KS650.280 Kansas Data for Estimating Runoff and Peak Discharge

The following tables and charts can be used as aids to provide two types of input values for the equations in Chapter 2. Many of the tables contain standard data for Kansas (such as rainfall amounts). Others are solutions to equations that are shown in the title of the table (such as Table KS2-8 where $I^{0.8}$ is the hydraulic flow length raised to 0.8 power). The solutions shown in the table can be computed on most handheld calculators.

Figure KS2-1 Antecedent Runoff Condition (ARC) Used in Kansas for Non-Irrigated Conservation Practices (Except Dams)

Note: For all dams, use ARC II condition curve numbers.

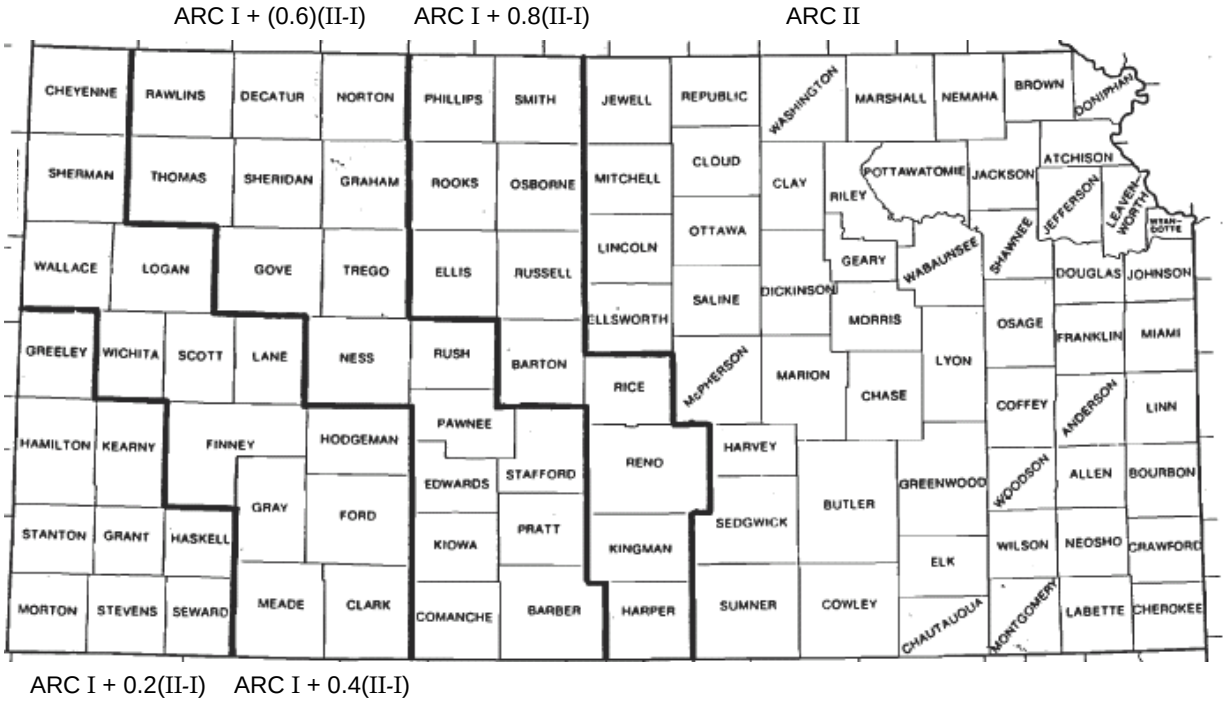


Table KS2-1 Runoff Curve Numbers - ARC II

For use on all earth dams and irrigated land in Kansas and on all conservation practices in the following counties: Allen, Anderson, Atchison, Bourbon, Brown, Butler, Chase, Chautauqua, Cherokee, Clay, Cloud, Coffey, Cowley, Crawford, Dickinson, Doniphan, Douglas, Elk, Ellsworth, Franklin, Geary, Greenwood, Harvey, Jackson, Jefferson, Jewell, Johnson, Labette, Leavenworth, Lincoln, Linn, Lyon, Marion, Marshall, McPherson, Miami, Mitchell, Montgomery, Morris, Nemaha, Neosho, Osage, Ottawa, Pottawatomie, Republic, Riley, Saline, Sedgwick, Shawnee, Sumner, Wabaunsee, Washington, Wilson, Woodson, and Wyandotte

The runoff curve numbers in this table may be used for all rainfall frequencies.

Land Use and Treatment and/or Practice [1/] or Hydrologic Condition [2/]	Hydrologic Soil Group			
	A	B	C	D
Fallow - Crop Residue Cover	75	84	89	92
Fallow - Contoured and Gradient Terraces	70	79	85	88
Row Crops - Straight Row [3/]	69	78	85	88
Row Crop - Contoured [3/]	67	77	82	86
Row Crop - Contoured and Gradient Terraces	64	72	78	81
Small Grain - Straight Row [3/]	63	74	82	85
Small Grain - Contoured [3/]	61	73	81	84
Small Grain - Contoured and Gradient Terraces	59	70	78	81
Cultivated - Storage-Type Terraces [4/ 5/]	50	60	67	70
Pasture or Range [6/] - poor	68	79	86	89
Pasture or Range [6/] - fair	50	69	79	84
Pasture or Range [6/] - good	50	61	74	80
Woods - poor	50	66	77	83
Woods - fair	50	60	73	79
Miscellaneous [7/]	72	82	87	89

[1/] Use estimated long-term land use condition
[2/] Hydrologic condition for cultivated agricultural lands (including fallow) is based on the effectiveness of the ground cover being between a poor and good condition.
[3/] Use for designing individual gradient, open-end, storage, and underground outlet terraces
[4/] Includes flat pothole areas and other areas with significant storage
[5/] Use for designing structures downstream of underground outlet and storage type terraces
[6/] Includes meadow
[7/] Includes roads, farmsteads, urban, etc. (about 3% for most rural areas)

Table KS2-2 Runoff Curve Numbers - ARC I + 0.8(II - I)

For use on non-irrigated drainage areas, except in the design of complex practices in the following counties: Barton, Ellis, Harper, Kingman, Osborne, Phillips, Reno, Rice, Rooks, Russell, and Smith

The curve numbers in this table may be used only for rainfall frequencies of 10 years and less.

Land Use and Treatment and/or Practice [1/] or Hydrologic Condition [2/]	Hydrologic Soil Group			
	A	B	C	D
Fallow - Crop Residue Cover	71	81	86	90
Fallow - Contoured and Gradient Terraces	66	76	82	85
Row Crops - Straight Row [3/]	65	74	82	85
Row Crop - Contoured [3/]	63	73	79	83
Row Crop - Contoured and Gradient Terraces	60	68	74	78
Small Grain - Straight Row [3/]	59	70	79	82
Small Grain - Contoured [3/]	57	69	78	81
Small Grain - Contoured and Gradient Terraces	55	66	74	78
Cultivated - Storage-Type Terraces [4/ 5/]	50	56	63	66
Pasture or Range [6/] - poor	64	76	83	86
Pasture or Range [6/] - fair	50	65	76	81
Pasture or Range [6/] - good	50	57	70	77
Woods - poor	50	62	73	80
Woods - fair	50	56	69	76
Miscellaneous [7/]	68	79	84	86

[1/] Use estimated long-term land use condition
[2/] Hydrologic condition for cultivated agricultural lands (including fallow) is based on the effectiveness of the ground cover being between a poor and good condition.
[3/] Use for designing individual gradient, open-end, storage, and underground outlet terraces
[4/] Includes flat pothole areas and other areas with significant storage
[5/] Use for designing structures downstream of underground outlet and storage type terraces
[6/] Includes meadow
[7/] Includes roads, farmsteads, urban, etc. (about 3% for most rural areas)

Table KS2-3 Runoff Curve Numbers - ARC I + 0.6(II - I)

For use on non-irrigated drainage areas, except in the design of complex practices in the following counties: Barber, Comanche, Decatur, Edwards, Gove, Graham, Kiowa, Ness, Norton, Pawnee, Pratt, Rawlins, Rush, Sheridan, Stafford, Thomas, and Trego

The curve numbers in this table may be used only for rainfall frequencies of 10 years and less.

Land Use and Treatment and/or Practice [1/] or Hydrologic Condition [2/]	Hydrologic Soil Group			
	A	B	C	D
Fallow - Crop Residue Cover	68	78	84	88
Fallow - Contoured and Gradient Terraces	62	72	79	83
Row Crops - Straight Row [3/]	61	71	79	83
Row Crop - Contoured [3/]	59	70	76	80
Row Crop - Contoured and Gradient Terraces	56	64	71	74
Small Grain - Straight Row [3/]	55	66	76	80
Small Grain - Contoured [3/]	53	65	74	78
Small Grain - Contoured and Gradient Terraces	51	62	71	74
Cultivated - Storage-Type Terraces [4/ 5/]	50	52	59	62
Pasture or Range [6/] - poor	60	72	80	84
Pasture or Range [6/] - fair	50	61	72	78
Pasture or Range [6/] - good	50	53	66	73
Woods - poor	50	58	70	77
Woods - fair	50	52	65	72
Miscellaneous [7/]	64	76	81	84

[1/] Use estimated long-term land use condition
[2/] Hydrologic condition for cultivated agricultural lands (including fallow) is based on the effectiveness of the ground cover being between a poor and good condition.
[3/] Use for designing individual gradient, open-end, storage, and underground outlet terraces
[4/] Includes flat pothole areas and other areas with significant storage
[5/] Use for designing structures downstream of underground outlet and storage type terraces
[6/] Includes meadow
[7/] Includes roads, farmsteads, urban, etc. (about 3% for most rural areas)

Table KS2-4 Runoff Curve Numbers - ARC I + 0.4(II - I)

For use on non-irrigated drainage areas, except in the design of complex practices in the following counties: Cheyenne, Clark, Finney, Ford, Gray, Hodgeman, Lane, Logan, Meade, Scott, Sherman, Wallace, and Wichita

The curve numbers in this table may be used only for rainfall frequencies of 10 years and less.

