

WATER MANAGEMENT  
Shawnee County, Kansas

The soils of the survey area are rated in the Water Management table according to limitations that affect their suitability for water management. Soils are rated for pond reservoir areas, drainage, irrigation, terraces and diversions, and grassed waterways. Restrictive features that affect each soil for the specified use is also provided in the table.

The ratings in the table 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 the specified use. 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. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Moderately 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. Limited indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but generally require special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate to high 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.

Limitation class terms, such as very limited or limited, etc., limitation ratings, and numerical ratings are shown for each soil feature listed. As many as three soil features may be listed for each soil component if applicable. The overall limitation rating for the soil component is based on the most severe limitation.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects traffic ability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditch banks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or to a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or to a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a very limited hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, which conduct surface water to outlets at a non-erosive velocity. Large stones, wetness, slope, and depth to bedrock or to a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

WATER MANAGEMENT--Continued  
Shawnee County, Kansas

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Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
045OE: Oska-----	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily percs slowly depth to rock
045SV: Sibleyville----	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
045SX: Rock Outcrop----	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
Vinland-----	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
045VM: Vinland-----	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
Martin-----	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily slope wetness	Limitation: erodes easily slope wetness
045WS: Woodson-----	Limitation: percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
085KB: Kennebec-----	Limitation: deep to water	Limitation: flooding	Favorable	Favorable
085MC: Martin-----	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Vinland-----	Limitation: deep to water	Limitation: slope depth to rock	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock
085ZA: Zook-----	Limitation: flooding frost action percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
087EC: Eudora-----	Limitation: deep to water	Limitation: flooding	Limitation: erodes easily	Limitation: erodes easily
Bismarckgrove---	Limitation: flooding frost action	Limitation: flooding percs slowly wetness	Limitation: erodes easily wetness	Limitation: erodes easily
087HC: Haig-----	Limitation: frost action percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily wetness	Limitation: erodes easily percs slowly wetness
087KV: Konawa-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: too sandy soil blowing	Favorable
087RS: Rossville-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
087SO: Shelby-----	Limitation: deep to water	Limitation: slope	Limitation: slope	Limitation: slope
Pawnee-----	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily slope wetness	Limitation: erodes easily slope wetness
087WC: Wabash-----	Limitation: flooding percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
139ED: Elmont-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
149KM: Kimo-----	Limitation: frost action percs slowly	Limitation: percs slowly slow intake wetness	Limitation: erodes easily wetness	Limitation: erodes easily percs slowly

WATER MANAGEMENT--Continued  
Shawnee County, Kansas

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Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
1971B: Irwin-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
197IV: Ivan-----	Limitation: deep to water	Limitation: flooding	Favorable	Favorable
197IX: Ivan-----	Limitation: deep to water	Limitation: flooding	Favorable	Favorable
197MR: Morrill-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
197MS: Morrill, very stony-----	Limitation: deep to water	Limitation: slope	Limitation: slope	Limitation: slope
197SA: Sarpy-----	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
197WF: Wamego-----	Limitation: deep to water	Limitation: percs slowly slope thin layer	Limitation: area reclaim erodes easily slope	Limitation: area reclaim erodes easily slope
197WY: Wymore-----	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily wetness	Limitation: erodes easily wetness
2797: Morrill, stony--	Limitation: deep to water	Limitation: slope	Limitation: slope	Limitation: slope
AED: Arents, Earthen Dam-----	---	---	---	---
An: Kennebec-----	Limitation: deep to water	Limitation: flooding	Favorable	Favorable
Bk: Martin-----	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Kennebec-----	Limitation: deep to water	Limitation: flooding slope	Favorable	Favorable
BOA: Borrow Areas----	---	---	---	---
Br: Fluvents-----	Limitation: deep to water	Limitation: flooding percs slowly	Favorable	Limitation: percs slowly
Dm: Dwight-----	Limitation: deep to water	Limitation: erodes easily excess sodium percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily excess sodium percs slowly
Martin-----	Limitation: frost action percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Ds: Dwight-----	Limitation: deep to water	Limitation: erodes easily excess sodium percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily excess sodium percs slowly
Dw: Dwight-----	Limitation: deep to water	Limitation: erodes easily excess sodium percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily excess sodium percs slowly
El: Elmont-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
Em: Elmont, eroded--	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
En: Elmont-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope

