

WATER MANAGEMENT
Kingman 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
Kingman County, Kansas

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
007AE: Albion-----	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Shellabarger----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: slope soil blowing	Limitation: slope
007FA: Farnum-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
077KA: Kanza-----	Limitation: flooding cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
077KR: Kirkland-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily	Limitation: erodes easily percs slowly
Renfrow-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
077NN: Nashville-----	Limitation: deep to water	Limitation: slope depth to rock	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock
077PC: Pond Creek-----	Limitation: deep to water	Limitation: erodes easily	Limitation: erodes easily	Limitation: erodes easily
077RC: Renfrow-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
Vernon-----	Limitation: deep to water	Limitation: percs slowly rooting depth droughty	Limitation: erodes easily percs slowly	Limitation: erodes easily rooting depth droughty
077SB: Shellabarger----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
077SE: Shellabarger----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
077SF: Shellabarger----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Favorable
077SG: Shellabarger----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Favorable
077SH: Shellabarger----	Limitation: deep to water	Limitation: soil blowing depth to rock	Limitation: soil blowing depth to rock	Limitation: depth to rock
151AO: Albion-----	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
151CN: Clark-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
151CO: Clark-----	Limitation: deep to water	Favorable	Favorable	Favorable
Ost-----	Limitation: deep to water	Favorable	Favorable	Favorable
151KP: Kanza-----	Limitation: flooding cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
Plevna-----	Limitation: flooding	Limitation: flooding wetness soil blowing	Limitation: wetness soil blowing	Limitation: wetness
151ND: Naron-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
151NF: Naron-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable

WATER MANAGEMENT--Continued
Kingman County, Kansas

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Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
151OC: Ost-----	Limitation: deep to water	Favorable	Favorable	Favorable
151OS: Ost-----	Limitation: deep to water	Favorable	Favorable	Favorable
151PN: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
151SE: Shellabarger----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
151ZS: Drummond-----	Limitation: excess sodium excess salt percs slowly	Limitation: percs slowly wetness droughty	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily excess sodium excess salt
Zenda-----	Limitation: flooding	Limitation: flooding wetness	Limitation: wetness	Favorable
173MA: Milan-----	Limitation: deep to water	Favorable	Favorable	Favorable
173PB: Plevna-----	Limitation: flooding	Limitation: flooding wetness soil blowing	Limitation: wetness soil blowing	Limitation: wetness
173RA: Renfrow-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
173RC: Renfrow-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
Wellsford-----	Limitation: deep to water	Limitation: percs slowly depth to rock	Limitation: percs slowly depth to rock	Limitation: percs slowly depth to rock
173TA: Tabler-----	Limitation: percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly
191RA: Renfrow-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
Grainola-----	Limitation: deep to water	Limitation: percs slowly depth to rock droughty	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily depth to rock droughty
990: Abbyville-----	Limitation: excess sodium	Limitation: excess sodium excess salt wetness	Limitation: wetness	Limitation: excess sodium
991: Abbyville, rarely flooded-	Limitation: excess sodium	Limitation: excess sodium excess salt wetness	Limitation: wetness	Limitation: excess sodium
Kisiwa, occasionally flooded-----	Limitation: excess sodium percs slowly ponding	Limitation: excess sodium percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily excess sodium wetness
1004: Albion-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
1005: Albion-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
1006: Albion-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable

