

Ag. Waste Application and Excavated Ponds
Roberts County, South Dakota

(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 limitation.)

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AaA: Aastad-----	85	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Slow refill	0.97
		Depth to saturated zone	0.24	Deep to water	0.38
				Cutbanks cave	0.10
Ac: Antler-----	50	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.84	Slow refill	0.98
		Restricted permeability	0.81	Cutbanks cave	0.10
		Salinity	0.01	Deep to water	0.07
Colvin-----	30	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Slow refill	0.30
		Leaching limitation	0.50	Cutbanks cave	0.10
At: Antler-----	45	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.84	Slow refill	0.98
		Restricted permeability	0.81	Cutbanks cave	0.10
		Salinity	0.01	Deep to water	0.07
Tonka-----	25	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slow refill	0.30
		Depth to saturated zone	1.00	Cutbanks cave	0.10
		Ponding	1.00		
		Leaching limitation	0.50		

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		Rating class and limiting features	Value	Rating class and limiting features	Value
AvA: Antler-----	45	Somewhat limited Depth to saturated zone Restricted permeability Salinity	0.84 0.81 0.01	Somewhat limited Slow refill Cutbanks cave Deep to water	0.98 0.10 0.07
Hamerly-----	40	Somewhat limited Depth to saturated zone Restricted permeability	0.84 0.50	Somewhat limited Slow refill Cutbanks cave Deep to water	0.97 0.10 0.07
BbE: Barnes-----	50	Very limited Slope Restricted permeability	1.00 0.50	Very limited Deep to water	1.00
Buse-----	25	Very limited Slope Large stones on the surface Cobble content Restricted permeability Salinity	1.00 1.00 1.00 0.50 0.01	Very limited Deep to water	1.00
Be: Bearden-----	85	Very limited Restricted permeability Depth to saturated zone	1.00 0.84	Somewhat limited Slow refill Cutbanks cave Deep to water	0.97 0.10 0.07
Bo: Borup-----	85	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Cutbanks cave	1.00
BpF: Buse-----	50	Very limited Slope Restricted permeability	1.00 0.50	Very limited Deep to water	1.00

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Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Forman-----	20	Very limited Slope Restricted permeability	1.00 0.50	Very limited Deep to water	1.00
Co: Colvin-----	90	Very limited Depth to saturated zone Leaching limitation	1.00 0.50	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
DcA: Dickey-----	80	Very limited Filtering capacity	1.00	Very limited Deep to water	1.00
DcB: Dickey-----	80	Very limited Filtering capacity	1.00	Very limited Deep to water	1.00
Dm: Divide-----	55	Very limited Filtering capacity Depth to saturated zone Flooding	1.00 0.84 0.60	Very limited Cutbanks cave Deep to water	1.00 0.07
Marysland-----	40	Very limited Depth to saturated zone Filtering capacity Leaching limitation Flooding	1.00 1.00 0.70 0.60	Very limited Cutbanks cave	1.00
Do: Doran-----	80	Very limited Restricted permeability	1.00	Somewhat limited Deep to water Slow refill Cutbanks cave	0.81 0.47 0.10

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Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Dv: Castlewood-----	85	Very limited Restricted permeability Depth to saturated zone Flooding Leaching limitation	1.00 1.00 0.60 0.50	Very limited Slow refill Cutbanks cave	1.00 0.10
EcA: Eckman-----	85	Not limited		Very limited Deep to water	1.00
EcB: Eckman-----	80	Not limited		Very limited Deep to water	1.00
EeC: Eckman-----	65	Not limited		Very limited Deep to water	1.00
Zell-----	25	Not limited		Very limited Deep to water	1.00
Eh: Embden-----	70	Not limited		Very limited Cutbanks cave Deep to water	1.00 0.90
Hamar-----	20	Very limited Depth to saturated zone Leaching limitation Droughty	1.00 0.90 0.03	Very limited Cutbanks cave	1.00
FdA: Fordville-----	90	Very limited Depth to dense layer Filtering capacity	1.00 1.00	Very limited Deep to water	1.00
FeB: Fordville-----	70	Very limited Depth to dense layer Filtering capacity	1.00 1.00	Very limited Deep to water	1.00

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Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Renshaw-----	25	Very limited Filtering capacity Droughty	1.00 0.34	Very limited Deep to water	1.00
FOA: Forman-----	70	Somewhat limited Restricted permeability	0.50	Very limited Deep to water	1.00
Aastad-----	20	Somewhat limited Restricted permeability Depth to saturated zone	0.50 0.24	Somewhat limited Slow refill Deep to water Cutbanks cave	0.97 0.38 0.10
FOB: Forman-----	60	Somewhat limited Restricted permeability	0.50	Very limited Deep to water	1.00
Aastad-----	25	Somewhat limited Restricted permeability Depth to saturated zone	0.50 0.24	Somewhat limited Slow refill Deep to water Cutbanks cave	0.97 0.38 0.10
FOC: Forman-----	60	Somewhat limited Restricted permeability	0.50	Very limited Deep to water	1.00
Aastad-----	25	Somewhat limited Restricted permeability Depth to saturated zone	0.50 0.24	Somewhat limited Slow refill Deep to water Cutbanks cave	0.97 0.38 0.10
FOD: Forman-----	55	Somewhat limited Slope Restricted permeability	0.63 0.50	Very limited Deep to water	1.00

