmon very fine sandy loams, rocky, 15 to 25 percent slopes
IVb	SdE	Salmon variant-Salmon very fine sandy loams, rocky, 25 to 50 percent slopes
IIIe	SeD	Scantic variant bouldery silt loam, 8 to 25 percent slopes
IVd	SeE	Scantic variant bouldery silt loam, 25 to 50 percent slopes
IVa	Sr	Searsport muck
IVc	StC	Stratton-Londonderry complex, 8 to 25 percent slopes

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IVa	SwA	Swanville silt loam, 0 to 6 percent slopes
IIIb	Te	Teel silt loam
IIc	TuB	Tunbridge-Lyman fine sandy loams, rocky, 3 to 8 percent slopes
IIc	TuC	Tunbridge-Lyman fine sandy loams, rocky, 8 to 15 percent slopes
IId	TuD	Tunbridge-Lyman fine sandy loams, rocky, 15 to 25 percent slopes
IVb	TuE	Tunbridge-Lyman fine sandy loams, rocky, 25 to 60 percent slopes
V	Ud	Udfluvents, frequently flooded
V	W	Water
IVa	WaA	Walpole fine sandy loam, 0 to 6 percent slopes

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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 IIIf 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.