

## Engineering Interpretations

### **Water Management**

Interpretations of soils for water management are given as limitations for pond reservoir areas; embankments, dikes, and levees; excavated pond (aquifer-fed); and as restrictive features that affect drainage, irrigation, terraces and diversions, and grassed waterways.

**POND RESERVOIR AREA** is the area that holds water behind a dam or embankment. Soils best suited to this use have a low seepage potential, which is determined by the permeability and depth to fractured or permeable bedrock, or other permeable material.

**EMBANKMENTS, DIKES, AND LEVEES** are raised structures of soil material constructed to impound water or protect land against overflow. They generally are less than 20 feet high and are constructed of "homogeneous" soil material (without a core zone) and compacted to medium density.

**EXCAVATED PONDS (AQUIFER-FED)** are bodies of water created by excavating a pit or dugout into a ground-water aquifer. Excluded are ponds which are fed by surface runoff or that have embankments that impound water 3 feet or more above the original surface.

**DRAINAGE** is the process of removing excess surface and subsurface water from agricultural land. Soil features are listed that affect grading, excavation, and stability of trench sides or ditch banks. Features are also listed which might affect productivity after drainage is installed. The availability of drainage outlets must also be considered.

**IRRIGATION** is the controlled application of water to supplement rainfall for supporting plant growth. Soil features are listed that affect design, layout, construction, management, or performance of an irrigation system.

**TERRACES AND DIVERSIONS** are embankments or a combination of an embankment and a channel constructed across a slope to control erosion by diverting or storing surface runoff instead of permitting it to flow uninterrupted down the slope. Soil features are listed that affect the construction of terraces and diversions and that may cause problems after construction.

**GRASSED WATERWAYS** are natural or constructed channels that generally are broad and shallow and are covered with erosion-resistant grasses. They are used to conduct surface water to outlets at a nonerosive velocity. Soil features are listed that affect the construction and maintenance of the waterway, and also that affect the growth of grass after construction.

*This subsection includes:*

- **(a) Water Management**

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Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Aa: Quarries, made land,-----	Not rated		Not rated		Not rated		Not rated		Not rated	
BaD: Balltown-----	Very limited ~bedrock <20 in. (very limited) ~slope (very limited)	1.00  1.00	Very limited ~slope (very limited) ~shallow to bedrock (very limited) ~percs slowly (very limited)	1.00  1.00  1.00	Very limited ~shallow to bedrock (very limited) ~percs slowly (very limited) ~droughty (very limited)	1.00  1.00  1.00	Very limited ~depth to bedrock (very limited) ~large stones (very limited) ~slope (very limited)	1.00  1.00  1.00	Very limited ~large stones (very limited) ~bedrock <20 in. (very limited) ~droughty (very limited)	1.00  1.00  1.00
BcB: Barco-----	Limited ~depth to bedrock (limited) ~seepage (moderately limited) ~slope (slightly limited)	0.75  0.50  0.10	Moderately limited ~slope (moderately limited) ~depth to bedrock (slightly limited)	0.40  0.09	Moderately limited ~slope (moderately limited) ~depth to bedrock (slightly limited)	0.40  0.09	Very limited ~depth to bedrock (very limited) ~slope (slightly limited)	1.00  0.10	Limited ~depth to bedrock (limited) ~slope (slightly limited)	0.75  0.10
BcB2: Barco, ERODED--	Limited ~depth to bedrock (limited) ~seepage (moderately limited) ~slope (slightly limited)	0.75  0.50  0.10	Moderately limited ~slope (moderately limited) ~depth to bedrock (slightly limited)	0.40  0.09	Moderately limited ~slope (moderately limited) ~depth to bedrock (slightly limited)	0.40  0.09	Very limited ~depth to bedrock (very limited) ~slope (slightly limited)	1.00  0.10	Limited ~depth to bedrock (limited) ~slope (slightly limited)	0.75  0.10