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Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
1011: Albion-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
Shellabarger----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
1017: Shellabarger, Eroded-----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
Albion-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
1061: Arents, Earthen Dam-----	---	---	---	---
1359: Clark-----	Limitation: deep to water	Favorable	Favorable	Favorable
Ost-----	Limitation: deep to water	Favorable	Favorable	Favorable
1555: Dillhut-----	Favorable	Limitation: wetness droughty	Limitation: wetness soil blowing	Limitation: droughty
Plev-----	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
1728: Farnum-----	Limitation: deep to water	Favorable	Favorable	Favorable
Funmar-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
2205: Jamash-----	Limitation: deep to water	Limitation: percs slowly slope depth to rock	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily rooting depth depth to rock
Piedmont-----	Limitation: deep to water	Limitation: percs slowly depth to rock	Limitation: erodes easily percs slowly depth to rock	Limitation: erodes easily rooting depth depth to rock
2381: Kanza-----	Limitation: flooding cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness	Limitation: wetness droughty
Ninnescah-----	Limitation: flooding cutbanks cave	Limitation: wetness soil blowing	Limitation: too sandy wetness soil blowing	Limitation: wetness
2390: Kaskan-----	Limitation: deep to water	Favorable	Limitation: erodes easily too sandy	Limitation: erodes easily
2556: Langdon-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
2812: Mahone-----	Limitation: deep to water	Limitation: fast intake soil blowing	Limitation: soil blowing	Favorable
2948: Nalim-----	Limitation: deep to water	Favorable	Favorable	Favorable
3051: Ost-----	Limitation: deep to water	Favorable	Favorable	Favorable
3052: Ost-----	Limitation: deep to water	Favorable	Favorable	Favorable
Clark-----	Limitation: deep to water	Favorable	Favorable	Favorable
3170: Penalosa-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily	Limitation: erodes easily percs slowly
3171: Penalosa-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily	Limitation: erodes easily percs slowly

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Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
3180: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
3181: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
Turon-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
3445: Shellabarger, Moderately Eroded-----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
3510: Saltcreek-----	Limitation: deep to water	Limitation: soil blowing	Limitation: erodes easily percs slowly soil blowing	Limitation: erodes easily percs slowly
Funmar-----	Limitation: deep to water	Limitation: percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
Farnum-----	Limitation: deep to water	Favorable	Favorable	Favorable
3530: Shellabarger, Eroded-----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
Albion-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
3531: Shellabarger, Moderately Eroded-----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
Nalim-----	Limitation: deep to water	Favorable	soil blowing Favorable	Favorable
3532: Shellabarger----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
3533: Shellabarger----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
3534: Shellabarger----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
3535: Shellabarger----	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
Nalim-----	Limitation: deep to water	Favorable	Favorable	Favorable
3926: Water-----	---	---	---	---
3966: Willowbrook----	Limitation: flooding cutbanks cave	Limitation: flooding wetness soil blowing	Limitation: too sandy wetness soil blowing	Favorable
4005: Yaggy-----	Limitation: flooding cutbanks cave	Limitation: wetness soil blowing droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
Saxman-----	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
4110: Zellmont-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
Poxmash-----	Limitation: deep to water	Limitation: soil blowing	Limitation: too sandy soil blowing	Favorable
Aa: Albion-----	Limitation: deep to water	Limitation: soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty

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Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Ab: Albion-----	Limitation: deep to water	Limitation: soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
Ac: Albion-----	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
Ad: Albion-----	Limitation: deep to water	Limitation: slope soil blowing droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
AED: Arents, Earthen Dam-----	---	---	---	---
Ba: Blanket-----	Limitation: deep to water	Limitation: erodes easily	Limitation: erodes easily	Limitation: erodes easily
Bb: Blanket-----	Limitation: deep to water	Limitation: erodes easily	Limitation: erodes easily	Limitation: erodes easily
Bc: Blanket-----	Limitation: deep to water	Limitation: erodes easily	Limitation: erodes easily	Limitation: erodes easily
Ca: Canadian-----	Limitation: deep to water	Limitation: soil blowing droughty	Limitation: soil blowing	Limitation: droughty
Cb: Carwile-----	Limitation: percs slowly	Limitation: percs slowly wetness soil blowing	Limitation: erodes easily wetness soil blowing	Limitation: erodes easily percs slowly rooting depth
Cc: Case-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Clark-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Cd: Case-----	Limitation: deep to water	Limitation: slope	Limitation: slope	Limitation: slope
Clark-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Ce: Clark-----	Limitation: deep to water	Favorable	Favorable	Favorable
Cf: Clark-----	Limitation: deep to water	Favorable	Favorable	Favorable
Da: Dillwyn-----	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
Plevna-----	Limitation: flooding	Limitation: flooding wetness soil blowing	Limitation: wetness soil blowing	Limitation: wetness
Fa: Farnum-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
Fb: Farnum-----	Limitation: deep to water	Favorable	Favorable	Favorable
Fc: Farnum-----	Limitation: deep to water	Favorable	Favorable	Favorable
Fd: Farnum-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Fe: Farnum-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Ff: Farnum-----	Limitation: deep to water	Favorable	Favorable	Favorable
Natrustolls----	---	---	---	---
Ka: Kaski-----	Limitation: deep to water	Limitation: flooding	Favorable	Favorable
Kb: Kingman-----	Limitation: flooding	Limitation: flooding wetness	Limitation: wetness	Limitation: wetness