Land Use and Treatment and/or Practice [1/] or Hydrologic Condition [2/]	Hydrologic Soil Group			
	A	B	C	D
Fallow - Crop Residue Cover	64	74	81	85
Fallow - Contoured and Gradient Terraces	59	69	76	80
Row Crops - Straight Row [3/]	58	67	76	80
Row Crop - Contoured [3/]	55	66	72	78
Row Crop - Contoured and Gradient Terraces	52	61	67	71
Small Grain - Straight Row [3/]	51	63	72	76
Small Grain - Contoured [3/]	50	62	71	74
Small Grain - Contoured and Gradient Terraces	50	59	67	71
Cultivated - Storage-Type Terraces [4/ 5/]	50	50	55	59
Pasture or Range [6/] - poor	56	69	78	81
Pasture or Range [6/] - fair	50	58	69	74
Pasture or Range [6/] - good	50	50	63	70
Woods - poor	50	54	66	73
Woods - fair	50	50	62	69
Miscellaneous [7/]	61	72	79	81

[1/] Use estimated long-term land use condition
[2/] Hydrologic condition for cultivated agricultural lands (including fallow) is based on the effectiveness of the ground cover being between a poor and good condition.
[3/] Use for designing individual gradient, open-end, storage, and underground outlet terraces
[4/] Includes flat pothole areas and other areas with significant storage
[5/] Use for designing structures downstream of underground outlet and storage type terraces
[6/] Includes meadow
[7/] Includes roads, farmsteads, urban, etc. (about 3% for most rural areas)

Table KS2-5 Runoff Curve Numbers - ARC I + 0.2(II - I)

For use on non-irrigated drainage areas, except in the design of complex practices in the following counties: Grant, Greeley, Hamilton, Haskell, Kearny, Morton, Seward, Stanton, and Stevens

The curve numbers in this table may be used only for rainfall frequencies of 10 years and less.

Land Use and Treatment and/or Practice [1/] or Hydrologic Condition [2/]	Hydrologic Soil Group			
	A	B	C	D
Fallow - Crop Residue Cover	61	71	79	83
Fallow - Contoured and Gradient Terraces	55	65	73	78
Row Crops - Straight Row [3/]	54	64	73	78
Row Crop - Contoured [3/]	51	63	69	75
Row Crop - Contoured and Gradient Terraces	50	57	64	67
Small Grain - Straight Row [3/]	50	59	69	73
Small Grain - Contoured [3/]	50	58	67	71
Small Grain - Contoured and Gradient Terraces	50	55	64	67
Cultivated - Storage-Type Terraces [4/ 5/]	50	50	51	55
Pasture or Range [6/] - poor	52	65	75	79
Pasture or Range [6/] - fair	50	54	65	71
Pasture or Range [6/] - good	50	50	59	66
Woods - poor	50	50	63	70
Woods - fair	50	50	58	65
Miscellaneous [7/]	57	69	76	79

[1/] Use estimated long-term land use condition
[2/] Hydrologic condition for cultivated agricultural lands (including fallow) is based on the effectiveness of the ground cover being between a poor and good condition.
[3/] Use for designing individual gradient, open-end, storage, and underground outlet terraces
[4/] Includes flat pothole areas and other areas with significant storage
[5/] Use for designing structures downstream of underground outlet and storage type terraces
[6/] Includes meadow
[7/] Includes roads, farmsteads, urban, etc. (about 3% for most rural areas)