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	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BcC: Barco-----	Limited ~depth to bedrock (limited)	0.75	Very limited ~slope (very limited)	1.00	Very limited ~slope (very limited)	1.00	Very limited ~depth to bedrock (very limited)	1.00	Limited ~depth to bedrock (limited)	0.75
	~seepage (moderately limited)	0.50	~depth to bedrock (slightly limited)	0.09	~depth to bedrock (slightly limited)	0.09	~slope (moderately limited)	0.45	~slope (moderately limited)	0.45
	~slope (moderately limited)	0.45								
BcC2: Barco, ERODED--	Limited ~depth to bedrock (limited)	0.75	Very limited ~slope (very limited)	1.00	Very limited ~slope (very limited)	1.00	Very limited ~depth to bedrock (very limited)	1.00	Limited ~depth to bedrock (limited)	0.75
	~seepage (moderately limited)	0.50	~depth to bedrock (slightly limited)	0.09	~depth to bedrock (slightly limited)	0.09	~slope (moderately limited)	0.45	~slope (moderately limited)	0.45
	~slope (moderately limited)	0.45								
BdB: Barden-----	Not limited		Moderately limited ~percs slowly (moderately limited)	0.40	Moderately limited ~erodes easily (moderately limited)	0.60	Moderately limited ~erodes easily (moderately limited)	0.60	Moderately limited ~erodes easily (moderately limited)	0.60
			~slope (slightly limited)	0.10	~percs slowly (moderately limited)	0.40	~wetness (slightly limited)	0.28	~wetness (slightly limited)	0.28
					~slope (slightly limited)	0.10				
BdB2: Barden, ERODED-	Not limited		Moderately limited ~percs slowly (moderately limited)	0.40	Moderately limited ~erodes easily (moderately limited)	0.60	Moderately limited ~erodes easily (moderately limited)	0.60	Moderately limited ~erodes easily (moderately limited)	0.60
			~slope (slightly limited)	0.10	~percs slowly (moderately limited)	0.40	~wetness (slightly limited)	0.28	~wetness (slightly limited)	0.28
					~slope (slightly limited)	0.10				



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	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BsB: Bronaugh-----	Moderately limited ~seepage (moderately limited)	0.50	Moderately limited ~slope (moderately limited)	0.40	Moderately limited ~erodes easily (moderately limited)	0.60	Moderately limited ~erodes easily (moderately limited)	0.60	Moderately limited ~erodes easily (moderately limited)	0.60
	~slope (slightly limited)	0.10			~slope (moderately limited)	0.40	~slope (slightly limited)	0.10	~slope (slightly limited)	0.10
Ce: Cleora, FREQUENTLY FLOODED-----	Very limited		Limited		Limited		Moderately limited		Not limited	
	~seepage (very limited)	1.00	~cutbanks cave (limited)	0.90	~flooding (limited)	0.90	~too sandy (moderately limited)	0.60		
			~flooding (limited)	0.90	~fast intake (limited)	0.90				
CoC: Coweta-----	Limited		Very limited		Very limited		Very limited		Limited	
	~depth to bedrock (limited)	0.92	~percs slowly (very limited)	1.00	~percs slowly (very limited)	1.00	~depth to bedrock (very limited)	1.00	~depth to bedrock (limited)	0.92
	~slope (moderately limited)	0.60	~slope (very limited)	1.00	~slope (very limited)	1.00	~slope (moderately limited)	0.60	~droughty (limited)	0.90
			~depth to bedrock (moderately limited)	0.60	~droughty (limited)	0.90			~slope (moderately limited)	0.60
CrD: Coweta-----	Limited		Very limited		Very limited		Very limited		Very limited	
	~depth to bedrock (limited)	0.96	~percs slowly (very limited)	1.00	~droughty (very limited)	1.00	~depth to bedrock (very limited)	1.00	~droughty (very limited)	1.00
	~slope (limited)	0.80	~slope (very limited)	1.00	~percs slowly (very limited)	1.00	~slope (limited)	0.80	~depth to bedrock (limited)	0.96
			~large stones (very limited)	1.00	~slope (very limited)	1.00			~slope (limited)	0.80

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	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
DuB: Dubbs-----	Very limited ~seepage (very limited) ~slope (slightly limited)	1.00  0.10	Moderately limited ~slope (moderately limited)	0.40	Moderately limited ~erodes easily (moderately limited) ~slope (moderately limited)	0.60  0.40	Moderately limited ~erodes easily (moderately limited) ~slope (slightly limited)	0.60  0.10	Moderately limited ~erodes easily (moderately limited) ~slope (slightly limited)	0.60  0.10
EdD: Eldon variant--	Limited ~slope (limited) ~seepage (moderately limited) ~depth to bedrock (moderately limited)	0.80  0.50  0.47	Very limited ~slope (very limited)	1.00	Very limited ~slope (very limited)	1.00	Limited ~slope (limited) ~large stones (limited) ~depth to bedrock (moderately limited)	0.80  0.70  0.36	Limited ~slope (limited) ~large stones (limited) ~depth to bedrock (moderately limited)	0.80  0.70  0.47
HcD: Hector-----	Very limited ~bedrock <20 in. (very limited) ~slope (limited)	1.00  0.80	Very limited ~shallow to bedrock (very limited) ~percs slowly (very limited) ~slope (very limited)	1.00  1.00  1.00	Very limited ~shallow to bedrock (very limited) ~percs slowly (very limited) ~droughty (very limited)	1.00  1.00  1.00	Very limited ~depth to bedrock (very limited) ~slope (limited)	1.00  0.80	Very limited ~bedrock <20 in. (very limited) ~droughty (very limited) ~slope (limited)	1.00  1.00  0.80
HeD: Hector-----	Very limited ~bedrock <20 in. (very limited) ~slope (limited)	1.00  0.80	Very limited ~shallow to bedrock (very limited) ~percs slowly (very limited) ~large surface stones (very limited)	1.00  1.00  1.00	Very limited ~shallow to bedrock (very limited) ~percs slowly (very limited) ~droughty (very limited)	1.00  1.00  1.00	Very limited ~large surface stones (very limited) ~depth to bedrock (very limited) ~large stones (very limited)	1.00  1.00  1.00	Very limited ~large stones (very limited) ~bedrock <20 in. (very limited) ~droughty (very limited)	1.00  1.00  1.00