WATER MANAGEMENT--Continued
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Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
La: Lincoln-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
Ma: McLain-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
Na: Nashville-----	Limitation: deep to water	Limitation: depth to rock	Limitation: depth to rock	Limitation: depth to rock
Nb: Nashville-----	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
Quinlan-----	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope depth to rock
Oa: Owens-----	Limitation: deep to water	Limitation: percs slowly depth to rock	Limitation: percs slowly depth to rock	Limitation: percs slowly depth to rock
Pa: Pond Creek-----	Limitation: deep to water	Limitation: erodes easily	Limitation: erodes easily	Limitation: erodes easily
Pb: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
Pc: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
Carwile-----	Limitation: percs slowly	Limitation: percs slowly wetness soil blowing	Limitation: erodes easily wetness soil blowing	Limitation: erodes easily percs slowly rooting depth
Pd: Pratt-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Tivoli-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Qa: Quinlan-----	Limitation: deep to water	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock
Qb: Quinlan-----	Limitation: deep to water	Limitation: erodes easily slope depth to rock	Limitation: erodes easily depth to rock	Limitation: erodes easily depth to rock
Ra: Renfrow-----	Limitation: deep to water	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly	Limitation: erodes easily percs slowly
Rb: Ruella-----	Limitation: deep to water	Favorable	Favorable	Favorable
Rc: Ruella-----	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Rock Outcrop----	---	---	---	---
Sa: Shellabarger----	Limitation: deep to water	Limitation: fast intake soil blowing	Limitation: soil blowing	Favorable
Sb: Shellabarger----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
Sc: Shellabarger----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Favorable
Sd: Shellabarger----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Favorable

WATER MANAGEMENT--Continued
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Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Ta: Tivoli-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
W: Water-----	---	---	---	---
Wa: Waldeck-----	Limitation: flooding	Limitation: flooding wetness soil blowing	Limitation: wetness soil blowing	Favorable
Za: Zenda-----	Limitation: flooding	Limitation: flooding wetness	Limitation: wetness	Favorable