Table KS2-6 Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number (CN) & Corresponding Runoff, in inches															
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
ALLEN	2 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	5 year	4.9	1.24	1.38	1.52	1.66	1.81	1.96	2.12	2.28	2.45	2.63	2.81	2.99	3.18	3.37	3.57	3.78	3.99
	10 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	25 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	50 year	7.3	2.82	3.02	3.23	3.44	3.65	3.87	4.09	4.30	4.53	4.75	4.97	5.20	5.43	5.65	5.89	6.12	6.35
	100 year	8.3	3.56	3.79	4.02	4.25	4.49	4.72	4.96	5.19	5.43	5.67	5.91	6.15	6.38	6.62	6.86	7.10	7.34
	Normal Annual		37.3																
ANDERSON	2 year	3.7	0.62	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.51	1.65	1.80	1.95	2.11	2.28	2.45	2.64	2.83
	5 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	10 year	5.6	1.67	1.82	1.98	2.15	2.32	2.49	2.67	2.85	3.04	3.23	3.42	3.62	3.82	4.03	4.24	4.46	4.68
	25 year	6.5	2.26	2.44	2.63	2.82	3.01	3.21	3.41	3.61	3.82	4.02	4.24	4.45	4.67	4.89	5.11	5.33	5.56
	50 year	7.2	2.75	2.95	3.15	3.36	3.57	3.79	4.00	4.22	4.44	4.66	4.88	5.10	5.33	5.56	5.79	6.02	6.25
	100 year	8.2	3.48	3.71	3.94	4.17	4.40	4.64	4.87	5.10	5.34	5.58	5.81	6.05	6.29	6.53	6.76	7.00	7.24
	Normal Annual		41.7																
ATCHISON	2 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	5 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	10 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	25 year	6.0	1.92	2.09	2.26	2.44	2.62	2.81	2.99	3.18	3.38	3.58	3.78	3.99	4.20	4.41	4.63	4.85	5.07
	50 year	6.7	2.39	2.58	2.78	2.97	3.17	3.37	3.57	3.78	3.99	4.20	4.42	4.64	4.86	5.08	5.30	5.53	5.76
	100 year	7.6	3.04	3.25	3.46	3.68	3.90	4.12	4.35	4.57	4.80	5.02	5.25	5.48	5.71	5.94	6.18	6.41	6.65
	Normal Annual		36.2																
BARBER	2 year	3.1	0.37	0.44	0.51	0.59	0.68	0.77	0.87	0.97	1.08	1.20	1.33	1.46	1.60	1.75	1.91	2.08	2.26
	5 year	4.2	0.86	0.97	1.09	1.21	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.37	2.55	2.73	2.92	3.11	3.31
	10 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	25 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	50 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	100 year	7.4	2.89	3.10	3.31	3.52	3.74	3.95	4.17	4.39	4.62	4.84	5.06	5.29	5.52	5.75	5.98	6.22	6.45
	Normal Annual		25.2																
BARTON	2 year	2.8	0.26	0.32	0.38	0.45	0.53	0.61	0.69	0.78	0.88	0.99	1.10	1.22	1.35	1.49	1.64	1.80	1.97
	5 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	10 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	25 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	50 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	100 year	6.9	2.53	2.73	2.93	3.13	3.33	3.54	3.74	3.96	4.17	4.38	4.60	4.82	5.04	5.27	5.50	5.73	5.96
	Normal Annual		25.9																
BOURBON	2 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	5 year	4.9	1.24	1.38	1.52	1.66	1.81	1.96	2.12	2.28	2.45	2.63	2.81	2.99	3.18	3.37	3.57	3.78	3.99
	10 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	25 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	50 year	7.4	2.89	3.10	3.31	3.52	3.74	3.95	4.17	4.39	4.62	4.84	5.06	5.29	5.52	5.75	5.98	6.22	6.45
	100 year	8.2	3.48	3.71	3.94	4.17	4.40	4.64	4.87	5.10	5.34	5.58	5.81	6.05	6.29	6.53	6.76	7.00	7.24
	Normal Annual		40.1																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
BROWN	2 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	5 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	10 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	25 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	50 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	100 year	7.4	2.89	3.10	3.31	3.52	3.74	3.95	4.17	4.39	4.62	4.84	5.06	5.29	5.52	5.75	5.98	6.22	6.45
	Normal Annual		37.0																
BUTLER	2 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	5 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	10 year	5.4	1.54	1.69	1.85	2.01	2.17	2.34	2.51	2.69	2.87	3.05	3.24	3.44	3.64	3.84	4.05	4.26	4.48
	25 year	6.3	2.12	2.30	2.48	2.66	2.85	3.05	3.24	3.44	3.64	3.85	4.05	4.26	4.48	4.70	4.92	5.14	5.36
	50 year	7.1	2.67	2.87	3.08	3.28	3.49	3.70	3.91	4.13	4.35	4.57	4.79	5.01	5.23	5.46	5.69	5.92	6.15
	100 year	8.0	3.33	3.56	3.78	4.01	4.24	4.46	4.69	4.93	5.16	5.39	5.63	5.86	6.10	6.33	6.57	6.81	7.04
	Normal Annual		34.4																
CHASE	2 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	5 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	10 year	5.4	1.54	1.69	1.85	2.01	2.17	2.34	2.51	2.69	2.87	3.05	3.24	3.44	3.64	3.84	4.05	4.26	4.48
	25 year	6.2	2.05	2.23	2.41	2.59	2.78	2.96	3.16	3.35	3.55	3.76	3.96	4.17	4.38	4.60	4.82	5.04	5.27
	50 year	6.9	2.53	2.73	2.93	3.13	3.33	3.54	3.74	3.96	4.17	4.38	4.60	4.82	5.04	5.27	5.50	5.73	5.96
	100 year	7.9	3.26	3.48	3.70	3.93	4.15	4.38	4.61	4.84	5.07	5.30	5.53	5.76	6.00	6.23	6.47	6.71	6.94
	Normal Annual		34.0																
CHAUTAUQUA	2 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	5 year	4.9	1.24	1.38	1.52	1.66	1.81	1.96	2.12	2.28	2.45	2.63	2.81	2.99	3.18	3.37	3.57	3.78	3.99
	10 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	25 year	6.7	2.39	2.58	2.78	2.97	3.17	3.37	3.57	3.78	3.99	4.20	4.42	4.64	4.86	5.08	5.30	5.53	5.76
	50 year	7.5	2.96	3.17	3.39	3.60	3.82	4.04	4.26	4.48	4.71	4.93	5.16	5.39	5.62	5.85	6.08	6.31	6.55
	100 year	8.4	3.64	3.87	4.10	4.34	4.57	4.81	5.05	5.28	5.52	5.76	6.00	6.24	6.48	6.72	6.96	7.20	7.44
	Normal Annual		36.9																
CHEROKEE	2 year	4.0	0.76	0.86	0.97	1.09	1.20	1.33	1.46	1.60	1.74	1.89	2.04	2.20	2.37	2.55	2.73	2.92	3.12
	5 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	10 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	25 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	50 year	7.6	3.04	3.25	3.46	3.68	3.90	4.12	4.35	4.57	4.80	5.02	5.25	5.48	5.71	5.94	6.18	6.41	6.65
	100 year	8.5	3.71	3.95	4.18	4.42	4.66	4.90	5.14	5.38	5.61	5.85	6.10	6.34	6.58	6.82	7.06	7.30	7.54
	Normal Annual		40.5																
CHEYENNE	2 year	2.2	0.10	0.13	0.17	0.22	0.27	0.32	0.38	0.45	0.52	0.60	0.69	0.78	0.89	1.00	1.13	1.27	1.42
	5 year	3.0	0.33	0.40	0.47	0.54	0.63	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.52	1.66	1.82	1.98	2.16
	10 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	25 year	4.1	0.81	0.92	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.12	2.29	2.46	2.64	2.82	3.01	3.21
	50 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	100 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	Normal Annual		18.4																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
CLARK	2 year	2.8	0.26	0.32	0.38	0.45	0.53	0.61	0.69	0.78	0.88	0.99	1.10	1.22	1.35	1.49	1.64	1.80	1.97
	5 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	10 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	25 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	50 year	6.0	1.92	2.09	2.26	2.44	2.62	2.81	2.99	3.18	3.38	3.58	3.78	3.99	4.20	4.41	4.63	4.85	5.07
	100 year	6.7	2.39	2.58	2.78	2.97	3.17	3.37	3.57	3.78	3.99	4.20	4.42	4.64	4.86	5.08	5.30	5.53	5.76
	Normal Annual		22.3																
CLAY	2 year	3.2	0.41	0.48	0.56	0.64	0.73	0.83	0.93	1.04	1.15	1.27	1.40	1.54	1.68	1.84	2.00	2.17	2.35
	5 year	4.1	0.81	0.92	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.12	2.29	2.46	2.64	2.82	3.01	3.21
	10 year	4.9	1.24	1.38	1.52	1.66	1.81	1.96	2.12	2.28	2.45	2.63	2.81	2.99	3.18	3.37	3.57	3.78	3.99
	25 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	50 year	6.3	2.12	2.30	2.48	2.66	2.85	3.05	3.24	3.44	3.64	3.85	4.05	4.26	4.48	4.70	4.92	5.14	5.36
	100 year	7.2	2.75	2.95	3.15	3.36	3.57	3.79	4.00	4.22	4.44	4.66	4.88	5.10	5.33	5.56	5.79	6.02	6.25
	Normal Annual		31.9																
CLOUD	2 year	3.0	0.33	0.40	0.47	0.54	0.63	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.52	1.66	1.82	1.98	2.16
	5 year	4.0	0.76	0.86	0.97	1.09	1.20	1.33	1.46	1.60	1.74	1.89	2.04	2.20	2.37	2.55	2.73	2.92	3.12
	10 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	25 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	50 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	100 year	7.0	2.60	2.80	3.00	3.20	3.41	3.62	3.83	4.04	4.26	4.47	4.69	4.92	5.14	5.37	5.59	5.82	6.05
	Normal Annual		27.6																
COFFEY	2 year	3.7	0.62	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.51	1.65	1.80	1.95	2.11	2.28	2.45	2.64	2.83
	5 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	10 year	5.6	1.67	1.82	1.98	2.15	2.32	2.49	2.67	2.85	3.04	3.23	3.42	3.62	3.82	4.03	4.24	4.46	4.68
	25 year	6.4	2.19	2.37	2.55	2.74	2.93	3.13	3.32	3.52	3.73	3.93	4.14	4.36	4.57	4.79	5.01	5.24	5.46
	50 year	7.1	2.67	2.87	3.08	3.28	3.49	3.70	3.91	4.13	4.35	4.57	4.79	5.01	5.23	5.46	5.69	5.92	6.15
	100 year	8.1	3.41	3.63	3.86	4.09	4.32	4.55	4.78	5.02	5.25	5.48	5.72	5.95	6.19	6.43	6.67	6.90	7.14
	Normal Annual		39.0																
COMANCHE	2 year	2.9	0.30	0.36	0.43	0.50	0.58	0.66	0.75	0.85	0.95	1.06	1.18	1.30	1.43	1.58	1.73	1.89	2.07
	5 year	4.0	0.76	0.86	0.97	1.09	1.20	1.33	1.46	1.60	1.74	1.89	2.04	2.20	2.37	2.55	2.73	2.92	3.12
	10 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	25 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	50 year	6.3	2.12	2.30	2.48	2.66	2.85	3.05	3.24	3.44	3.64	3.85	4.05	4.26	4.48	4.70	4.92	5.14	5.36
	100 year	7.1	2.67	2.87	3.08	3.28	3.49	3.70	3.91	4.13	4.35	4.57	4.79	5.01	5.23	5.46	5.69	5.92	6.15
	Normal Annual		24.2																
COWLEY	2 year	3.7	0.62	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.51	1.65	1.80	1.95	2.11	2.28	2.45	2.64	2.83
	5 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	10 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	25 year	6.4	2.19	2.37	2.55	2.74	2.93	3.13	3.32	3.52	3.73	3.93	4.14	4.36	4.57	4.79	5.01	5.24	5.46
	50 year	7.3	2.82	3.02	3.23	3.44	3.65	3.87	4.09	4.30	4.53	4.75	4.97	5.20	5.43	5.65	5.89	6.12	6.35
	100 year	8.2	3.48	3.71	3.94	4.17	4.40	4.64	4.87	5.10	5.34	5.58	5.81	6.05	6.29	6.53	6.76	7.00	7.24
	Normal Annual		33.4																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
CRAWFORD	2 year	3.9	0.71	0.81	0.92	1.03	1.14	1.26	1.39	1.52	1.66	1.81	1.96	2.12	2.28	2.46	2.64	2.82	3.02
	5 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	10 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	25 year	6.7	2.39	2.58	2.78	2.97	3.17	3.37	3.57	3.78	3.99	4.20	4.42	4.64	4.86	5.08	5.30	5.53	5.76
	50 year	7.5	2.96	3.17	3.39	3.60	3.82	4.04	4.26	4.48	4.71	4.93	5.16	5.39	5.62	5.85	6.08	6.31	6.55
	100 year	8.4	3.64	3.87	4.10	4.34	4.57	4.81	5.05	5.28	5.52	5.76	6.00	6.24	6.48	6.72	6.96	7.20	7.44
	Normal Annual		39.8																
DECATUR	2 year	2.4	0.15	0.19	0.24	0.29	0.35	0.41	0.48	0.55	0.63	0.72	0.82	0.93	1.04	1.16	1.30	1.44	1.60
	5 year	3.2	0.41	0.48	0.56	0.64	0.73	0.83	0.93	1.04	1.15	1.27	1.40	1.54	1.68	1.84	2.00	2.17	2.35
	10 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	25 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	50 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	100 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	Normal Annual		21.8																
DICKINSON	2 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	5 year	4.3	0.91	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.01	3.20	3.41
	10 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	25 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	50 year	6.5	2.26	2.44	2.63	2.82	3.01	3.21	3.41	3.61	3.82	4.02	4.24	4.45	4.67	4.89	5.11	5.33	5.56
	100 year	7.5	2.96	3.17	3.39	3.60	3.82	4.04	4.26	4.48	4.71	4.93	5.16	5.39	5.62	5.85	6.08	6.31	6.55
	Normal Annual		31.8																
DONIPHAN	2 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	5 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	10 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	25 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	50 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	100 year	7.4	2.89	3.10	3.31	3.52	3.74	3.95	4.17	4.39	4.62	4.84	5.06	5.29	5.52	5.75	5.98	6.22	6.45
	Normal Annual		35.2																
DOUGLAS	2 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	5 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	10 year	5.4	1.54	1.69	1.85	2.01	2.17	2.34	2.51	2.69	2.87	3.05	3.24	3.44	3.64	3.84	4.05	4.26	4.48
	25 year	6.2	2.05	2.23	2.41	2.59	2.78	2.96	3.16	3.35	3.55	3.76	3.96	4.17	4.38	4.60	4.82	5.04	5.27
	50 year	6.9	2.53	2.73	2.93	3.13	3.33	3.54	3.74	3.96	4.17	4.38	4.60	4.82	5.04	5.27	5.50	5.73	5.96
	100 year	7.9	3.26	3.48	3.70	3.93	4.15	4.38	4.61	4.84	5.07	5.30	5.53	5.76	6.00	6.23	6.47	6.71	6.94
	Normal Annual		37.3																
EDWARDS	2 year	2.8	0.26	0.32	0.38	0.45	0.53	0.61	0.69	0.78	0.88	0.99	1.10	1.22	1.35	1.49	1.64	1.80	1.97
	5 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	10 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	25 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	50 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	100 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	Normal Annual		23.0																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
ELK	2 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	5 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	10 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	25 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	50 year	7.4	2.89	3.10	3.31	3.52	3.74	3.95	4.17	4.39	4.62	4.84	5.06	5.29	5.52	5.75	5.98	6.22	6.45
	100 year	8.3	3.56	3.79	4.02	4.25	4.49	4.72	4.96	5.19	5.43	5.67	5.91	6.15	6.38	6.62	6.86	7.10	7.34
	Normal Annual		36.1																
ELLIS	2 year	2.6	0.20	0.25	0.31	0.37	0.43	0.50	0.58	0.67	0.76	0.85	0.96	1.07	1.19	1.33	1.47	1.62	1.79