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	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
HeE: Hector-----	Very limited ~bedrock <20 in. (very limited)	1.00	Very limited ~slope (very limited)	1.00	Very limited ~shallow to bedrock (very limited)	1.00	Very limited ~slope (very limited)	1.00	Very limited ~large stones (very limited)	1.00
	~slope (very limited)	1.00	~shallow to bedrock (very limited)	1.00	~percs slowly (very limited)	1.00	~large surface stones (very limited)	1.00	~bedrock <20 in. (very limited)	1.00
			~percs slowly (very limited)	1.00	~droughty (very limited)	1.00	~depth to bedrock (very limited)	1.00	~slope (very limited)	1.00
Hm: Hepler, OCCASIONALLY FLOODED-----	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Moderately limited	
	~seepage (moderately limited)	0.50	~flooding (moderately limited)	0.60	~flooding (moderately limited)	0.60	~erodes easily (moderately limited)	0.60	~erodes easily (moderately limited)	0.60
			~percs slowly (slightly limited)	0.13	~erodes easily (moderately limited)	0.60	~wetness (moderately limited)	0.44	~wetness (moderately limited)	0.44
					~percs slowly (slightly limited)	0.13				
Hp: Hepler, OCCASIONALLY FLOODED, OVERWASH-----	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Moderately limited	
	~seepage (moderately limited)	0.50	~flooding (moderately limited)	0.60	~flooding (moderately limited)	0.60	~erodes easily (moderately limited)	0.60	~erodes easily (moderately limited)	0.60
			~percs slowly (slightly limited)	0.13	~erodes easily (moderately limited)	0.60	~wetness (moderately limited)	0.44	~wetness (moderately limited)	0.44
					~percs slowly (slightly limited)	0.13				

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	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Hr: Hepler, OCCASIONALLY FLOODED-----	Moderately limited		Moderately limited		Moderately limited		Moderately limited		Moderately limited	
	~seepage (moderately limited)	0.50	~flooding (moderately limited)	0.60	~flooding (moderately limited)	0.60	~erodes easily (moderately limited)	0.60	~erodes easily (moderately limited)	0.60
			~percs slowly (slightly limited)	0.13	~erodes easily (moderately limited)	0.60	~wetness (moderately limited)	0.44	~wetness (moderately limited)	0.44
					~percs slowly (slightly limited)	0.13				
Radley, OCCASIONALLY FLOODED-----	Moderately limited		Moderately limited		Moderately limited		Not limited		Not limited	
	~seepage (moderately limited)	0.50	~flooding (moderately limited)	0.60	~flooding (moderately limited)	0.60				
					~slow intake (moderately limited)	0.30				
La: Lanton, OCCASIONALLY FLOODED-----	Not limited		Moderately limited		Moderately limited		Moderately limited		Moderately limited	
			~flooding (moderately limited)	0.60	~flooding (moderately limited)	0.60	~erodes easily (moderately limited)	0.60	~erodes easily (moderately limited)	0.60
			~percs slowly (moderately limited)	0.40	~erodes easily (moderately limited)	0.60	~wetness (moderately limited)	0.60	~wetness (moderately limited)	0.60
					~slow intake (moderately limited)	0.60				
LeB: Liberal-----	Limited		Moderately limited		Moderately limited		Limited		Limited	
	~depth to bedrock (limited)	0.65	~percs slowly (moderately limited)	0.40	~erodes easily (moderately limited)	0.60	~depth to bedrock (limited)	0.63	~depth to bedrock (limited)	0.65
	~slope (slightly limited)	0.10	~slope (moderately limited)	0.40	~percs slowly (moderately limited)	0.40	~erodes easily (moderately limited)	0.60	~erodes easily (moderately limited)	0.60
					~slope (moderately limited)	0.40	~wetness (slightly limited)	0.28	~wetness (slightly limited)	0.28