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Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Eo: Elmont, eroded--	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Ep: Elmont, eroded-- Dwight-----	Limitation: deep to water Limitation: deep to water	Limitation: slope Limitation: erodes easily excess sodium percs slowly	Limitation: erodes easily Limitation: erodes easily percs slowly	Limitation: erodes easily Limitation: erodes easily excess sodium percs slowly
Es: Eudora-----	Limitation: deep to water	Limitation: soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily
Et: Eudora-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
Eu: Eudora-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Ev: Eudora----- Kimo-----	Limitation: deep to water Limitation: frost action percs slowly cutbanks cave	Favorable Limitation: erodes easily percs slowly wetness	Limitation: erodes easily Limitation: erodes easily wetness	Limitation: erodes easily Limitation: erodes easily percs slowly
Ew: Eudora----- Kimo-----	Limitation: deep to water Limitation: frost action percs slowly cutbanks cave	Limitation: soil blowing Limitation: percs slowly wetness soil blowing	Limitation: erodes easily soil blowing Limitation: erodes easily wetness soil blowing	Limitation: erodes easily Limitation: erodes easily percs slowly
Gm: Gymer-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
Gy: Gymer-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
INL: Aquolls-----	---	---	---	---
Kb: Kennebec-----	Limitation: deep to water	Limitation: flooding	Favorable	Favorable
Kc: Chase-----	Limitation: flooding frost action percs slowly	Limitation: flooding percs slowly wetness	Limitation: wetness	Limitation: percs slowly
KF: Kennebec-----	Limitation: deep to water	Limitation: flooding	Favorable	Favorable
Km: Kimo-----	Limitation: frost action percs slowly cutbanks cave	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily wetness	Limitation: erodes easily percs slowly
Ko: Kimo-----	Limitation: flooding frost action percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily wetness	Limitation: erodes easily percs slowly
Ks: Kipson----- Sogn-----	Limitation: deep to water Limitation: deep to water	Limitation: slope depth to rock Limitation: depth to rock	Limitation: large stones slope depth to rock Limitation: depth to rock	Limitation: large stones slope depth to rock Limitation: depth to rock
Ku: Konawa-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Favorable
Kw: Konawa-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: slope soil blowing	Limitation: slope

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Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
La: Labette-----	Limitation: deep to water	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily percs slowly depth to rock
Lb: Labette-----	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily percs slowly depth to rock
Lc: Labette, eroded--	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily large stones depth to rock	Limitation: erodes easily large stones depth to rock
Ld: Ladysmith-----	Limitation: percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
LIQ: Limestone Quarry	---	---	---	---
Lm: Ladysmith-----	Limitation: percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Ls: Ladysmith, eroded-----	Limitation:  percs slowly	Limitation:  erodes easily percs slowly wetness	Limitation:  erodes easily percs slowly wetness	Limitation:  erodes easily percs slowly wetness
Ma: Made Land-----	---	---	---	---
Mb: Martin-----	Limitation: frost action percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Mc: Martin-----	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Me: Martin, eroded--	Limitation: frost action percs slowly slope	Limitation: erodes easily percs slowly slope wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Mf: Martin-----	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily slope wetness	Limitation: erodes easily slope wetness
Mh: Martin, eroded--	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily slope wetness	Limitation: erodes easily slope wetness
Mk: Martin-----	Limitation: frost action percs slowly slope	Limitation: slope slow intake wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Mm: Morrill-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
Mn: Morrill, eroded--	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
Mo: Morrill-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
MOO: Morrill-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Mp: Morrill-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope
Gravelly Land---	Limitation: deep to water	Limitation: percs slowly slope droughty	Limitation: percs slowly slope	Limitation: percs slowly slope droughty