	5 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	10 year	4.2	0.86	0.97	1.09	1.21	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.37	2.55	2.73	2.92	3.11	3.31
	25 year	4.9	1.24	1.38	1.52	1.66	1.81	1.96	2.12	2.28	2.45	2.63	2.81	2.99	3.18	3.37	3.57	3.78	3.99
	50 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	100 year	6.3	2.12	2.30	2.48	2.66	2.85	3.05	3.24	3.44	3.64	3.85	4.05	4.26	4.48	4.70	4.92	5.14	5.36
	Normal Annual		23.3																
ELLSWORTH	2 year	3.0	0.33	0.40	0.47	0.54	0.63	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.52	1.66	1.82	1.98	2.16
	5 year	4.0	0.76	0.86	0.97	1.09	1.20	1.33	1.46	1.60	1.74	1.89	2.04	2.20	2.37	2.55	2.73	2.92	3.12
	10 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	25 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	50 year	6.2	2.05	2.23	2.41	2.59	2.78	2.96	3.16	3.35	3.55	3.76	3.96	4.17	4.38	4.60	4.82	5.04	5.27
	100 year	7.1	2.67	2.87	3.08	3.28	3.49	3.70	3.91	4.13	4.35	4.57	4.79	5.01	5.23	5.46	5.69	5.92	6.15
	Normal Annual		27.1																
FINNEY	2 year	2.4	0.15	0.19	0.24	0.29	0.35	0.41	0.48	0.55	0.63	0.72	0.82	0.93	1.04	1.16	1.30	1.44	1.60
	5 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	10 year	4.0	0.76	0.86	0.97	1.09	1.20	1.33	1.46	1.60	1.74	1.89	2.04	2.20	2.37	2.55	2.73	2.92	3.12
	25 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	50 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	100 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	Normal Annual		18.9																
FORD	2 year	2.7	0.23	0.29	0.34	0.41	0.48	0.55	0.64	0.72	0.82	0.92	1.03	1.15	1.27	1.41	1.55	1.71	1.88
	5 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	10 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	25 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	50 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	100 year	6.4	2.19	2.37	2.55	2.74	2.93	3.13	3.32	3.52	3.73	3.93	4.14	4.36	4.57	4.79	5.01	5.24	5.46
	Normal Annual		21.7																
FRANKLIN	2 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	5 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	10 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	25 year	6.4	2.19	2.37	2.55	2.74	2.93	3.13	3.32	3.52	3.73	3.93	4.14	4.36	4.57	4.79	5.01	5.24	5.46
	50 year	7.1	2.67	2.87	3.08	3.28	3.49	3.70	3.91	4.13	4.35	4.57	4.79	5.01	5.23	5.46	5.69	5.92	6.15
	100 year	8.1	3.41	3.63	3.86	4.09	4.32	4.55	4.78	5.02	5.25	5.48	5.72	5.95	6.19	6.43	6.67	6.90	7.14
	Normal Annual		40.2																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
GEARY	2 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	5 year	4.3	0.91	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.01	3.20	3.41
	10 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	25 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	50 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	100 year	7.5	2.96	3.17	3.39	3.60	3.82	4.04	4.26	4.48	4.71	4.93	5.16	5.39	5.62	5.85	6.08	6.31	6.55
	Normal Annual		34.5																
GOVE	2 year	2.4	0.15	0.19	0.24	0.29	0.35	0.41	0.48	0.55	0.63	0.72	0.82	0.93	1.04	1.16	1.30	1.44	1.60
	5 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	10 year	3.9	0.71	0.81	0.92	1.03	1.14	1.26	1.39	1.52	1.66	1.81	1.96	2.12	2.28	2.46	2.64	2.82	3.02
	25 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	50 year	5.4	1.54	1.69	1.85	2.01	2.17	2.34	2.51	2.69	2.87	3.05	3.24	3.44	3.64	3.84	4.05	4.26	4.48
	100 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	Normal Annual		21.9																
GRAHAM	2 year	2.5	0.17	0.22	0.27	0.33	0.39	0.46	0.53	0.61	0.69	0.79	0.89	1.00	1.12	1.24	1.38	1.53	1.69
	5 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	10 year	4.0	0.76	0.86	0.97	1.09	1.20	1.33	1.46	1.60	1.74	1.89	2.04	2.20	2.37	2.55	2.73	2.92	3.12
	25 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	50 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	100 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	Normal Annual		23.8																
GRANT	2 year	2.4	0.15	0.19	0.24	0.29	0.35	0.41	0.48	0.55	0.63	0.72	0.82	0.93	1.04	1.16	1.30	1.44	1.60
	5 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	10 year	4.0	0.76	0.86	0.97	1.09	1.20	1.33	1.46	1.60	1.74	1.89	2.04	2.20	2.37	2.55	2.73	2.92	3.12
	25 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	50 year	5.4	1.54	1.69	1.85	2.01	2.17	2.34	2.51	2.69	2.87	3.05	3.24	3.44	3.64	3.84	4.05	4.26	4.48
	100 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	Normal Annual		17.9																
GRAY	2 year	2.5	0.17	0.22	0.27	0.33	0.39	0.46	0.53	0.61	0.69	0.79	0.89	1.00	1.12	1.24	1.38	1.53	1.69
	5 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	10 year	4.2	0.86	0.97	1.09	1.21	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.37	2.55	2.73	2.92	3.11	3.31
	25 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	50 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	100 year	6.0	1.92	2.09	2.26	2.44	2.62	2.81	2.99	3.18	3.38	3.58	3.78	3.99	4.20	4.41	4.63	4.85	5.07
	Normal Annual		22.5																
GREELEY	2 year	2.3	0.12	0.16	0.20	0.25	0.30	0.36	0.43	0.50	0.58	0.66	0.75	0.85	0.96	1.08	1.21	1.35	1.51
	5 year	3.1	0.37	0.44	0.51	0.59	0.68	0.77	0.87	0.97	1.08	1.20	1.33	1.46	1.60	1.75	1.91	2.08	2.26
	10 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	25 year	4.3	0.91	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.01	3.20	3.41
	50 year	4.9	1.24	1.38	1.52	1.66	1.81	1.96	2.12	2.28	2.45	2.63	2.81	2.99	3.18	3.37	3.57	3.78	3.99
	100 year	5.4	1.54	1.69	1.85	2.01	2.17	2.34	2.51	2.69	2.87	3.05	3.24	3.44	3.64	3.84	4.05	4.26	4.48
	Normal Annual		17.0																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
GREENWOOD	2 year	3.7	0.62	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.51	1.65	1.80	1.95	2.11	2.28	2.45	2.64	2.83
	5 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	10 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	25 year	6.4	2.19	2.37	2.55	2.74	2.93	3.13	3.32	3.52	3.73	3.93	4.14	4.36	4.57	4.79	5.01	5.24	5.46
	50 year	7.2	2.75	2.95	3.15	3.36	3.57	3.79	4.00	4.22	4.44	4.66	4.88	5.10	5.33	5.56	5.79	6.02	6.25
	100 year	8.2	3.48	3.71	3.94	4.17	4.40	4.64	4.87	5.10	5.34	5.58	5.81	6.05	6.29	6.53	6.76	7.00	7.24
	Normal Annual		37.0																
HAMILTON	2 year	2.3	0.12	0.16	0.20	0.25	0.30	0.36	0.43	0.50	0.58	0.66	0.75	0.85	0.96	1.08	1.21	1.35	1.51
	5 year	3.2	0.41	0.48	0.56	0.64	0.73	0.83	0.93	1.04	1.15	1.27	1.40	1.54	1.68	1.84	2.00	2.17	2.35
	10 year	3.7	0.62	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.51	1.65	1.80	1.95	2.11	2.28	2.45	2.64	2.83
	25 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	50 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	100 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	Normal Annual		16.9																
HARPER	2 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	5 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	10 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	25 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	50 year	7.0	2.60	2.80	3.00	3.20	3.41	3.62	3.83	4.04	4.26	4.47	4.69	4.92	5.14	5.37	5.59	5.82	6.05
	100 year	7.8	3.18	3.40	3.62	3.84	4.07	4.29	4.52	4.75	4.98	5.21	5.44	5.67	5.90	6.14	6.37	6.61	6.85
	Normal Annual		27.6																
HARVEY	2 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	5 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	10 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	25 year	6.0	1.92	2.09	2.26	2.44	2.62	2.81	2.99	3.18	3.38	3.58	3.78	3.99	4.20	4.41	4.63	4.85	5.07
	50 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	100 year	7.7	3.11	3.33	3.54	3.76	3.98	4.21	4.43	4.66	4.89	5.11	5.34	5.58	5.81	6.04	6.28	6.51	6.75
	Normal Annual		31.9																
HASKELL	2 year	2.5	0.17	0.22	0.27	0.33	0.39	0.46	0.53	0.61	0.69	0.79	0.89	1.00	1.12	1.24	1.38	1.53	1.69
	5 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	10 year	4.1	0.81	0.92	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.12	2.29	2.46	2.64	2.82	3.01	3.21
	25 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	50 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	100 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	Normal Annual		19.5																
HODGEMAN	2 year	2.6	0.20	0.25	0.31	0.37	0.43	0.50	0.58	0.67	0.76	0.85	0.96	1.07	1.19	1.33	1.47	1.62	1.79
	5 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	10 year	4.2	0.86	0.97	1.09	1.21	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.37	2.55	2.73	2.92	3.11	3.31
	25 year	4.9	1.24	1.38	1.52	1.66	1.81	1.96	2.12	2.28	2.45	2.63	2.81	2.99	3.18	3.37	3.57	3.78	3.99
	50 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	100 year	6.2	2.05	2.23	2.41	2.59	2.78	2.96	3.16	3.35	3.55	3.76	3.96	4.17	4.38	4.60	4.82	5.04	5.27
	Normal Annual		21.5																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
JACKSON	2 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	5 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	10 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	25 year	6.0	1.92	2.09	2.26	2.44	2.62	2.81	2.99	3.18	3.38	3.58	3.78	3.99	4.20	4.41	4.63	4.85	5.07
	50 year	6.7	2.39	2.58	2.78	2.97	3.17	3.37	3.57	3.78	3.99	4.20	4.42	4.64	4.86	5.08	5.30	5.53	5.76
	100 year	7.6	3.04	3.25	3.46	3.68	3.90	4.12	4.35	4.57	4.80	5.02	5.25	5.48	5.71	5.94	6.18	6.41	6.65
	Normal Annual		35.3																
JEFFERSON	2 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	5 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	10 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	25 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	50 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	100 year	7.7	3.11	3.33	3.54	3.76	3.98	4.21	4.43	4.66	4.89	5.11	5.34	5.58	5.81	6.04	6.28	6.51	6.75
	Normal Annual		36.4																
JEWELL	2 year	2.8	0.26	0.32	0.38	0.45	0.53	0.61	0.69	0.78	0.88	0.99	1.10	1.22	1.35	1.49	1.64	1.80	1.97
	5 year	3.7	0.62	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.51	1.65	1.80	1.95	2.11	2.28	2.45	2.64	2.83
	10 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	25 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	50 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	100 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	Normal Annual		26.3																
JOHNSON	2 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	5 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	10 year	5.4	1.54	1.69	1.85	2.01	2.17	2.34	2.51	2.69	2.87	3.05	3.24	3.44	3.64	3.84	4.05	4.26	4.48
	25 year	6.3	2.12	2.30	2.48	2.66	2.85	3.05	3.24	3.44	3.64	3.85	4.05	4.26	4.48	4.70	4.92	5.14	5.36
	50 year	7.0	2.60	2.80	3.00	3.20	3.41	3.62	3.83	4.04	4.26	4.47	4.69	4.92	5.14	5.37	5.59	5.82	6.05
	100 year	7.9	3.26	3.48	3.70	3.93	4.15	4.38	4.61	4.84	5.07	5.30	5.53	5.76	6.00	6.23	6.47	6.71	6.94
	Normal Annual		38.3																
KEARNY	2 year	2.4	0.15	0.19	0.24	0.29	0.35	0.41	0.48	0.55	0.63	0.72	0.82	0.93	1.04	1.16	1.30	1.44	1.60
	5 year	3.2	0.41	0.48	0.56	0.64	0.73	0.83	0.93	1.04	1.15	1.27	1.40	1.54	1.68	1.84	2.00	2.17	2.35
	10 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	25 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	50 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	100 year	5.6	1.67	1.82	1.98	2.15	2.32	2.49	2.67	2.85	3.04	3.23	3.42	3.62	3.82	4.03	4.24	4.46	4.68
	Normal Annual		17.4																
KINGMAN	2 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	5 year	4.3	0.91	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.01	3.20	3.41
	10 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	25 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	50 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	100 year	7.6	3.04	3.25	3.46	3.68	3.90	4.12	4.35	4.57	4.80	5.02	5.25	5.48	5.71	5.94	6.18	6.41	6.65
	Normal Annual		27.8																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
KIOWA	2 year	2.9	0.30	0.36	0.43	0.50	0.58	0.66	0.75	0.85	0.95	1.06	1.18	1.30	1.43	1.58	1.73	1.89	2.07
	5 year	3.9	0.71	0.81	0.92	1.03	1.14	1.26	1.39	1.52	1.66	1.81	1.96	2.12	2.28	2.46	2.64	2.82	3.02
	10 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	25 year	5.4	1.54	1.69	1.85	2.01	2.17	2.34	2.51	2.69	2.87	3.05	3.24	3.44	3.64	3.84	4.05	4.26	4.48
	50 year	6.2	2.05	2.23	2.41	2.59	2.78	2.96	3.16	3.35	3.55	3.76	3.96	4.17	4.38	4.60	4.82	5.04	5.27
	100 year	6.9	2.53	2.73	2.93	3.13	3.33	3.54	3.74	3.96	4.17	4.38	4.60	4.82	5.04	5.27	5.50	5.73	5.96
	Normal Annual		22.6																
LABETTE	2 year	3.9	0.71	0.81	0.92	1.03	1.14	1.26	1.39	1.52	1.66	1.81	1.96	2.12	2.28	2.46	2.64	2.82	3.02
	5 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	10 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	25 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	50 year	7.6	3.04	3.25	3.46	3.68	3.90	4.12	4.35	4.57	4.80	5.02	5.25	5.48	5.71	5.94	6.18	6.41	6.65
	100 year	8.6	3.79	4.03	4.27	4.50	4.74	4.98	5.22	5.47	5.71	5.95	6.19	6.43	6.67	6.91	7.16	7.40	7.64
	Normal Annual		40.8																
LANE	2 year	2.4	0.15	0.19	0.24	0.29	0.35	0.41	0.48	0.55	0.63	0.72	0.82	0.93	1.04	1.16	1.30	1.44	1.60
	5 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	10 year	3.9	0.71	0.81	0.92	1.03	1.14	1.26	1.39	1.52	1.66	1.81	1.96	2.12	2.28	2.46	2.64	2.82	3.02
	25 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	50 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	100 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	Normal Annual		20.7																
LEAVENWORTH	2 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	5 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	10 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	25 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	50 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	100 year	7.7	3.11	3.33	3.54	3.76	3.98	4.21	4.43	4.66	4.89	5.11	5.34	5.58	5.81	6.04	6.28	6.51	6.75