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		Rating class and limiting features	Value	Rating class and limiting features	Value
Aastad-----	25	Somewhat limited Restricted permeability	0.50	Somewhat limited Slow refill	0.97
		Depth to saturated zone	0.24	Deep to water	0.38
				Cutbanks cave	0.10
FsB: Forman-----	65	Somewhat limited Restricted permeability	0.50	Very limited Deep to water	1.00
Aastad-----	25	Somewhat limited Restricted permeability	0.50	Somewhat limited Slow refill	0.97
		Depth to saturated zone	0.24	Deep to water	0.38
				Cutbanks cave	0.10
FuC: Forman-----	55	Somewhat limited Restricted permeability	0.50	Very limited Deep to water	1.00
Buse-----	25	Somewhat limited Restricted permeability	0.50	Very limited Deep to water	1.00
FuD: Forman-----	55	Somewhat limited Slope	0.63	Very limited Deep to water	1.00
		Restricted permeability	0.50		
Buse-----	25	Somewhat limited Slope	0.63	Very limited Deep to water	1.00
		Restricted permeability	0.50		
FuE: Forman-----	45	Very limited Slope	1.00	Very limited Deep to water	1.00
		Restricted permeability	0.50		
Buse-----	25	Very limited Slope	1.00	Very limited Deep to water	1.00
		Restricted permeability	0.50		

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		Rating class and limiting features	Value	Rating class and limiting features	Value
FvE: Forman-----	55	Very limited Slope Restricted permeability	1.00 0.50	Very limited Deep to water	1.00
Buse-----	20	Very limited Slope Large stones on the surface Cobble content Restricted permeability Salinity	1.00 1.00 1.00 0.50 0.01	Very limited Deep to water	1.00
Ga: Gardena-----	85	Not limited		Somewhat limited Deep to water Cutbanks cave	0.81 0.10
Gp: Orthents, Gravelly--	100	Very limited Slope Filtering capacity Droughty Leaching limitation	1.00 1.00 0.71 0.45	Very limited Deep to water	1.00
GyA: Glyndon-----	85	Very limited Depth to saturated zone	1.00	Somewhat limited Cutbanks cave Deep to water	0.10 0.01
Ha: Hamar-----	90	Very limited Depth to saturated zone Leaching limitation Droughty	1.00 0.90 0.03	Very limited Cutbanks cave	1.00
HbA: Hamerly-----	45	Somewhat limited Depth to saturated zone Restricted permeability	0.84 0.50	Somewhat limited Slow refill Cutbanks cave Deep to water	0.97 0.10 0.07

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Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Tonka-----	25	Very limited Restricted permeability	1.00	Somewhat limited Slow refill	0.30
		Depth to saturated zone	1.00	Cutbanks cave	0.10
		Ponding	1.00		
		Leaching limitation	0.50		
HcA: Hamerly-----	65	Somewhat limited Depth to saturated zone	0.84	Somewhat limited Slow refill	0.97
		Restricted permeability	0.50	Cutbanks cave	0.10
				Deep to water	0.07
Vallars-----	20	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill	0.97
		Restricted permeability	0.50	Cutbanks cave	0.10
HcB: Hamerly-----	65	Somewhat limited Depth to saturated zone	0.84	Somewhat limited Slow refill	0.97
		Restricted permeability	0.50	Cutbanks cave	0.10
				Deep to water	0.07
Vallars-----	20	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill	0.97
		Restricted permeability	0.50	Cutbanks cave	0.10
HdD: Hattie-----	90	Very limited Restricted permeability	1.00	Very limited Deep to water	1.00
		Slope	0.63		
HdE: Hattie-----	85	Very limited Slope	1.00	Very limited Deep to water	1.00
		Restricted permeability	1.00		