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
007AE: Albion-----	55	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Shellabarger-----	45	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
007FA: Farnum-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
077KA: Kanza-----	100	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.65	Very limited Cutbanks cave	1.00
077KR: Kirkland-----	70	Somewhat limited Seepage	0.05	Somewhat limited Hard to pack	0.22	Very limited Deep to water	1.00
Renfrow-----	30	Not limited		Somewhat limited Hard to pack	0.19	Very limited Deep to water	1.00
077NN: Nashville-----	100	Somewhat limited Seepage Depth to bedrock	0.70 0.11	Very limited Piping Thin layer	1.00 0.86	Very limited Deep to water	1.00
077PC: Pond Creek-----	100	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.73	Very limited Deep to water	1.00
077RC: Renfrow-----	65	Not limited		Somewhat limited Hard to pack	0.19	Very limited Deep to water	1.00
Vernon-----	35	Somewhat limited Depth to bedrock	0.08	Very limited Piping Thin layer	1.00 0.81	Very limited Deep to water	1.00
077SB: Shellabarger-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
077SE: Shellabarger-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
077SF: Shellabarger-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
077SG: Shellabarger-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
077SH: Shellabarger-----	100	Somewhat limited Seepage Depth to bedrock	0.70 0.01	Somewhat limited Piping Thin layer	0.94 0.52	Very limited Deep to water	1.00
151AO: Albion-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
151CN: Clark-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping Seepage	0.12 0.08	Very limited Deep to water	1.00
151CO: Clark-----	70	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
Ost-----	30	Somewhat limited Seepage	0.05	Very limited Piping	1.00	Very limited Deep to water	1.00
151KP: Kanza-----	50	Very limited		Very 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
Plevna-----	50	Seepage	1.00	Depth to saturated zone Seepage	1.00 0.98	Cutbanks cave	1.00
		Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Cutbanks cave	1.00
151ND: Naron-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00
151NF: Naron-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00
151OC: Ost-----	100	Somewhat limited Seepage	0.05	Very limited Piping	1.00	Very limited Deep to water	1.00
151OS: Ost-----	100	Somewhat limited Seepage	0.05	Very limited Piping	1.00	Very limited Deep to water	1.00
151PN: Pratt-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.57	Very limited Deep to water	1.00
151SE: Shellabarger-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
151ZS: Drummond-----	50	Not limited		Somewhat limited Depth to saturated zone Salinity	0.43	Somewhat limited Salty water	0.50
					0.12	Deep to water Cutbanks cave	0.25 0.10
Zenda-----	50	Somewhat limited Seepage	0.70	Somewhat limited Depth to saturated zone Piping	0.43	Somewhat limited Slow refill	0.30
					0.15	Deep to water Cutbanks cave	0.25 0.10
173MA: Milan-----	100	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.10	Very limited Deep to water	1.00
173PB: Plevna-----	100	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Cutbanks cave	1.00
173RA: Renfrow-----	100	Not limited		Somewhat limited Hard to pack	0.19	Very limited Deep to water	1.00
173RC: Renfrow-----	65	Not limited		Somewhat limited Hard to pack	0.19	Very limited Deep to water	1.00
Wellsford-----	35	Very limited Seepage Depth to bedrock	1.00 0.66	Very limited Thin layer Hard to pack	1.00 0.50	Very limited Deep to water	1.00
173TA: Tabler-----	100	Not limited		Somewhat limited Hard to pack	0.16	Very limited Deep to water	1.00
191RA: Renfrow-----	70	Not limited		Somewhat limited Hard to pack	0.19	Very limited Deep to water	1.00
Grainola-----	30	Somewhat limited Depth to bedrock	0.03	Somewhat limited Thin layer Hard to pack	0.66 0.50	Very limited Deep to water	1.00

WATER MANAGEMENT--Continued
Kingman 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
990: Abbyville-----	95	Not limited		Very limited Piping Depth to saturated zone Seepage	1.00 0.43 0.04	Very limited Slow refill Deep to water Cutbanks cave Salty water	1.00 0.25 0.10 0.01
991: Abbyville, rarely flooded-----	45	Not limited		Very limited Piping Depth to saturated zone Seepage	 1.00 0.43 0.04	Very limited Slow refill Deep to water Cutbanks cave Salty water	 1.00 0.25 0.10 0.01
Kisiwa, occasionally flooded-----	40	Very limited Seepage	 1.00	Very limited Ponding Depth to saturated zone Seepage Piping	 1.00 1.00 1.00 1.00	Very limited Deep to water	 1.00
1004: Albion-----	90	Very limited Seepage	1.00	Somewhat limited Seepage	0.99	Very limited Deep to water	1.00
1005: Albion-----	75	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
1006: Albion-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
1011: Albion-----	70	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
Shellabarger-----	30	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
1017: Shellabarger, Eroded	40	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
Albion-----	45	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
1061: Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
1359: Clark-----	70	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.52	Very limited Deep to water	1.00
Ost-----	30	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.82	Very limited Deep to water	1.00
1555: Dillhut-----	35	Very limited Seepage	1.00	Somewhat limited Seepage	0.13	Very limited Deep to water	1.00
Plev-----	35	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Deep to water	1.00
1728: Farnum-----	40	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.01	Very limited Deep to water	1.00
Funmar-----	40	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00

