

Table 1.--Estimated limitations of various land uses and chief geologic causes of the limitations
(Note: table does not apply to soil overlying bedrock of map units.)

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Map unit	Septic tank disposal system degree--cause	Residences		Highway and street location degree--cause	Access roads location degree--cause	Light industry and shopping centers degree--cause	Intensive recreation degree--cause	Extensive recreation degree--cause	Impoundments		Underground utilities degree--cause
		With basements degree--cause	Without basements degree--cause						Reservoir area degree--cause	Embankments degree--cause	
1. Alluvium.	Refer to soils report (Sims, 1965).	Refer to soils report (Sims, 1965).	Refer to soils report (Sims, 1965).	Refer to soils report (Sims, 1965).	Refer to soils report (Sims, 1965).	Refer to soils report (Sims, 1965).	Refer to soils report (Sims, 1965).	Refer to soils report (Sims, 1965).	Refer to soils report (Sims, 1965).	Refer to soils report (Sims, 1965).	Refer to soils report (Sims, 1965).
2. High level gravel deposits.	Slight to moderate. Variable thickness and permeability; underlain by impervious rock.	Slight.	None	None	None	None	None	None	Not Applicable	Not Applicable	Slight.
3. Breccia.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not applicable. Small area.	Not applicable. Small area.	Not applicable. Small area.	Not applicable. Small area.	Not applicable. Small area.	Not Applicable
4. Dolomite and shale.	Severe. Impermeable rock; locally fast drainage by fractures and sinks to water table; possible contamination of ground water.	Severe. Rock excavation; numerous deep sinks; drainage problems.	None	Moderate. Numerous deep sinks; rock excavation; possible drainage problems.	Moderate. Numerous deep sinks.	Severe. Numerous deep sinks; small area; possible drainage problems.	Severe. Steep slopes; small areas of level land.	None	Severe. Leaky reservoir rock; many sinks.	Slight to moderate.	Severe. Rock excavation.
5. Siltstone.	Severe. Impermeable; joints tight.	Severe. Rock excavation; poor drainage.	None	Slight to moderate. Subgrade requires drainage; rock excavation.	Slight. Subgrade requires drainage; shallow cuts can be ripped.	Slight. Local seeps.	None	None	Slight. Where topographically suitable.	Slight to moderate.	Moderate. Rock excavation; in narrow trenches pneumatic equipment required; locally blasting required.
6. Dolomite.	Not Applicable	Not Applicable	Not Applicable	Severe. Rock excavation; steep slopes.	Moderate. Rock excavation; steep slopes; narrow ravines.	Not Applicable	Not Applicable	Moderate to slight. Steep wooded slopes. Slight for forest reserve or natural history park.	Slight. Reservoir might leak where rocks are faulted.	Severe.	Severe. Rock excavation.
7. Limestone	Severe. Impermeable rock; locally fast drainage through fractures; danger of contamination of ground water.	Not Applicable	None where topographically favorable	Severe. Rock excavation; steep slopes.	Moderate. Rock excavation; steep slopes; narrow ravines. Slight where topographically suitable.	Not Applicable	Not Applicable	Moderate to slight. Steep wooded slopes. Slight for forest reserve or natural history park.	Slight. Reservoir might leak where rocks are faulted.	Severe.	Severe. Rock excavation.
8. Limestone, thin irregular bedded.	Severe. Impermeable rock; locally fast drainage through fractures; danger of contamination of ground water.	Severe. Rock excavation; locally upper few feet may be rippable; sinks common; drainage required.	None	Slight to moderate. Rock excavation; locally upper few feet may be rippable; local drainage problems; sinks common.	Slight. Local drainage problems from seeps or springs; sinks common.	Slight to moderate depending on topography. Rock excavation; locally upper few feet may be rippable; sinks common; local drainage problems.	None	None	Severe. Leaky reservoir rock; locally conditions may be favorable; sinks common.	Severe.	Severe. Rock excavation.
9. Limestone, thin even bedded.	Severe. Impermeable rock; locally fast drainage through fractures; danger of contamination of ground water.	Severe to moderate. Rock excavation; locally upper few feet may be rippable; solution channels common; seepage problems locally.	None	Slight to moderate. Rock excavation; locally upper few feet may be rippable; solution channels common; local seepage problems.	Slight. Local drainage problems.	Slight to moderate. Rock excavation; locally upper few feet may be rippable; solution channels common; local seepage problems.	None	None	Severe to moderate. Leaky reservoir rock; locally conditions may be favorable; solution channels common.	Severe.	Severe. Rock excavation.
10. Shale and limestone interbedded.	Severe. Impermeable rock.	Slight to moderate. Earth and rock excavation; poor drainage.	None	Slight to moderate. Earth and rock excavation; local seeps, subgrade requires drainage.	Slight. Local seeps.	Slight. Rock generally rippable in shallow cuts; local seeps.	None	None	Slight. Most favorable sites on this unit; locally impermeable rock thin and underlain by fissured limestone.	Slight.	Moderate. Highly variable amount of rock and earth excavation.

EXPLANATION

(Terms earth and rock excavation are used in engineering sense; earth can be excavated by hand tools whereas rock requires heavy equipment or blasting to remove.)

Limitations

- Slight - A slight limitation is one that commonly requires some corrective measure but can be overcome without a great deal of difficulty or expense.
- Moderate - A moderate limitation is one that can normally be overcome but the difficulty and expense are great enough that it is commonly a question of feasibility.
- Severe - A severe limitation is one that is difficult to overcome and commonly is not feasible because of the expense involved.

Land Uses

- Septic tank disposal system.--A septic tank disposal system consists of a septic tank and a filter field. The filter field is a subsurface tile system laid in such a way that effluent from the septic tank is distributed with reasonable uniformity into the natural soil.
- Residences.--Ratings are made for residences with and without basements because the degree of limitation is dependent upon ease and required depth of excavation. For example, excavation in limestone has greater limitation than excavation in shale for a house with a basement.
- Highway and street location.--This column refers to paved roads in which cuts and fills are made in hilly topography and considerable work is done preparing subgrades and bases before the surface is applied.
- Access road location.--These are low-cost roads, driveways, etc., usually surfaced with crushed stone or a thin layer of blacktop. A minimum of cuts and fills are made. Little work is done preparing a subgrade, and generally only a thin base is used. The degree of limitation is based on 12-months use and would be less severe if not used during the winter and early spring. Some types of recreation areas would not be used during these seasons.
- Light industry and shopping centers.--Ratings are based on developments having structures or equivalent load limit requirements of three stories or less and large paved areas for parking lots. Structures with greater load limit requirements would normally need footings in solid rock and the rock would need to be core drilled to determine presence of caverns, cracks, etc.
- Intensive recreation.--This unit includes athletic fields, stadiums, etc.
- Extensive recreation.--This unit includes campsites, picnic areas, parks, etc.
- Reservoir area.--Refers to the floor of the area where water is impounded. Ratings are based on the permeability of the rock.
- Embankment.--The rocks are rated on limitations for embankment material.
- Underground utilities.--Included in this group are sanitary sewers, storm sewers, water mains and other pipes that require fairly deep trenches.

This document has not been edited or revised for conformity with U. S. Geological Survey standards or nomenclature.