WATER MANAGEMENT--Continued  
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Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Mr: Muir-----	Limitation: deep to water	Favorable	Favorable	Favorable
MRR: Morrill-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Pa: Pawnee-----	Limitation: frost action percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Pc: Pawnee-----	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Pe: Pawnee, eroded--	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
Pn: Pawnee-----	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily slope wetness	Limitation: erodes easily slope wetness
RD: Reading-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
Re: Reading-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
Rv: River Wash-----	---	---	---	---
Sa: Sарpy-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
SAP: Sand Pit-----	---	---	---	---
Se: Sарpy-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
Eudora-----	Limitation: deep to water	Limitation: flooding soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily
Sg: Sharpsburg-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
Sh: Sharpsburg-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
Sk: Shelby-----	Limitation: deep to water	Favorable	Favorable	Favorable
Sm: Shelby-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Sn: Shelby, eroded--	Limitation: deep to water	Limitation: slope	Favorable	Favorable
So: Shelby-----	Limitation: deep to water	Limitation: slope	Limitation: slope	Limitation: slope
Sp: Morrill-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Favorable
Sr: Morrill, eroded--	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Favorable
Ss: Morrill-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: slope soil blowing	Limitation: slope
St: Sibleyville-----	Limitation: deep to water	Limitation: depth to rock	Limitation: depth to rock	Limitation: depth to rock

WATER MANAGEMENT--Continued  
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Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Su: Sibleyville-----	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
Sv: Sogn-----	Limitation: deep to water	Limitation: slope depth to rock	Limitation: depth to rock	Limitation: depth to rock
Vinland-----	Limitation: deep to water	Limitation: slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Sw: Stony Steep Land Vinland-----	--- Limitation: deep to water	--- Limitation: slope depth to rock	--- Limitation: erodes easily slope depth to rock	--- Limitation: erodes easily slope depth to rock
Vn: Vinland-----	Limitation: deep to water	Limitation: slope depth to rock	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock
W: Water-----	---	---	---	---
Wa: Wabash-----	Limitation: flooding percs slowly	Limitation: slow intake wetness droughty	Limitation: percs slowly wetness	Limitation: percs slowly wetness droughty
Wb: Wabash-----	Limitation: flooding percs slowly	Limitation: flooding percs slowly wetness	Limitation: percs slowly wetness	Limitation: percs slowly wetness
We: Welda-----	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily	Limitation: erodes easily

WATER MANAGEMENT--Continued  
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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
045OE: Oska-----	88	Somewhat limited Depth to bedrock	0.56	Somewhat limited Thin layer Hard to pack	0.56 0.28	Very limited Deep to water	1.00
045SV: Sibleyville-----	50	Somewhat limited Seepage Depth to bedrock Slope	0.70 0.19 0.00	Somewhat limited Thin layer Seepage	0.93 0.04	Very limited Deep to water	1.00
045SX: Rock Outcrop-----	60	Not rated		Not rated		Not rated	
Vinland-----	26	Very limited Seepage Depth to bedrock Slope	1.00 0.58 0.28	Very limited Thin layer Piping	1.00 0.50	Very limited Deep to water	1.00
045VM: Vinland-----	40	Very limited Seepage Depth to bedrock Slope	1.00 0.58 0.00	Very limited Thin layer Piping	1.00 0.50	Very limited Deep to water	1.00
Martin-----	25	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 0.63	Very limited Slow refill Cutbanks cave Deep to water	1.00 0.10 0.00
045WS: Woodson-----	90	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 0.78	Very limited Deep to water	1.00
085KB: Kennebec-----	86	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.71 0.09	Somewhat limited Deep to water Slow refill Cutbanks cave	0.54 0.30 0.10
085MC: Martin-----	48	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 0.57	Very limited Slow refill Cutbanks cave Deep to water	1.00 0.10 0.00
Vinland-----	40	Very limited Seepage Depth to bedrock	1.00 0.58	Very limited Thin layer Piping	1.00 0.42	Very limited Deep to water	1.00
085ZA: Zook-----	90	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.95 0.10
087EC: Eudora-----	65	Somewhat limited Seepage	0.70	Very limited Piping	1.00	Very limited Deep to water	1.00
Bismarckgrove-----	20	Somewhat limited Seepage	0.70	Very limited Piping Seepage	1.00 0.22	Very limited Deep to water	1.00
087HC: Haig-----	85	Somewhat limited Seepage	0.05	Very limited Depth to saturated zone	1.00	Very limited Deep to water	1.00
087KV: Konawa-----	91	Very limited		Somewhat limited		Very limited	