WATER MANAGEMENT--Continued
Kingman 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
2205: Jamash-----	60	Somewhat limited Depth to bedrock	0.66	Very limited Thin layer	1.00	Very limited Deep to water	1.00
Piedmont-----	40	Somewhat limited Depth to bedrock Seepage	0.08 0.05	Somewhat limited Thin layer	0.81	Very limited Deep to water	1.00
2381: Kanza-----	50	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.90	Very limited Cutbanks cave	1.00
Ninnescah-----	50	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.12	Very limited Cutbanks cave Deep to water	1.00 0.00
2390: Kaskan-----	85	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
2556: Langdon-----	50	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited Deep to water	1.00
2812: Mahone-----	95	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.93	Very limited Deep to water	1.00
2948: Nalim-----	80	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
3051: Ost-----	90	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.82	Very limited Deep to water	1.00
3052: Ost-----	55	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.82	Very limited Deep to water	1.00
Clark-----	45	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.52	Very limited Deep to water	1.00
3170: Penalosa-----	100	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
3171: Penalosa-----	100	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
3180: Pratt-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.86	Very limited Deep to water	1.00
3181: Pratt-----	45	Very limited Seepage	1.00	Somewhat limited Seepage	0.86	Very limited Deep to water	1.00
Turon-----	30	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.87 0.77	Very limited Deep to water	1.00
3445: Shellabarger, Moderately Eroded--	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
3510: Saltcreek-----	50	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Funmar-----	30	Somewhat limited Seepage	0.05	Not limited		Very limited Deep to water	1.00
Farnum-----	20	Somewhat limited		Somewhat limited		Very limited	

WATER MANAGEMENT--Continued
Kingman 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	0.01	Deep to water	1.00
3530: Shellabarger, Eroded	45	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
Albion-----	40	Very limited Seepage	1.00	Somewhat limited Seepage	0.90	Very limited Deep to water	1.00
3531: Shellabarger, Moderately Eroded--	50	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
Nalim-----	50	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
3532: Shellabarger-----	80	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
3533: Shellabarger-----	85	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
3534: Shellabarger-----	85	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
3535: Shellabarger-----	55	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.88	Very limited Deep to water	1.00
Nalim-----	45	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
3926: Water-----	100	Not rated		Not rated		Not rated	
3966: Willowbrook-----	90	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
4005: Yaggy-----	60	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Saxman-----	30	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.86	Very limited Cutbanks cave Deep to water	1.00 0.06
4110: Zellmont-----	70	Somewhat limited Seepage Depth to bedrock	0.70 0.08	Somewhat limited Thin layer	0.81	Very limited Deep to water	1.00
Poxmash-----	30	Very limited Seepage Depth to bedrock	1.00 0.00	Very limited Seepage Thin layer	1.00 0.08	Very limited Deep to water	1.00
Aa: Albion-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.49	Very limited Deep to water	1.00
Ab: Albion-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.49	Very limited Deep to water	1.00
Ac: Albion-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00

WATER MANAGEMENT--Continued
Kingman 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
Ad: Albion-----	100	Very limited Seepage Slope	1.00 0.00	Somewhat limited Seepage	0.49	Very limited Deep to water	1.00
AED: Arents, Earthen Dam-	100	Not rated		Not rated		Not rated	
Ba: Blanket-----	100	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Bb: Blanket-----	100	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Bc: Blanket-----	100	Somewhat limited Seepage	0.70	Not limited		Very limited Deep to water	1.00
Ca: Canadian-----	100	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.07	Very limited Deep to water	1.00
Cb: Carwile-----	100	Somewhat limited Seepage	0.57	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Cc: Case-----	60	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
Clark-----	40	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.13	Very limited Deep to water	1.00
Cd: Case-----	60	Somewhat limited Seepage Slope	0.70 0.00	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
Clark-----	40	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.13	Very limited Deep to water	1.00
Ce: Clark-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.13	Very limited Deep to water	1.00
Cf: Clark-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.13	Very limited Deep to water	1.00
Da: Dillwyn-----	60	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.18	Very limited Cutbanks cave Deep to water	1.00 0.00
Plevna-----	40	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Cutbanks cave	1.00
Fa: Farnum-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
Fb: Farnum-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.03	Very limited Deep to water	1.00
Fc: Farnum-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.03	Very limited Deep to water	1.00