	Normal Annual		37.5																
LINCOLN	2 year	2.9	0.30	0.36	0.43	0.50	0.58	0.66	0.75	0.85	0.95	1.06	1.18	1.30	1.43	1.58	1.73	1.89	2.07
	5 year	3.9	0.71	0.81	0.92	1.03	1.14	1.26	1.39	1.52	1.66	1.81	1.96	2.12	2.28	2.46	2.64	2.82	3.02
	10 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	25 year	5.4	1.54	1.69	1.85	2.01	2.17	2.34	2.51	2.69	2.87	3.05	3.24	3.44	3.64	3.84	4.05	4.26	4.48
	50 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	100 year	6.9	2.53	2.73	2.93	3.13	3.33	3.54	3.74	3.96	4.17	4.38	4.60	4.82	5.04	5.27	5.50	5.73	5.96
	Normal Annual		26.8																
LINN	2 year	3.7	0.62	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.51	1.65	1.80	1.95	2.11	2.28	2.45	2.64	2.83
	5 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	10 year	5.6	1.67	1.82	1.98	2.15	2.32	2.49	2.67	2.85	3.04	3.23	3.42	3.62	3.82	4.03	4.24	4.46	4.68
	25 year	6.5	2.26	2.44	2.63	2.82	3.01	3.21	3.41	3.61	3.82	4.02	4.24	4.45	4.67	4.89	5.11	5.33	5.56
	50 year	7.2	2.75	2.95	3.15	3.36	3.57	3.79	4.00	4.22	4.44	4.66	4.88	5.10	5.33	5.56	5.79	6.02	6.25
	100 year	8.1	3.41	3.63	3.86	4.09	4.32	4.55	4.78	5.02	5.25	5.48	5.72	5.95	6.19	6.43	6.67	6.90	7.14
	Normal Annual		41.5																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
LOGAN	2 year	2.3	0.12	0.16	0.20	0.25	0.30	0.36	0.43	0.50	0.58	0.66	0.75	0.85	0.96	1.08	1.21	1.35	1.51
	5 year	3.2	0.41	0.48	0.56	0.64	0.73	0.83	0.93	1.04	1.15	1.27	1.40	1.54	1.68	1.84	2.00	2.17	2.35
	10 year	3.7	0.62	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.51	1.65	1.80	1.95	2.11	2.28	2.45	2.64	2.83
	25 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	50 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	100 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	Normal Annual		19.3																
LYON	2 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	5 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	10 year	5.4	1.54	1.69	1.85	2.01	2.17	2.34	2.51	2.69	2.87	3.05	3.24	3.44	3.64	3.84	4.05	4.26	4.48
	25 year	6.3	2.12	2.30	2.48	2.66	2.85	3.05	3.24	3.44	3.64	3.85	4.05	4.26	4.48	4.70	4.92	5.14	5.36
	50 year	7.0	2.60	2.80	3.00	3.20	3.41	3.62	3.83	4.04	4.26	4.47	4.69	4.92	5.14	5.37	5.59	5.82	6.05
	100 year	8.0	3.33	3.56	3.78	4.01	4.24	4.46	4.69	4.93	5.16	5.39	5.63	5.86	6.10	6.33	6.57	6.81	7.04
	Normal Annual		36.7																
MARION	2 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	5 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	10 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	25 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	50 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	100 year	7.7	3.11	3.33	3.54	3.76	3.98	4.21	4.43	4.66	4.89	5.11	5.34	5.58	5.81	6.04	6.28	6.51	6.75
	Normal Annual		32.4																
MARSHALL	2 year	3.2	0.41	0.48	0.56	0.64	0.73	0.83	0.93	1.04	1.15	1.27	1.40	1.54	1.68	1.84	2.00	2.17	2.35
	5 year	4.2	0.86	0.97	1.09	1.21	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.37	2.55	2.73	2.92	3.11	3.31
	10 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	25 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	50 year	6.4	2.19	2.37	2.55	2.74	2.93	3.13	3.32	3.52	3.73	3.93	4.14	4.36	4.57	4.79	5.01	5.24	5.46
	100 year	7.2	2.75	2.95	3.15	3.36	3.57	3.79	4.00	4.22	4.44	4.66	4.88	5.10	5.33	5.56	5.79	6.02	6.25
	Normal Annual		30.9																
MCPHERSON	2 year	3.2	0.41	0.48	0.56	0.64	0.73	0.83	0.93	1.04	1.15	1.27	1.40	1.54	1.68	1.84	2.00	2.17	2.35
	5 year	4.2	0.86	0.97	1.09	1.21	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.37	2.55	2.73	2.92	3.11	3.31
	10 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	25 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	50 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	100 year	7.4	2.89	3.10	3.31	3.52	3.74	3.95	4.17	4.39	4.62	4.84	5.06	5.29	5.52	5.75	5.98	6.22	6.45
	Normal Annual		29.0																
MEADE	2 year	2.7	0.23	0.29	0.34	0.41	0.48	0.55	0.64	0.72	0.82	0.92	1.03	1.15	1.27	1.41	1.55	1.71	1.88
	5 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	10 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	25 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	50 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	100 year	6.3	2.12	2.30	2.48	2.66	2.85	3.05	3.24	3.44	3.64	3.85	4.05	4.26	4.48	4.70	4.92	5.14	5.36
	Normal Annual		20.6																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
MIAMI	2 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	5 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	10 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	25 year	6.4	2.19	2.37	2.55	2.74	2.93	3.13	3.32	3.52	3.73	3.93	4.14	4.36	4.57	4.79	5.01	5.24	5.46
	50 year	7.1	2.67	2.87	3.08	3.28	3.49	3.70	3.91	4.13	4.35	4.57	4.79	5.01	5.23	5.46	5.69	5.92	6.15
	100 year	8.0	3.33	3.56	3.78	4.01	4.24	4.46	4.69	4.93	5.16	5.39	5.63	5.86	6.10	6.33	6.57	6.81	7.04
	Normal Annual		40.7																
MITCHELL	2 year	2.8	0.26	0.32	0.38	0.45	0.53	0.61	0.69	0.78	0.88	0.99	1.10	1.22	1.35	1.49	1.64	1.80	1.97
	5 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	10 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	25 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	50 year	6.0	1.92	2.09	2.26	2.44	2.62	2.81	2.99	3.18	3.38	3.58	3.78	3.99	4.20	4.41	4.63	4.85	5.07
	100 year	6.7	2.39	2.58	2.78	2.97	3.17	3.37	3.57	3.78	3.99	4.20	4.42	4.64	4.86	5.08	5.30	5.53	5.76
	Normal Annual		26.4																
MONTGOMERY	2 year	3.9	0.71	0.81	0.92	1.03	1.14	1.26	1.39	1.52	1.66	1.81	1.96	2.12	2.28	2.46	2.64	2.82	3.02
	5 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	10 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	25 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	50 year	7.6	3.04	3.25	3.46	3.68	3.90	4.12	4.35	4.57	4.80	5.02	5.25	5.48	5.71	5.94	6.18	6.41	6.65
	100 year	8.5	3.71	3.95	4.18	4.42	4.66	4.90	5.14	5.38	5.61	5.85	6.10	6.34	6.58	6.82	7.06	7.30	7.54
	Normal Annual		37.0																
MORRIS	2 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	5 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	10 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	25 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	50 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	100 year	7.7	3.11	3.33	3.54	3.76	3.98	4.21	4.43	4.66	4.89	5.11	5.34	5.58	5.81	6.04	6.28	6.51	6.75
	Normal Annual		34.1																
MORTON	2 year	2.4	0.15	0.19	0.24	0.29	0.35	0.41	0.48	0.55	0.63	0.72	0.82	0.93	1.04	1.16	1.30	1.44	1.60
	5 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	10 year	3.9	0.71	0.81	0.92	1.03	1.14	1.26	1.39	1.52	1.66	1.81	1.96	2.12	2.28	2.46	2.64	2.82	3.02
	25 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	50 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	100 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	Normal Annual		17.3																
NEMAHA	2 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	5 year	4.3	0.91	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.01	3.20	3.41
	10 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	25 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	50 year	6.5	2.26	2.44	2.63	2.82	3.01	3.21	3.41	3.61	3.82	4.02	4.24	4.45	4.67	4.89	5.11	5.33	5.56
	100 year	7.3	2.82	3.02	3.23	3.44	3.65	3.87	4.09	4.30	4.53	4.75	4.97	5.20	5.43	5.65	5.89	6.12	6.35
	Normal Annual		34.5																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
NEOSHO	2 year	3.9	0.71	0.81	0.92	1.03	1.14	1.26	1.39	1.52	1.66	1.81	1.96	2.12	2.28	2.46	2.64	2.82	3.02
	5 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	10 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	25 year	6.7	2.39	2.58	2.78	2.97	3.17	3.37	3.57	3.78	3.99	4.20	4.42	4.64	4.86	5.08	5.30	5.53	5.76
	50 year	7.5	2.96	3.17	3.39	3.60	3.82	4.04	4.26	4.48	4.71	4.93	5.16	5.39	5.62	5.85	6.08	6.31	6.55
	100 year	8.4	3.64	3.87	4.10	4.34	4.57	4.81	5.05	5.28	5.52	5.76	6.00	6.24	6.48	6.72	6.96	7.20	7.44
	Normal Annual		39.8																
NESS	2 year	2.5	0.17	0.22	0.27	0.33	0.39	0.46	0.53	0.61	0.69	0.79	0.89	1.00	1.12	1.24	1.38	1.53	1.69
	5 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	10 year	4.1	0.81	0.92	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.12	2.29	2.46	2.64	2.82	3.01	3.21
	25 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	50 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	100 year	6.0	1.92	2.09	2.26	2.44	2.62	2.81	2.99	3.18	3.38	3.58	3.78	3.99	4.20	4.41	4.63	4.85	5.07
	Normal Annual		21.4																
NORTON	2 year	2.4	0.15	0.19	0.24	0.29	0.35	0.41	0.48	0.55	0.63	0.72	0.82	0.93	1.04	1.16	1.30	1.44	1.60
	5 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	10 year	3.9	0.71	0.81	0.92	1.03	1.14	1.26	1.39	1.52	1.66	1.81	1.96	2.12	2.28	2.46	2.64	2.82	3.02
	25 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	50 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	100 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	Normal Annual		22.3																
OSAGE	2 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	5 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	10 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	25 year	6.3	2.12	2.30	2.48	2.66	2.85	3.05	3.24	3.44	3.64	3.85	4.05	4.26	4.48	4.70	4.92	5.14	5.36
	50 year	7.0	2.60	2.80	3.00	3.20	3.41	3.62	3.83	4.04	4.26	4.47	4.69	4.92	5.14	5.37	5.59	5.82	6.05
	100 year	8.0	3.33	3.56	3.78	4.01	4.24	4.46	4.69	4.93	5.16	5.39	5.63	5.86	6.10	6.33	6.57	6.81	7.04
	Normal Annual		36.9																
OSBORNE	2 year	2.7	0.23	0.29	0.34	0.41	0.48	0.55	0.64	0.72	0.82	0.92	1.03	1.15	1.27	1.41	1.55	1.71	1.88
	5 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	10 year	4.3	0.91	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.01	3.20	3.41
	25 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	50 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	100 year	6.5	2.26	2.44	2.63	2.82	3.01	3.21	3.41	3.61	3.82	4.02	4.24	4.45	4.67	4.89	5.11	5.33	5.56
	Normal Annual		25.0																
OTTAWA	2 year	3.0	0.33	0.40	0.47	0.54	0.63	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.52	1.66	1.82	1.98	2.16
	5 year	4.1	0.81	0.92	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.12	2.29	2.46	2.64	2.82	3.01	3.21
	10 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	25 year	5.6	1.67	1.82	1.98	2.15	2.32	2.49	2.67	2.85	3.04	3.23	3.42	3.62	3.82	4.03	4.24	4.46	4.68
	50 year	6.3	2.12	2.30	2.48	2.66	2.85	3.05	3.24	3.44	3.64	3.85	4.05	4.26	4.48	4.70	4.92	5.14	5.36
	100 year	7.1	2.67	2.87	3.08	3.28	3.49	3.70	3.91	4.13	4.35	4.57	4.79	5.01	5.23	5.46	5.69	5.92	6.15
	Normal Annual		28.8																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
PAWNEE	2 year	2.8	0.26	0.32	0.38	0.45	0.53	0.61	0.69	0.78	0.88	0.99	1.10	1.22	1.35	1.49	1.64	1.80	1.97
	5 year	3.7	0.62	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.51	1.65	1.80	1.95	2.11	2.28	2.45	2.64	2.83
	10 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	25 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	50 year	6.0	1.92	2.09	2.26	2.44	2.62	2.81	2.99	3.18	3.38	3.58	3.78	3.99	4.20	4.41	4.63	4.85	5.07
	100 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	Normal Annual		23.3																
PHILLIPS	2 year	2.5	0.17	0.22	0.27	0.33	0.39	0.46	0.53	0.61	0.69	0.79	0.89	1.00	1.12	1.24	1.38	1.53	1.69
	5 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	10 year	4.1	0.81	0.92	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.12	2.29	2.46	2.64	2.82	3.01	3.21
	25 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	50 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	100 year	6.0	1.92	2.09	2.26	2.44	2.62	2.81	2.99	3.18	3.38	3.58	3.78	3.99	4.20	4.41	4.63	4.85	5.07
	Normal Annual		23.6																
POTTAWATOMIE	2 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	5 year	4.3	0.91	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.01	3.20	3.41
	10 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	25 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	50 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	100 year	7.5	2.96	3.17	3.39	3.60	3.82	4.04	4.26	4.48	4.71	4.93	5.16	5.39	5.62	5.85	6.08	6.31	6.55
	Normal Annual		33.6																
PRATT	2 year	3.0	0.33	0.40	0.47	0.54	0.63	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.52	1.66	1.82	1.98	2.16
	5 year	4.1	0.81	0.92	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.12	2.29	2.46	2.64	2.82	3.01	3.21
	10 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	25 year	5.6	1.67	1.82	1.98	2.15	2.32	2.49	2.67	2.85	3.04	3.23	3.42	3.62	3.82	4.03	4.24	4.46	4.68
	50 year	6.4	2.19	2.37	2.55	2.74	2.93	3.13	3.32	3.52	3.73	3.93	4.14	4.36	4.57	4.79	5.01	5.24	5.46
	100 year	7.2	2.75	2.95	3.15	3.36	3.57	3.79	4.00	4.22	4.44	4.66	4.88	5.10	5.33	5.56	5.79	6.02	6.25
	Normal Annual		24.6																
RAWLINS	2 year	2.3	0.12	0.16	0.20	0.25	0.30	0.36	0.43	0.50	0.58	0.66	0.75	0.85	0.96	1.08	1.21	1.35	1.51
	5 year	3.1	0.37	0.44	0.51	0.59	0.68	0.77	0.87	0.97	1.08	1.20	1.33	1.46	1.60	1.75	1.91	2.08	2.26
	10 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	25 year	4.3	0.91	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.01	3.20	3.41
	50 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	100 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	Normal Annual		21.0																
RENO	2 year	3.2	0.41	0.48	0.56	0.64	0.73	0.83	0.93	1.04	1.15	1.27	1.40	1.54	1.68	1.84	2.00	2.17	2.35
	5 year	4.2	0.86	0.97	1.09	1.21	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.37	2.55	2.73	2.92	3.11	3.31