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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
087RS: Rossville-----	85	Seepage	1.00	Seepage	0.08	Deep to water	1.00
		Somewhat limited Seepage	0.70	Somewhat limited Piping	0.40	Very limited Deep to water	1.00
087SO: Shelby-----	65	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.00	Very limited Deep to water	1.00
		Not limited		Very limited Depth to saturated zone Hard to pack	1.00 0.77	Very limited Deep to water	1.00
087WC: Wabash-----	94	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 1.00	Very limited Slow refill	1.00
						Cutbanks cave	0.10
139ED: Elmont-----	85	Somewhat limited Seepage	0.05	Somewhat limited Thin layer Piping	0.06 0.01	Very limited Deep to water	1.00
		Depth to bedrock	0.00				
149KM: Kimo-----	90	Somewhat limited Seepage	0.70	Very limited Piping Depth to saturated zone	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
						Deep to water	0.00
197IB: Irwin-----	80	Not limited		Somewhat limited Hard to pack	0.19	Very limited Deep to water	1.00
197IV: Ivan-----	90	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.56	Very limited Deep to water	1.00
197IX: Ivan-----	80	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.05	Very limited Deep to water	1.00
197MR: Morrill-----	75	Somewhat limited Seepage	0.57	Somewhat limited Piping	0.73	Very limited Deep to water	1.00
197MS: Morrill, very stony-	75	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
197SA: Sarpy-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited Deep to water	1.00
197WF: Wamego-----	75	Somewhat limited Depth to bedrock Slope	0.26 0.00	Somewhat limited Thin layer	0.96	Very limited Deep to water	1.00
197WY: Wymore-----	100	Somewhat limited Seepage	0.05	Very limited Depth to saturated zone Hard to pack	1.00 0.73	Very limited Deep to water	1.00
2797: Morrill, stony-----	85	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.04	Very limited Deep to water	1.00
AED: Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
An: Kennebec-----	90	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.85	Somewhat limited Deep to water	0.54

WATER MANAGEMENT--Continued  
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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Bk: Martin-----	54	Not limited		Depth to saturated zone	0.09	Slow refill	0.30
						Cutbanks cave	0.10
				Very limited Depth to saturated zone	1.00	Very limited Slow refill	1.00
				Hard to pack	0.60	Cutbanks cave	0.10
Kennebec-----	43	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.85	Somewhat limited Deep to water	0.54
				Depth to saturated zone	0.09	Slow refill	0.30
						Cutbanks cave	0.10
BOA: Borrow Areas-----	100	Not rated		Not rated		Not rated	
Br: Fluvents-----	97	Somewhat limited Seepage	0.70	Somewhat limited Depth to saturated zone	0.46	Somewhat limited Slow refill	0.30
						Deep to water	0.24
						Cutbanks cave	0.10
Dm: Dwight-----	60	Not limited		Very limited Hard to pack	1.00	Very limited Deep to water	1.00
Martin-----	30	Not limited		Very limited Depth to saturated zone	1.00	Very limited Slow refill	1.00
				Hard to pack	0.57	Cutbanks cave	0.10
Ds: Dwight-----	97	Not limited		Very limited Hard to pack	1.00	Very limited Deep to water	1.00
Dw: Dwight-----	85	Not limited		Very limited Hard to pack	1.00	Very limited Deep to water	1.00
El: Elmont-----	90	Somewhat limited Seepage Depth to bedrock	0.05 0.00	Somewhat limited Thin layer	0.11	Very limited Deep to water	1.00
Em: Elmont, eroded-----	90	Somewhat limited Seepage Depth to bedrock	0.05 0.00	Somewhat limited Thin layer	0.11	Very limited Deep to water	1.00
En: Elmont-----	90	Somewhat limited Seepage Depth to bedrock	0.05 0.00	Somewhat limited Thin layer	0.11	Very limited Deep to water	1.00
Eo: Elmont, eroded-----	90	Somewhat limited Seepage Depth to bedrock	0.05 0.00	Somewhat limited Thin layer	0.11	Very limited Deep to water	1.00
Ep: Elmont, eroded-----	75	Somewhat limited Seepage Depth to bedrock	0.05 0.00	Somewhat limited Thin layer	0.11	Very limited Deep to water	1.00
Dwight-----	25	Not limited		Very limited Hard to pack	1.00	Very limited Deep to water	1.00
Es: Eudora-----	95	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00
Et: Eudora-----	90	Somewhat limited		Very limited		Very limited	

