

Sewage Disposal

Steuben County, Indiana

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The columns that identify the rating class and limiting features show no more than five limitations for any given soil. The soil may have additional limitations]

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
BoB:					
Boyer	50	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.08
Ormas	40	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.08
Riverdale	10	Not rated		Not rated	
BoC:					
Boyer	50	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.04	Slope	1.00
Ormas	40	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.04	Slope	1.00
Martinsville	5	Not rated		Not rated	
Rawson	5	Not rated		Not rated	
Bz:					
Brookston	100	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53
CaC:					
Casco	100	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.04		

Sewage Disposal

Steuben County, Indiana

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		Rating class and limiting features	Value	Rating class and limiting features	Value
CaD2:					
Casco	100	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	1.00		
Co:					
Cohoctah	100	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
CrA:					
Crosier	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
Miami	7	Not rated		Not rated	
Brookston	3	Not rated		Not rated	
Ed:					
Edwards, drained	100	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	1.00
Ht:					
Houghton, undrained	85	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00

Sewage Disposal

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Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Ht:					
Palms, undrained	8	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Subsidence	1.00	Seepage	0.68
Muskego, undrained	7	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Subsidence	1.00	Seepage	1.00
Hw:					
Houghton, drained	75	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Adrian, drained	7	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Edwards, drained	7	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
				Seepage	1.00

Sewage Disposal

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		Rating class and limiting features	Value	Rating class and limiting features	Value
Hw:					
Muskego, drained	6	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Subsidence	1.00	Seepage	1.00
Palms, drained	5	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Seepage	1.00
KoB:					
Kosciusko	100	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.47	Slope	0.32
KsC:					
Kosciusko	100	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.47	Slope	1.00
		Slope	0.04		
Mc:					
Martisco, undrained	100	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
				Seepage	1.00
MhB:					
Miami	85	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Seepage	0.53
		Slow water movement	1.00	Depth to saturated zone	0.19
				Slope	0.08

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		Rating class and limiting features	Value	Rating class and limiting features	Value
MhB:					
Crosier	9	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	0.08
Brookston	6	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53
MhC:					
Miami	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Seepage	0.53
		Slope	0.04	Depth to saturated zone	0.19
Crosier	9	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	0.08
Brookston	6	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53
MkC3:					
Miami, severely eroded	97	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Seepage	0.53
		Slope	0.04	Depth to saturated zone	0.19
Crosby	3	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53

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		Rating class and limiting features	Value	Rating class and limiting features	Value
Mm:					
Millgrove	100	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.47		
Pa:					
Palms, drained	100	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Subsidence	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Seepage	1.00
Ry:					
Riverdale	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
Brems	7	Not rated		Not rated	
Cohoctah	3	Not rated		Not rated	
Sh:					
Shoals	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.47	Seepage	0.53
Sloan	8	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53

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Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Sh:					
Eel	7	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.47		
Ud:					
Udorthents	100	Not rated		Not rated	
W:					
Water	100	Not rated		Not rated	

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This table shows the degree and kind of soil limitations that affect septic tank absorption fields and sewage lagoons. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

"Septic tank absorption fields" are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

"Sewage lagoons" are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, Ksat, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Ksat is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a Ksat rate of more than 14 micrometers per second are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.