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Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value
HkD: Hattie-----	45	Very limited Restricted permeability Slope	1.00 1.00	Very limited Deep to water	1.00
Kloten-----	40	Very limited Depth to bedrock Droughty Slope Runoff limitation	1.00 1.00 1.00 0.40	Very limited Deep to water	1.00
HmA: Hecla-----	60	Somewhat limited Leaching limitation Droughty	0.45 0.10	Very limited Cutbanks cave Deep to water	1.00 0.81
Hamar-----	30	Very limited Depth to saturated zone Leaching limitation Droughty	1.00 0.90 0.03	Very limited Cutbanks cave	1.00
HsB: Heimdal-----	55	Very limited Depth to dense layer	1.00	Very limited Deep to water	1.00
Sisseton-----	20	Not limited		Very limited Deep to water	1.00
HsC: Heimdal-----	50	Very limited Depth to dense layer	1.00	Very limited Deep to water	1.00
Sisseton-----	25	Not limited		Very limited Deep to water	1.00
HvA: Heimdal-----	75	Very limited Depth to dense layer	1.00	Very limited Deep to water	1.00
Svea-----	15	Not limited		Somewhat limited Deep to water Slow refill Cutbanks cave	0.81 0.47 0.10

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Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value
HvB: Heimdal-----	65	Very limited Depth to dense layer	1.00	Very limited Deep to water	1.00
Svea-----	25	Not limited		Somewhat limited Deep to water Slow refill Cutbanks cave	0.81 0.47 0.10
La: Ladelle-----	90	Somewhat limited Flooding	0.60	Somewhat limited Deep to water Slow refill Cutbanks cave	0.90 0.47 0.10
Lm: Lamoure-----	90	Very limited Depth to saturated zone Flooding	1.00 0.60	Somewhat limited Slow refill Cutbanks cave	0.47 0.10
Lp: La Prairie-----	90	Not limited		Very limited Deep to water	1.00
Lt: Lamoure-----	85	Very limited Depth to saturated zone Flooding	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.47 0.10
Lu: Ludden-----	90	Very limited Restricted permeability Flooding Runoff limitation	1.00 1.00 0.40	Very limited Deep to water	1.00
M-W: Miscellaneous Water-	100	Not rated		Not rated	

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		Rating class and limiting features	Value	Rating class and limiting features	Value
MaB: Maddock-----	90	Very limited Filtering capacity Leaching limitation Droughty	1.00 0.45 0.03	Very limited Deep to water	1.00
MaD: Maddock-----	85	Very limited Slope Filtering capacity Leaching limitation Droughty	1.00 1.00 0.45 0.03	Very limited Deep to water	1.00
Mr: Southam-----	90	Very limited Restricted permeability Ponding Depth to saturated zone Runoff limitation Salinity	1.00 1.00 1.00 0.40 0.01	Somewhat limited Slow refill Cutbanks cave Salty water	0.97 0.10 0.01
Mw: Marysland-----	85	Very limited Depth to saturated zone Filtering capacity Leaching limitation Flooding	1.00 1.00 0.70 0.60	Very limited Cutbanks cave	1.00
Or: Orthents, Loamy-----	100	Somewhat limited Restricted permeability	0.50	Very limited Deep to water	1.00
Pa: Parnell-----	85	Very limited Restricted permeability Ponding Depth to saturated zone Leaching limitation	1.00 1.00 1.00 0.50	Somewhat limited Slow refill Cutbanks cave	0.97 0.10

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Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value
PeA: Peever-----	85	Somewhat limited Restricted permeability	0.89	Very limited Deep to water	1.00
PeB: Peever-----	85	Somewhat limited Restricted permeability	0.89	Very limited Deep to water	1.00
PeC: Peever-----	80	Somewhat limited Restricted permeability	0.89	Very limited Deep to water	1.00
PhA: Peever-----	70	Somewhat limited Restricted permeability	0.89	Very limited Deep to water	1.00
Cavour-----	25	Very limited Restricted permeability	1.00	Somewhat limited Slow refill	0.98
		Salinity	0.50	Deep to water	0.90
		Runoff limitation	0.40	Salty water	0.78
		Sodium content	0.18	Cutbanks cave	0.10
Pk: Peever-----	60	Somewhat limited Restricted permeability	0.89	Very limited Deep to water	1.00
Tonka-----	30	Very limited Restricted permeability	1.00	Somewhat limited Slow refill	0.30
		Depth to saturated zone	1.00	Cutbanks cave	0.10
		Ponding	1.00		
		Leaching limitation	0.50		
Pm: Playmoor-----	85	Very limited Depth to saturated zone	1.00	Very limited Cutbanks cave	1.00
		Flooding	1.00	Salty water	0.50
		Salinity	0.50	Slow refill	0.47
		Leaching limitation	0.50		
		Sodium content	0.08		