	10 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	25 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	50 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	100 year	7.4	2.89	3.10	3.31	3.52	3.74	3.95	4.17	4.39	4.62	4.84	5.06	5.29	5.52	5.75	5.98	6.22	6.45
	Normal Annual		27.7																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
REPUBLIC	2 year	2.9	0.30	0.36	0.43	0.50	0.58	0.66	0.75	0.85	0.95	1.06	1.18	1.30	1.43	1.58	1.73	1.89	2.07
	5 year	3.9	0.71	0.81	0.92	1.03	1.14	1.26	1.39	1.52	1.66	1.81	1.96	2.12	2.28	2.46	2.64	2.82	3.02
	10 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	25 year	5.4	1.54	1.69	1.85	2.01	2.17	2.34	2.51	2.69	2.87	3.05	3.24	3.44	3.64	3.84	4.05	4.26	4.48
	50 year	6.0	1.92	2.09	2.26	2.44	2.62	2.81	2.99	3.18	3.38	3.58	3.78	3.99	4.20	4.41	4.63	4.85	5.07
	100 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	Normal Annual		28.6																
RICE	2 year	3.0	0.33	0.40	0.47	0.54	0.63	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.52	1.66	1.82	1.98	2.16
	5 year	4.1	0.81	0.92	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.12	2.29	2.46	2.64	2.82	3.01	3.21
	10 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	25 year	5.6	1.67	1.82	1.98	2.15	2.32	2.49	2.67	2.85	3.04	3.23	3.42	3.62	3.82	4.03	4.24	4.46	4.68
	50 year	6.4	2.19	2.37	2.55	2.74	2.93	3.13	3.32	3.52	3.73	3.93	4.14	4.36	4.57	4.79	5.01	5.24	5.46
	100 year	7.3	2.82	3.02	3.23	3.44	3.65	3.87	4.09	4.30	4.53	4.75	4.97	5.20	5.43	5.65	5.89	6.12	6.35
	Normal Annual		26.6																
RILEY	2 year	3.3	0.45	0.52	0.61	0.69	0.79	0.89	0.99	1.10	1.22	1.35	1.48	1.62	1.77	1.92	2.09	2.26	2.45
	5 year	4.3	0.91	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.01	3.20	3.41
	10 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	25 year	5.8	1.79	1.95	2.12	2.29	2.47	2.65	2.83	3.02	3.21	3.40	3.60	3.80	4.01	4.22	4.43	4.65	4.87
	50 year	6.5	2.26	2.44	2.63	2.82	3.01	3.21	3.41	3.61	3.82	4.02	4.24	4.45	4.67	4.89	5.11	5.33	5.56
	100 year	7.4	2.89	3.10	3.31	3.52	3.74	3.95	4.17	4.39	4.62	4.84	5.06	5.29	5.52	5.75	5.98	6.22	6.45
	Normal Annual		33.5																
ROOKS	2 year	2.5	0.17	0.22	0.27	0.33	0.39	0.46	0.53	0.61	0.69	0.79	0.89	1.00	1.12	1.24	1.38	1.53	1.69
	5 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	10 year	4.1	0.81	0.92	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.12	2.29	2.46	2.64	2.82	3.01	3.21
	25 year	4.9	1.24	1.38	1.52	1.66	1.81	1.96	2.12	2.28	2.45	2.63	2.81	2.99	3.18	3.37	3.57	3.78	3.99
	50 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	100 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	Normal Annual		23.9																
RUSH	2 year	2.7	0.23	0.29	0.34	0.41	0.48	0.55	0.64	0.72	0.82	0.92	1.03	1.15	1.27	1.41	1.55	1.71	1.88
	5 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	10 year	4.3	0.91	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.01	3.20	3.41
	25 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	50 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	100 year	6.5	2.26	2.44	2.63	2.82	3.01	3.21	3.41	3.61	3.82	4.02	4.24	4.45	4.67	4.89	5.11	5.33	5.56
	Normal Annual		23.3																
RUSSELL	2 year	2.8	0.26	0.32	0.38	0.45	0.53	0.61	0.69	0.78	0.88	0.99	1.10	1.22	1.35	1.49	1.64	1.80	1.97
	5 year	3.7	0.62	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.51	1.65	1.80	1.95	2.11	2.28	2.45	2.64	2.83
	10 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	25 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	50 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	100 year	6.7	2.39	2.58	2.78	2.97	3.17	3.37	3.57	3.78	3.99	4.20	4.42	4.64	4.86	5.08	5.30	5.53	5.76
	Normal Annual		26.8																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
SALINE	2 year	3.1	0.37	0.44	0.51	0.59	0.68	0.77	0.87	0.97	1.08	1.20	1.33	1.46	1.60	1.75	1.91	2.08	2.26
	5 year	4.1	0.81	0.92	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.12	2.29	2.46	2.64	2.82	3.01	3.21
	10 year	4.9	1.24	1.38	1.52	1.66	1.81	1.96	2.12	2.28	2.45	2.63	2.81	2.99	3.18	3.37	3.57	3.78	3.99
	25 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	50 year	6.4	2.19	2.37	2.55	2.74	2.93	3.13	3.32	3.52	3.73	3.93	4.14	4.36	4.57	4.79	5.01	5.24	5.46
	100 year	7.3	2.82	3.02	3.23	3.44	3.65	3.87	4.09	4.30	4.53	4.75	4.97	5.20	5.43	5.65	5.89	6.12	6.35
	Normal Annual		28.4																
SCOTT	2 year	2.4	0.15	0.19	0.24	0.29	0.35	0.41	0.48	0.55	0.63	0.72	0.82	0.93	1.04	1.16	1.30	1.44	1.60
	5 year	3.2	0.41	0.48	0.56	0.64	0.73	0.83	0.93	1.04	1.15	1.27	1.40	1.54	1.68	1.84	2.00	2.17	2.35
	10 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	25 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	50 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	100 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	Normal Annual		20.2																
SEDGWICK	2 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	5 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	10 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	25 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	50 year	7.0	2.60	2.80	3.00	3.20	3.41	3.62	3.83	4.04	4.26	4.47	4.69	4.92	5.14	5.37	5.59	5.82	6.05
	100 year	7.8	3.18	3.40	3.62	3.84	4.07	4.29	4.52	4.75	4.98	5.21	5.44	5.67	5.90	6.14	6.37	6.61	6.85
	Normal Annual		30.6																
SEWARD	2 year	2.6	0.20	0.25	0.31	0.37	0.43	0.50	0.58	0.67	0.76	0.85	0.96	1.07	1.19	1.33	1.47	1.62	1.79
	5 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	10 year	4.2	0.86	0.97	1.09	1.21	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.37	2.55	2.73	2.92	3.11	3.31
	25 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	50 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	100 year	6.0	1.92	2.09	2.26	2.44	2.62	2.81	2.99	3.18	3.38	3.58	3.78	3.99	4.20	4.41	4.63	4.85	5.07
	Normal Annual		19.8																
SHAWNEE	2 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	5 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	10 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	25 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	50 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	100 year	7.8	3.18	3.40	3.62	3.84	4.07	4.29	4.52	4.75	4.98	5.21	5.44	5.67	5.90	6.14	6.37	6.61	6.85
	Normal Annual		34.7																
SHERIDAN	2 year	2.4	0.15	0.19	0.24	0.29	0.35	0.41	0.48	0.55	0.63	0.72	0.82	0.93	1.04	1.16	1.30	1.44	1.60
	5 year	3.2	0.41	0.48	0.56	0.64	0.73	0.83	0.93	1.04	1.15	1.27	1.40	1.54	1.68	1.84	2.00	2.17	2.35
	10 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	25 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	50 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	100 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	Normal Annual		21.3																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
SHERMAN	2 year	2.2	0.10	0.13	0.17	0.22	0.27	0.32	0.38	0.45	0.52	0.60	0.69	0.78	0.89	1.00	1.13	1.27	1.42
	5 year	3.0	0.33	0.40	0.47	0.54	0.63	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.52	1.66	1.82	1.98	2.16
	10 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	25 year	4.2	0.86	0.97	1.09	1.21	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.37	2.55	2.73	2.92	3.11	3.31
	50 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	100 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	Normal Annual		16.7																
SMITH	2 year	2.6	0.20	0.25	0.31	0.37	0.43	0.50	0.58	0.67	0.76	0.85	0.96	1.07	1.19	1.33	1.47	1.62	1.79
	5 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	10 year	4.2	0.86	0.97	1.09	1.21	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.37	2.55	2.73	2.92	3.11	3.31
	25 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	50 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	100 year	6.3	2.12	2.30	2.48	2.66	2.85	3.05	3.24	3.44	3.64	3.85	4.05	4.26	4.48	4.70	4.92	5.14	5.36
	Normal Annual		24.4																
STAFFORD	2 year	2.9	0.30	0.36	0.43	0.50	0.58	0.66	0.75	0.85	0.95	1.06	1.18	1.30	1.43	1.58	1.73	1.89	2.07
	5 year	4.0	0.76	0.86	0.97	1.09	1.20	1.33	1.46	1.60	1.74	1.89	2.04	2.20	2.37	2.55	2.73	2.92	3.12
	10 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	25 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	50 year	6.2	2.05	2.23	2.41	2.59	2.78	2.96	3.16	3.35	3.55	3.76	3.96	4.17	4.38	4.60	4.82	5.04	5.27
	100 year	7.1	2.67	2.87	3.08	3.28	3.49	3.70	3.91	4.13	4.35	4.57	4.79	5.01	5.23	5.46	5.69	5.92	6.15
	Normal Annual		25.1																
STANTON	2 year	2.4	0.15	0.19	0.24	0.29	0.35	0.41	0.48	0.55	0.63	0.72	0.82	0.93	1.04	1.16	1.30	1.44	1.60
	5 year	3.2	0.41	0.48	0.56	0.64	0.73	0.83	0.93	1.04	1.15	1.27	1.40	1.54	1.68	1.84	2.00	2.17	2.35
	10 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	25 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	50 year	5.2	1.42	1.56	1.71	1.87	2.02	2.19	2.35	2.52	2.70	2.88	3.07	3.26	3.45	3.65	3.86	4.07	4.28
	100 year	5.6	1.67	1.82	1.98	2.15	2.32	2.49	2.67	2.85	3.04	3.23	3.42	3.62	3.82	4.03	4.24	4.46	4.68
	Normal Annual		15.8																
STEVENS	2 year	2.5	0.17	0.22	0.27	0.33	0.39	0.46	0.53	0.61	0.69	0.79	0.89	1.00	1.12	1.24	1.38	1.53	1.69
	5 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	10 year	4.1	0.81	0.92	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.12	2.29	2.46	2.64	2.82	3.01	3.21
	25 year	4.7	1.13	1.26	1.39	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.63	2.81	3.00	3.19	3.38	3.59	3.80
	50 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	100 year	5.9	1.86	2.02	2.19	2.37	2.54	2.73	2.91	3.10	3.29	3.49	3.69	3.90	4.10	4.31	4.53	4.75	4.97
	Normal Annual		19.7																
SUMNER	2 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	5 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	10 year	5.4	1.54	1.69	1.85	2.01	2.17	2.34	2.51	2.69	2.87	3.05	3.24	3.44	3.64	3.84	4.05	4.26	4.48
	25 year	6.2	2.05	2.23	2.41	2.59	2.78	2.96	3.16	3.35	3.55	3.76	3.96	4.17	4.38	4.60	4.82	5.04	5.27
	50 year	7.1	2.67	2.87	3.08	3.28	3.49	3.70	3.91	4.13	4.35	4.57	4.79	5.01	5.23	5.46	5.69	5.92	6.15
	100 year	8.0	3.33	3.56	3.78	4.01	4.24	4.46	4.69	4.93	5.16	5.39	5.63	5.86	6.10	6.33	6.57	6.81	7.04
	Normal Annual		34.0																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
THOMAS	2 year	2.3	0.12	0.16	0.20	0.25	0.30	0.36	0.43	0.50	0.58	0.66	0.75	0.85	0.96	1.08	1.21	1.35	1.51
	5 year	3.1	0.37	0.44	0.51	0.59	0.68	0.77	0.87	0.97	1.08	1.20	1.33	1.46	1.60	1.75	1.91	2.08	2.26
	10 year	3.7	0.62	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.51	1.65	1.80	1.95	2.11	2.28	2.45	2.64	2.83
	25 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	50 year	5.0	1.30	1.44	1.58	1.73	1.88	2.04	2.20	2.36	2.54	2.71	2.89	3.08	3.27	3.47	3.67	3.88	4.09
	100 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	Normal Annual		19.0																
TREGO	2 year	2.5	0.17	0.22	0.27	0.33	0.39	0.46	0.53	0.61	0.69	0.79	0.89	1.00	1.12	1.24	1.38	1.53	1.69
	5 year	3.4	0.49	0.57	0.66	0.75	0.84	0.95	1.06	1.17	1.29	1.42	1.56	1.70	1.85	2.01	2.18	2.35	2.54
	10 year	4.0	0.76	0.86	0.97	1.09	1.20	1.33	1.46	1.60	1.74	1.89	2.04	2.20	2.37	2.55	2.73	2.92	3.12
	25 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	50 year	5.6	1.67	1.82	1.98	2.15	2.32	2.49	2.67	2.85	3.04	3.23	3.42	3.62	3.82	4.03	4.24	4.46	4.68
	100 year	6.0	1.92	2.09	2.26	2.44	2.62	2.81	2.99	3.18	3.38	3.58	3.78	3.99	4.20	4.41	4.63	4.85	5.07
	Normal Annual		22.2																
WABAUNSEE	2 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	5 year	4.5	1.02	1.14	1.27	1.40	1.53	1.67	1.82	1.97	2.13	2.29	2.46	2.64	2.82	3.00	3.20	3.40	3.60
	10 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	25 year	6.1	1.99	2.16	2.33	2.51	2.70	2.88	3.08	3.27	3.47	3.67	3.87	4.08	4.29	4.50	4.72	4.94	5.17
	50 year	6.8	2.46	2.65	2.85	3.05	3.25	3.45	3.66	3.87	4.08	4.29	4.51	4.73	4.95	5.17	5.40	5.63	5.86
	100 year	7.7	3.11	3.33	3.54	3.76	3.98	4.21	4.43	4.66	4.89	5.11	5.34	5.58	5.81	6.04	6.28	6.51	6.75
	Normal Annual		35.5																
WALLACE	2 year	2.2	0.10	0.13	0.17	0.22	0.27	0.32	0.38	0.45	0.52	0.60	0.69	0.78	0.89	1.00	1.13	1.27	1.42
	5 year	3.0	0.33	0.40	0.47	0.54	0.63	0.71	0.81	0.91	1.02	1.13	1.25	1.38	1.52	1.66	1.82	1.98	2.16
	10 year	3.6	0.58	0.66	0.76	0.86	0.96	1.07	1.19	1.31	1.44	1.57	1.72	1.87	2.02	2.19	2.36	2.54	2.73
	25 year	4.2	0.86	0.97	1.09	1.21	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.37	2.55	2.73	2.92	3.11	3.31
	50 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	100 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	Normal Annual		18.2																
WASHINGTON	2 year	3.1	0.37	0.44	0.51	0.59	0.68	0.77	0.87	0.97	1.08	1.20	1.33	1.46	1.60	1.75	1.91	2.08	2.26
	5 year	4.1	0.81	0.92	1.03	1.15	1.27	1.40	1.53	1.67	1.82	1.97	2.12	2.29	2.46	2.64	2.82	3.01	3.21
	10 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	25 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	50 year	6.2	2.05	2.23	2.41	2.59	2.78	2.96	3.16	3.35	3.55	3.76	3.96	4.17	4.38	4.60	4.82	5.04	5.27
	100 year	7.1	2.67	2.87	3.08	3.28	3.49	3.70	3.91	4.13	4.35	4.57	4.79	5.01	5.23	5.46	5.69	5.92	6.15
	Normal Annual		30.1																
WICHITA	2 year	2.3	0.12	0.16	0.20	0.25	0.30	0.36	0.43	0.50	0.58	0.66	0.75	0.85	0.96	1.08	1.21	1.35	1.51
	5 year	3.2	0.41	0.48	0.56	0.64	0.73	0.83	0.93	1.04	1.15	1.27	1.40	1.54	1.68	1.84	2.00	2.17	2.35
	10 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	25 year	4.4	0.97	1.08	1.21	1.33	1.47	1.60	1.75	1.90	2.05	2.21	2.38	2.55	2.73	2.91	3.10	3.30	3.50
	50 year	5.1	1.36	1.50	1.65	1.80	1.95	2.11	2.28	2.44	2.62	2.80	2.98	3.17	3.36	3.56	3.76	3.97	4.19
	100 year	5.5	1.60	1.76	1.91	2.08	2.24	2.41	2.59	2.77	2.95	3.14	3.33	3.53	3.73	3.94	4.15	4.36	4.58
	Normal Annual		18.6																