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Map symbol and soil name	Pond reservoir areas		Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LuB: Lula-----	Limited ~depth to bedrock (limited) ~seepage (moderately limited) ~slope (slightly limited)	0.65  0.50  0.10	Moderately limited ~slope (moderately limited)	0.40	Moderately limited ~erodes easily (moderately limited) ~slope (moderately limited)	0.60  0.40	Limited ~depth to bedrock (limited) ~erodes easily (moderately limited) ~slope (slightly limited)	0.63  0.60  0.10	Limited ~depth to bedrock (limited) ~erodes easily (moderately limited) ~slope (slightly limited)	0.65  0.60  0.10
Ma: Mayes-----	Not limited		Very limited ~percs slowly (very limited)	1.00	Very limited ~percs slowly (very limited) ~erodes easily (moderately limited) ~slow intake (moderately limited)	1.00  0.60  0.60	Moderately limited ~erodes easily (moderately limited) ~wetness (moderately limited)	0.60  0.60	Moderately limited ~erodes easily (moderately limited) ~wetness (moderately limited)	0.60  0.60
Mp: Dumps-----	Not rated		Not rated		Not rated		Not rated		Not rated	
Mine pits-----										
Os: Osage, OCCASIONALLY FLOODED-----	Not limited		Very limited  ~percs slowly (very limited) ~flooding (moderately limited)	1.00  0.60	Very limited  ~percs slowly (very limited) ~slow intake (limited) ~flooding (moderately limited)	1.00  0.70  0.60	Very limited  ~wetness (very limited)	1.00	Very limited  ~wetness (very limited)	1.00

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	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Pa: Parsons-----	Not limited		Very limited ~percs slowly (very limited)	1.00	Very limited ~percs slowly (very limited) ~erodes easily (moderately limited)	1.00 0.60	Limited ~wetness (limited) ~erodes easily (moderately limited)	0.99 0.60	Limited ~wetness (limited) ~erodes easily (moderately limited)	0.99 0.60
Ra: Radley, OCCASIONALLY FLOODED-----	Moderately limited ~seepage (moderately limited)	0.50	Moderately limited ~flooding (moderately limited)	0.60	Moderately limited ~flooding (moderately limited) ~slow intake (moderately limited)	0.60 0.30	Not limited		Not limited	
RpE3: Radley, OCCASIONALLY FLOODED-----	Moderately limited ~seepage (moderately limited)	0.50	Moderately limited ~flooding (moderately limited)	0.60	Moderately limited ~flooding (moderately limited) ~slow intake (moderately limited)	0.60 0.30	Not limited		Not limited	
Barden, SEVERELY ERODED-----	Limited ~slope (limited)	0.99	Very limited ~slope (very limited) ~percs slowly (moderately limited)	1.00 0.40	Very limited ~slope (very limited) ~erodes easily (moderately limited) ~percs slowly (moderately limited)	1.00 0.60 0.40	Limited ~slope (limited) ~erodes easily (moderately limited) ~wetness (slightly limited)	0.99 0.60 0.28	Limited ~slope (limited) ~erodes easily (moderately limited) ~wetness (slightly limited)	0.99 0.60 0.28

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RpE3: (cont.) Parsons, SEVERELY ERODED-----	Limited		Very limited		Very limited		Limited		Limited	
	~slope (limited)	0.99	~percs slowly (very limited)	1.00	~percs slowly (very limited)	1.00	~wetness (limited)	0.99	~wetness (limited)	0.99
			~slope (very limited)	1.00	~slope (very limited)	1.00	~slope (limited)	0.99	~slope (limited)	0.99
					~erodes easily (moderately limited)	0.60	~erodes easily (moderately limited)	0.60	~erodes easily (moderately limited)	0.60
Ve: Verdigris, OCCASIONALLY FLOODED-----	Moderately limited		Moderately limited		Moderately limited		Not limited		Not limited	
	~seepage (moderately limited)	0.50	~flooding (moderately limited)	0.60	~flooding (moderately limited)	0.60				
W: Water-----	Not rated		Not rated		Not rated		Not rated		Not rated	
ZaB: Zaar-----	Slightly limited		Very limited		Very limited		Moderately limited		Moderately limited	
	~slope (slightly limited)	0.10	~percs slowly (very limited)	1.00	~percs slowly (very limited)	1.00	~wetness (moderately limited)	0.60	~wetness (moderately limited)	0.60
			~slope (moderately limited)	0.40	~slow intake (limited)	0.79	~slope (slightly limited)	0.10	~slope (slightly limited)	0.10
					~slope (moderately limited)	0.40				

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	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ZaC: Zaar-----	Moderately limited ~slope (moderately limited)	0.45	Very limited ~percs slowly (very limited) ~slope (very limited)	1.00	Very limited ~percs slowly (very limited) ~slope (very limited) ~slow intake (limited)	1.00	Moderately limited ~wetness (moderately limited) ~slope (moderately limited)	0.60	Moderately limited ~wetness (moderately limited) ~slope (moderately limited)	0.60
				1.00		1.00		0.45		0.45