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		Rating class and limiting features	Value	Rating class and limiting features	Value
PoA: Poinsett-----	90	Not limited		Very limited Deep to water	1.00
PoB: Poinsett-----	90	Not limited		Very limited Deep to water	1.00
Ra: Rauville-----	90	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill	0.30
		Flooding	1.00	Cutbanks cave	0.10
		Runoff limitation	0.40		
ReA: Renshaw-----	85	Very limited Filtering capacity	1.00	Very limited Deep to water	1.00
		Droughty	0.34		
ReB: Renshaw-----	85	Very limited Filtering capacity	1.00	Very limited Deep to water	1.00
		Droughty	0.34		
RhB: Renshaw-----	70	Very limited Filtering capacity	1.00	Very limited Deep to water	1.00
		Droughty	0.34		
Sioux-----	20	Very limited Depth to dense layer	1.00	Very limited Deep to water	1.00
		Filtering capacity	1.00		
		Droughty	0.84		
		Leaching limitation	0.45		
RhD: Renshaw-----	50	Very limited Slope	1.00	Very limited Deep to water	1.00
		Filtering capacity	1.00		
		Droughty	0.34		

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Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Sioux-----	40	Very limited Slope Depth to dense layer Filtering capacity Droughty Leaching limitation	1.00 1.00 1.00 0.84 0.45	Very limited Deep to water	1.00
RsE: Renshaw-----	50	Very limited Slope Filtering capacity Droughty	1.00 1.00 0.34	Very limited Deep to water	1.00
Sioux-----	35	Very limited Slope Depth to dense layer Filtering capacity Droughty Leaching limitation	1.00 1.00 1.00 0.84 0.45	Very limited Deep to water	1.00
RtA: Rentill-----	85	Very limited Depth to dense layer Filtering capacity Restricted permeability	1.00 1.00 0.81	Very limited Deep to water	1.00
RtB: Rentill-----	85	Very limited Depth to dense layer Filtering capacity Restricted permeability	1.00 1.00 0.81	Very limited Deep to water	1.00

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		Rating class and limiting features	Value	Rating class and limiting features	Value
Sb: Minnewaukan-----	90	Very limited Depth to saturated zone Ponding Filtering capacity Leaching limitation Flooding	1.00 1.00 1.00 0.90 0.60	Very limited Cutbanks cave	1.00
ScF: Sieche-----	80	Very limited Slope Restricted permeability	1.00 0.50	Very limited Deep to water	1.00
SnA: Sinai-----	90	Very limited Restricted permeability	1.00	Very limited Deep to water	1.00
SnB: Sinai-----	90	Very limited Restricted permeability	1.00	Very limited Deep to water	1.00
SsF: Sisseton-----	70	Very limited Slope	1.00	Very limited Deep to water	1.00
StD: Sisseton-----	45	Very limited Slope	1.00	Very limited Deep to water	1.00
Heimdal-----	30	Very limited Slope Depth to dense layer	1.00 1.00	Very limited Deep to water	1.00
SvC: Svea-----	90	Not limited		Somewhat limited Deep to water Slow refill Cutbanks cave	0.81 0.47 0.10
SwA: Sverdrup-----	85	Very limited Filtering capacity Droughty	1.00 0.54	Very limited Deep to water	1.00

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Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value
SwB: Sverdrup-----	85	Very limited Filtering capacity Droughty	1.00 0.54	Very limited Deep to water	1.00
Tk: Tonka-----	85	Very limited Restricted permeability Depth to saturated zone Ponding Leaching limitation	1.00 1.00 1.00 0.50	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
To: Towner-----	85	Very limited Filtering capacity	1.00	Very limited Deep to water	1.00
Un: Ulen-----	90	Very limited Filtering capacity Depth to saturated zone Droughty	1.00 1.00 0.15	Very limited Cutbanks cave Deep to water	1.00 0.01
VhA: Vallers-----	60	Very limited Depth to saturated zone Restricted permeability	1.00 0.50	Somewhat limited Slow refill Cutbanks cave	0.97 0.10
Hamerly-----	30	Somewhat limited Depth to saturated zone Restricted permeability	0.84 0.50	Somewhat limited Slow refill Cutbanks cave Deep to water	0.97 0.10 0.07
Parnell-----	5	Very limited Restricted permeability Ponding Depth to saturated zone Leaching limitation	1.00 1.00 1.00 0.50	Somewhat limited Slow refill Cutbanks cave	0.97 0.10

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Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value
VnA: Vienna-----	85	Somewhat limited Restricted permeability	0.50	Very limited Deep to water	1.00
VnB: Vienna-----	80	Somewhat limited Restricted permeability	0.50	Very limited Deep to water	1.00
VnC: Vienna-----	80	Somewhat limited Restricted permeability	0.50	Very limited Deep to water	1.00
W: Water-----	100	Not rated		Not rated	
Wa: Waubay-----	90	Not limited		Somewhat limited Deep to water Slow refill Cutbanks cave	0.90 0.30 0.10
ZeD: Zell-----	60	Very limited Slope	1.00	Very limited Deep to water	1.00
Eckman-----	25	Somewhat limited Slope	0.63	Very limited Deep to water	1.00