Table KS2-6 (continued) Expected 24-Hour Rainfall and Runoff Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

County	Rainfall Frequency	Rainfall, inches	Runoff Curve Number & Corresponding Runoff, in inches																
			60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92
WILSON	2 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	5 year	4.9	1.24	1.38	1.52	1.66	1.81	1.96	2.12	2.28	2.45	2.63	2.81	2.99	3.18	3.37	3.57	3.78	3.99
	10 year	5.7	1.73	1.89	2.05	2.22	2.39	2.57	2.75	2.93	3.12	3.32	3.51	3.71	3.92	4.12	4.34	4.55	4.77
	25 year	6.6	2.32	2.51	2.70	2.89	3.09	3.29	3.49	3.70	3.90	4.11	4.33	4.54	4.76	4.98	5.21	5.43	5.66
	50 year	7.4	2.89	3.10	3.31	3.52	3.74	3.95	4.17	4.39	4.62	4.84	5.06	5.29	5.52	5.75	5.98	6.22	6.45
	100 year	8.4	3.64	3.87	4.10	4.34	4.57	4.81	5.05	5.28	5.52	5.76	6.00	6.24	6.48	6.72	6.96	7.20	7.44
	Normal Annual		36.0																
WOODSON	2 year	3.8	0.67	0.76	0.86	0.97	1.08	1.20	1.32	1.45	1.59	1.73	1.88	2.03	2.20	2.37	2.54	2.73	2.92
	5 year	4.8	1.19	1.32	1.45	1.59	1.74	1.89	2.05	2.21	2.37	2.54	2.72	2.90	3.09	3.28	3.48	3.68	3.89
	10 year	5.6	1.67	1.82	1.98	2.15	2.32	2.49	2.67	2.85	3.04	3.23	3.42	3.62	3.82	4.03	4.24	4.46	4.68
	25 year	6.5	2.26	2.44	2.63	2.82	3.01	3.21	3.41	3.61	3.82	4.02	4.24	4.45	4.67	4.89	5.11	5.33	5.56
	50 year	7.3	2.82	3.02	3.23	3.44	3.65	3.87	4.09	4.30	4.53	4.75	4.97	5.20	5.43	5.65	5.89	6.12	6.35
	100 year	8.3	3.56	3.79	4.02	4.25	4.49	4.72	4.96	5.19	5.43	5.67	5.91	6.15	6.38	6.62	6.86	7.10	7.34
	Normal Annual		37.3																
WYANDOTTE	2 year	3.5	0.53	0.62	0.71	0.80	0.90	1.01	1.12	1.24	1.37	1.50	1.64	1.78	1.94	2.10	2.27	2.45	2.64
	5 year	4.6	1.07	1.20	1.33	1.46	1.60	1.74	1.89	2.05	2.21	2.38	2.55	2.72	2.91	3.10	3.29	3.49	3.70
	10 year	5.3	1.48	1.63	1.78	1.94	2.10	2.26	2.43	2.61	2.78	2.97	3.16	3.35	3.55	3.75	3.95	4.17	4.38
	25 year	6.2	2.05	2.23	2.41	2.59	2.78	2.96	3.16	3.35	3.55	3.76	3.96	4.17	4.38	4.60	4.82	5.04	5.27
	50 year	6.9	2.53	2.73	2.93	3.13	3.33	3.54	3.74	3.96	4.17	4.38	4.60	4.82	5.04	5.27	5.50	5.73	5.96
	100 year	7.8	3.18	3.40	3.62	3.84	4.07	4.29	4.52	4.75	4.98	5.21	5.44	5.67	5.90	6.14	6.37	6.61	6.85
	Normal Annual		38.1																

