

Soil-based Residential Wastewater Disposal Ratings (VT)

Franklin 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
IIIc	AuA	Au Gres loamy fine sand, 0 to 6 percent slopes
IIIc	BeB	Belgrade silt loam, 2 to 8 percent slopes
IIId	BeC	Belgrade silt loam, 8 to 15 percent slopes
IVa	Bg	Binghamville silt loam
IVa	Br	Birdsall silt loam
IIh	BxC	Buxton silt loam, 8 to 15 percent slopes
IIIe	BxD	Buxton silt loam, 15 to 25 percent slopes
IVd	BxE	Buxton silt loam, 25 to 45 percent slopes
IVa	CaA	Cabot stony fine sandy loam, 0 to 3 percent slopes
IVa	CaB	Cabot stony fine sandy loam, 3 to 8 percent slopes
IVa	CbA	Cabot extremely stony fine sandy loam, 0 to 3 percent slopes
IIId	CbB	Cabot extremely stony fine sandy loam, 3 to 15 percent slopes
IVa	Ce	Carlisle muck
Ia	CoB	Colton gravelly loamy sand, 2 to 8 percent slopes
Ia	CoC	Colton gravelly loamy sand, 8 to 15 percent slopes
Ib	CoD	Colton gravelly loamy sand, 15 to 25 percent slopes
IIe	CoE	Colton gravelly loamy sand, 25 to 60 percent slopes
Ia	CpB	Copake fine sandy loam, 2 to 8 percent slopes
IVa	Cv	Covington clay
IIh	DeB	Deerfield loamy fine sand, 0 to 8 percent slopes
IIh	DeC	Deerfield loamy fine sand, 8 to 15 percent slopes
IIIc	EdA	Eldridge loamy fine sand, 0 to 3 percent slopes
IIIc	EdB	Eldridge loamy fine sand, 3 to 8 percent slopes
IIId	EdC	Eldridge loamy fine sand, 8 to 15 percent slopes
IVa	EnA	Enosburg loamy fine sand, 0 to 3 percent slopes
IVa	EnB	Enosburg loamy fine sand, 3 to 8 percent slopes
IVc	FaB	Farmington loam, very rocky, 3 to 8 percent slopes
IVc	FaC	Farmington loam, very rocky, 8 to 15 percent slopes
IVc	FmC	Farmington-Rock outcrop complex, 6 to 15 percent slopes
IVc	FmD	Farmington-Rock outcrop complex, 15 to 60 percent slopes
IIh	GeA	Georgia stony loam, 0 to 3 percent slopes
IIh	GeB	Georgia stony loam, 3 to 8 percent slopes
IIh	GeC	Georgia stony loam, 8 to 15 percent slopes
IIh	GrB	Georgia extremely stony loam, 0 to 8 percent slopes
IIh	GrC	Georgia extremely stony loam, 8 to 15 percent slopes

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IIIg	Ha	Hadley silt loam
IIh	HbA	Hinesburg loamy fine sand, 0 to 3 percent slopes
IIh	HbB	Hinesburg loamy fine sand, 3 to 8 percent slopes
IIh	HbC	Hinesburg loamy fine sand, 8 to 15 percent slopes
IIIe	HbD	Hinesburg loamy fine sand, 15 to 25 percent slopes
IVd	HbE	Hinesburg loamy fine sand, 25 to 60 percent slopes
IVa	KbA	Kingsbury clay, 0 to 3 percent slopes
IVa	KbB	Kingsbury clay, 3 to 8 percent slopes
IVa	Le	Limerick silt loam
IIc	LoB	Lordstown loam, rocky, 3 to 8 percent slopes
IIc	LoC	Lordstown loam, rocky, 8 to 15 percent slopes
IIId	LoD	Lordstown loam, rocky, 15 to 25 percent slopes
IVc	LrC	Lordstown-Rock outcrop complex, 5 to 15 percent slopes
IVc	LrD	Lordstown-Rock outcrop complex, 15 to 25 percent slopes
IVb	LrE	Lordstown-Rock outcrop complex, 25 to 60 percent slopes
IVa	Ly	Lyons stony loam
V	Ma	Marsh
IIIc	MeA	Massena stony loam, 0 to 3 percent slopes
IIIc	MeB	Massena stony loam, 3 to 8 percent slopes
IIIc	MnA	Massena extremely stony loam, 0 to 6 percent slopes
Ia	MsA	Missisquoi loamy sand, 0 to 3 percent slopes
Ia	MsB	Missisquoi loamy sand, 3 to 8 percent slopes
Ia	MsC	Missisquoi loamy sand, 8 to 15 percent slopes
Ib	MsD	Missisquoi loamy sand, 15 to 25 percent slopes
IIe	MsE	Missisquoi loamy sand, 25 to 60 percent slopes
IIIc	MuB	Munson silt loam, 3 to 8 percent slopes
IIId	MuC	Munson silt loam, 8 to 15 percent slopes
IIIg	Od	Ondawa variant silt loam
IVa	Pa	Peacham stony soils
IIh	PeB	Peru stony fine sandy loam, 3 to 8 percent slopes
IIh	PeC	Peru stony fine sandy loam, 8 to 15 percent slopes
IIIe	PeD	Peru stony fine sandy loam, 15 to 25 percent slopes
IIh	PrC	Peru extremely stony fine sandy loam, 3 to 15 percent slopes
IIIe	PrD	Peru extremely stony fine sandy loam, 15 to 25 percent slopes
IIIb	Pu	Podunk variant silt loam
IVa	RaB	Raynham silt loam, 3 to 8 percent slopes