WATER MANAGEMENT--Continued
Kingman 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
Fd: Farnum-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.03	Very limited Deep to water	1.00
Fe: Farnum-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.12	Very limited Deep to water	1.00
Ff: Farnum-----	60	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.03	Very limited Deep to water	1.00
Natrustolls-----	40	Not rated		Not rated		Not rated	
Ka: Kaski-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.75	Very limited Deep to water	1.00
Kb: Kingman-----	100	Somewhat limited Seepage	0.57	Very limited Depth to saturated zone Piping Seepage	1.00 0.09 0.08	Somewhat limited Slow refill Cutbanks cave	0.43 0.10
La: Lincoln-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.39	Very limited Deep to water	1.00
Ma: Mclain-----	100	Somewhat limited Seepage	0.01	Not limited		Very limited Deep to water	1.00
Na: Nashville-----	100	Somewhat limited Seepage Depth to bedrock	0.70 0.17	Very limited Piping Thin layer	1.00 0.91	Very limited Deep to water	1.00
Nb: Nashville-----	60	Somewhat limited Seepage Depth to bedrock	0.70 0.17	Very limited Piping Thin layer	1.00 0.91	Very limited Deep to water	1.00
Quinlan-----	40	Very limited Seepage Depth to bedrock	1.00 0.74	Very limited Thin layer Piping	1.00 1.00	Very limited Deep to water	1.00
Oa: Owens-----	100	Very limited Seepage Depth to bedrock	1.00 0.61	Very limited Thin layer Hard to pack	1.00 0.50	Very limited Deep to water	1.00
Pa: Pond Creek-----	100	Somewhat limited Seepage	0.05	Somewhat limited Piping	0.68	Very limited Deep to water	1.00
Pb: Pratt-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.57	Very limited Deep to water	1.00
Pc: Pratt-----	60	Very limited Seepage	1.00	Somewhat limited Seepage	0.57	Very limited Deep to water	1.00
Carwile-----	40	Somewhat limited Seepage	0.57	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Pd: Pratt-----	50	Very limited Seepage	1.00	Somewhat limited Seepage	0.57	Very limited Deep to water	1.00
Tivoli-----	50	Very limited Seepage	1.00	Somewhat limited Seepage	0.99	Very limited Deep to water	1.00
Qa: Quinlan-----	100	Very limited Seepage	1.00	Very limited Thin layer	1.00	Very limited Deep to water	1.00

WATER MANAGEMENT--Continued
Kingman County, Kansas

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		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Depth to bedrock	0.74	Piping	1.00		
Qb: Quinlan-----	100	Very limited Seepage Depth to bedrock	1.00 0.74	Very limited Thin layer Piping	1.00 1.00	Very limited Deep to water	1.00
Ra: Renfrow-----	100	Not limited		Somewhat limited Hard to pack	0.19	Very limited Deep to water	1.00
Rb: Ruella-----	100	Somewhat limited Depth to bedrock Seepage	0.84 0.70	Very limited Thin layer	1.00	Very limited Deep to water	1.00
Rc: Ruella-----	60	Somewhat limited Depth to bedrock Seepage	0.84 0.70	Very limited Thin layer	1.00	Very limited Deep to water	1.00
Rock Outcrop-----	40	Not rated		Not rated		Not rated	
Sa: Shellabarger-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
Sb: Shellabarger-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
Sc: Shellabarger-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
Sd: Shellabarger-----	100	Somewhat limited Seepage	0.70	Somewhat limited Seepage	0.09	Very limited Deep to water	1.00
Ta: Tivoli-----	100	Very limited Seepage Slope	1.00 0.12	Somewhat limited Seepage	0.99	Very limited Deep to water	1.00
W: Water-----	100	Not rated		Not rated		Not rated	
Wa: Waldeck-----	100	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.43	Very limited Cutbanks cave Deep to water	1.00 0.25
Za: Zenda-----	100	Somewhat limited Seepage	0.70	Somewhat limited Depth to saturated zone Piping	0.43 0.14	Somewhat limited Slow refill Deep to water Cutbanks cave	0.30 0.25 0.10