WATER MANAGEMENT--Continued  
Shawnee County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Seepage	0.70	Piping	1.00	Deep to water	1.00
Eu: Eudora-----	85	Somewhat limited Seepage	0.70	Very limited Piping	1.00	Very limited Deep to water	1.00
Ev: Eudora-----	60	Somewhat limited Seepage	0.70	Very limited Piping	1.00	Very limited Deep to water	1.00
Kimo-----	30	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.91	Somewhat limited Slow refill Cutbanks cave Deep to water	0.30 0.10 0.00
Ew: Eudora-----	60	Somewhat limited Seepage	0.70	Very limited Piping Seepage	1.00 0.08	Very limited Deep to water	1.00
Kimo-----	30	Somewhat limited Seepage	0.70	Very limited Piping Depth to saturated zone	1.00 1.00	Somewhat limited Slow refill Cutbanks cave Deep to water	0.30 0.10 0.00
Gm: Gymer-----	88	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.02	Very limited Deep to water	1.00
Gy: Gymer-----	100	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
INL: Aquolls-----	100	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Somewhat limited Cutbanks cave	0.10
Kb: Kennebec-----	95	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.71 0.09	Somewhat limited Deep to water Slow refill Cutbanks cave	0.54 0.30 0.10
Kc: Chase-----	85	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Very limited Deep to water	1.00
KF: Kennebec-----	98	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.73 0.09	Somewhat limited Deep to water Slow refill Cutbanks cave	0.54 0.30 0.10
Km: Kimo-----	90	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.91	Somewhat limited Slow refill Cutbanks cave Deep to water	0.30 0.10 0.00
Ko: Kimo-----	95	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping Seepage	1.00 1.00 1.00 0.07	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Ks: Kipson-----	50	Very limited Seepage Depth to bedrock	1.00 0.58	Very limited Thin layer Piping	1.00 0.32	Very limited Deep to water	1.00

WATER MANAGEMENT--Continued  
Shawnee County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Slope	0.02				
Sogn-----	35	Very limited Seepage Depth to bedrock	1.00 1.00	Very limited Thin layer	1.00	Very limited Deep to water	1.00
Ku: Konawa-----	85	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.00	Very limited Deep to water	1.00
Kw: Konawa-----	85	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.00	Very limited Deep to water	1.00
La: Labette-----	88	Somewhat limited Depth to bedrock	0.56	Somewhat limited Thin layer Hard to pack	0.56 0.22	Very limited Deep to water	1.00
Lb: Labette-----	85	Somewhat limited Depth to bedrock	0.56	Somewhat limited Thin layer Hard to pack	0.56 0.22	Very limited Deep to water	1.00
Lc: Labette, eroded----	95	Somewhat limited Depth to bedrock	0.66	Somewhat limited Thin layer Hard to pack	0.66 0.28	Very limited Deep to water	1.00
Ld: Ladysmith-----	90	Somewhat limited Seepage	0.01	Very limited Depth to saturated zone Hard to pack	1.00 0.99	Somewhat limited Slow refill Cutbanks cave	0.99 0.10
LIQ: Limestone Quarry----	100	Not rated		Not rated		Not rated	
Lm: Ladysmith-----	85	Somewhat limited Seepage	0.01	Very limited Depth to saturated zone Hard to pack	1.00 0.99	Somewhat limited Slow refill Cutbanks cave Deep to water	0.99 0.10 0.00
Ls: Ladysmith, eroded---	100	Somewhat limited Seepage	0.01	Very limited Depth to saturated zone Hard to pack	1.00 0.99	Somewhat limited Slow refill Cutbanks cave	0.99 0.10
Ma: Made Land-----	100	Not rated		Not rated		Not rated	
Mb: Martin-----	90	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 0.57	Very limited Slow refill Cutbanks cave Deep to water	1.00 0.10 0.00
Mc: Martin-----	85	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 0.63	Very limited Slow refill Cutbanks cave Deep to water	1.00 0.10 0.00
Me: Martin, eroded-----	90	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 0.72	Very limited Slow refill Cutbanks cave	1.00 0.10