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IVb	RoE	Rock outcrop-Woodstock complex, 20 to 60 percent slopes
IVa	Ru	Rumney variant silt loam
Ic	SaA	St. Albans slaty loam, 0 to 3 percent slopes
Ic	SaB	St. Albans slaty loam, 3 to 8 percent slopes
Ic	SaC	St. Albans slaty loam, 8 to 15 percent slopes
Ic	SbB	St. Albans very stony loam, 2 to 8 percent slopes
Ic	SbC	St. Albans very stony loam, 8 to 15 percent slopes
Id	SbD	St. Albans very stony loam, 15 to 25 percent slopes
IIIf	SbE	St. Albans very stony loam, 25 to 60 percent slopes
IVa	ScA	Scantic silt loam, 0 to 3 percent slopes
IVa	ScB	Scantic silt loam, 3 to 8 percent slopes
IIh	StB	Stowe stony fine sandy loam, 3 to 8 percent slopes
IIh	StC	Stowe stony fine sandy loam, 8 to 15 percent slopes
IIIe	StD	Stowe stony fine sandy loam, 15 to 25 percent slopes
IIh	SwC	Stowe extremely stony fine sandy loam, 5 to 15 percent slopes
IIIe	SwD	Stowe extremely stony fine sandy loam, 15 to 25 percent slopes
IVd	SyE	Stowe stony soils, 25 to 60 percent slopes
V	Tm	Terric Medisaprists
IIc	TwB	Tunbridge-Woodstock fine sandy loams, very rocky, 3 to 8 percent slopes
IIc	TwC	Tunbridge-Woodstock fine sandy loams, very rocky, 8 to 15 percent slopes
IIId	TwD	Tunbridge-Woodstock fine sandy loams, very rocky, 15 to 25 percent slopes
V	W	Water
IVa	Wa	Walkkill silt loam
IVa	Wh	Wareham loamy fine sand
IIIc	WrA	Westbury stony fine sandy loam, 0 to 3 percent slopes
IIIc	WrB	Westbury stony fine sandy loam, 3 to 8 percent slopes
IIId	WrC	Westbury stony fine sandy loam, 8 to 15 percent slopes
Ia	WsA	Windsor loamy fine sand, 0 to 3 percent slopes
Ia	WsB	Windsor loamy fine sand, 3 to 8 percent slopes
Ia	WsC	Windsor loamy fine sand, 8 to 15 percent slopes
Ib	WsD	Windsor loamy fine sand, 15 to 25 percent slopes
IIe	WsE	Windsor loamy fine sand, 25 to 60 percent slopes
IIIb	Wt	Winooski silt loam
IVc	WxC	Woodstock-Rock outcrop complex, 8 to 15 percent slopes
IVc	WxD	Woodstock-Rock outcrop complex, 15 to 25 percent slopes
IVb	WxE	Woodstock-Rock outcrop complex, 25 to 60 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 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.