WATER MANAGEMENT--Continued  
Shawnee County, Kansas

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Mf: Martin-----	90	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 0.57	Very limited Slow refill Cutbanks cave	1.00 0.10
Mh: Martin, eroded-----	85	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 0.72	Very limited Slow refill Cutbanks cave	1.00 0.10
Mk: Martin-----	90	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 0.72	Very limited Slow refill Cutbanks cave	1.00 0.10
Mm: Morrill-----	91	Somewhat limited Seepage	0.57	Somewhat limited Piping	0.58	Very limited Deep to water	1.00
Mn: Morrill, eroded-----	91	Somewhat limited Seepage	0.57	Somewhat limited Piping	0.86	Very limited Deep to water	1.00
Mo: Morrill-----	91	Somewhat limited Seepage	0.57	Somewhat limited Piping	0.92	Very limited Deep to water	1.00
MOO: Morrill-----	90	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.58	Very limited Deep to water	1.00
Mp: Morrill-----	55	Somewhat limited Seepage	0.57	Somewhat limited Piping	0.95	Very limited Deep to water	1.00
Gravelly Land-----	30	Not rated		Not rated		Not rated	
Mr: Muir-----	85	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.57	Very limited Deep to water	1.00
MRR: Morrill-----	90	Somewhat limited Seepage	0.57	Somewhat limited Piping	0.13	Very limited Deep to water	1.00
Pa: Pawnee-----	100	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 0.71	Very limited Deep to water	1.00
Pc: Pawnee-----	85	Not limited		Very limited Depth to saturated zone	1.00	Very limited Deep to water	1.00
Pe: Pawnee, eroded-----	90	Not limited		Very limited Depth to saturated zone	1.00	Very limited Deep to water	1.00
Pn: Pawnee-----	85	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 0.71	Very limited Deep to water	1.00
RD: Reading-----	90	Somewhat limited Seepage	0.57	Somewhat limited Piping	0.00	Very limited Deep to water	1.00
Re: Reading-----	85	Somewhat limited Seepage	0.57	Somewhat limited Piping	0.01	Very limited Deep to water	1.00

WATER MANAGEMENT--Continued  
Shawnee County, Kansas

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Rv: River Wash-----	100	Not rated		Not rated		Not rated	
Sa: Sarpy-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited Deep to water	1.00
SAP: Sand Pit-----	100	Not rated		Not rated		Not rated	
Se: Sarpy-----	55	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited Deep to water	1.00
Eudora-----	45	Somewhat limited Seepage	0.70	Very limited Piping Seepage	1.00 0.08	Very limited Deep to water	1.00
Sg: Sharpsburg-----	88	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Sh: Sharpsburg-----	85	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Sk: Shelby-----	95	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
Sm: Shelby-----	88	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
Sn: Shelby, eroded-----	100	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
So: Shelby-----	85	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
Sp: Morrill-----	85	Somewhat limited Seepage	0.57	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00
Sr: Morrill, eroded-----	85	Somewhat limited Seepage	0.57	Somewhat limited Piping Seepage	0.57 0.08	Very limited Deep to water	1.00
Ss: Morrill-----	85	Somewhat limited Seepage	0.57	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00
St: Sibleyville-----	90	Somewhat limited Seepage Depth to bedrock	0.70 0.02	Somewhat limited Thin layer	0.56	Very limited Deep to water	1.00
Su: Sibleyville-----	90	Somewhat limited Seepage Depth to bedrock	0.70 0.02	Somewhat limited Thin layer	0.56	Very limited Deep to water	1.00
Sv: Sogn-----	55	Very limited Seepage Depth to bedrock	1.00 1.00	Very limited Thin layer	1.00	Very limited Deep to water	1.00
Vinland-----	25	Very limited Seepage Depth to bedrock Slope	1.00 0.66 0.02	Very limited Thin layer Piping	1.00 0.50	Very limited Deep to water	1.00
Sw: Stony Steep Land----	60	Not rated		Not rated		Not rated	

WATER MANAGEMENT--Continued  
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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Vinland-----	26	Very limited Seepage Depth to bedrock Slope	1.00 0.58 0.28	Very limited Thin layer Piping	1.00 0.42	Very limited Deep to water	1.00
Vn: Vinland-----	100	Very limited Seepage Depth to bedrock	1.00 0.66	Very limited Thin layer Piping	1.00 0.50	Very limited Deep to water	1.00
W: Water-----	100	Not rated		Not rated		Not rated	
Wa: Wabash-----	90	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 1.00	Very limited Slow refill Cutbanks cave	1.00 0.10
Wb: Wabash-----	88	Not limited		Very limited Depth to saturated zone Hard to pack	1.00 1.00	Very limited Slow refill Cutbanks cave	1.00 0.10
We: Welda-----	95	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00