Table KS2-7 Runoff (Q) for Various Runoff Curve Numbers and Rainfall Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

Rainfall	Runoff Curve Number and Corresponding Runoff (inches):																																	
(inches)	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92
2.2	0.10	0.12	0.13	0.15	0.17	0.19	0.22	0.24	0.27	0.29	0.32	0.35	0.38	0.41	0.45	0.48	0.52	0.56	0.60	0.64	0.69	0.73	0.78	0.84	0.89	0.94	1.00	1.06	1.13	1.20	1.27	1.34	1.42
2.3	0.12	0.14	0.16	0.18	0.20	0.23	0.25	0.28	0.30	0.33	0.36	0.40	0.43	0.46	0.50	0.54	0.58	0.62	0.66	0.71	0.75	0.80	0.85	0.91	0.96	1.02	1.08	1.15	1.21	1.28	1.35	1.43	1.51
2.4	0.15	0.17	0.19	0.21	0.24	0.26	0.29	0.32	0.35	0.38	0.41	0.44	0.48	0.51	0.55	0.59	0.63	0.68	0.72	0.77	0.82	0.87	0.93	0.98	1.04	1.10	1.16	1.23	1.30	1.37	1.44	1.52	1.60
2.5	0.17	0.20	0.22	0.24	0.27	0.30	0.33	0.36	0.39	0.42	0.46	0.49	0.53	0.57	0.61	0.65	0.69	0.74	0.79	0.84	0.89	0.94	1.00	1.06	1.12	1.18	1.24	1.31	1.38	1.45	1.53	1.61	1.69
2.6	0.20	0.23	0.25	0.28	0.31	0.34	0.37	0.40	0.43	0.47	0.50	0.54	0.58	0.62	0.67	0.71	0.76	0.80	0.85	0.91	0.96	1.01	1.07	1.13	1.19	1.26	1.33	1.40	1.47	1.54	1.62	1.70	1.79
2.7	0.23	0.26	0.29	0.31	0.34	0.38	0.41	0.44	0.48	0.52	0.55	0.59	0.64	0.68	0.72	0.77	0.82	0.87	0.92	0.97	1.03	1.09	1.15	1.21	1.27	1.34	1.41	1.48	1.55	1.63	1.71	1.79	1.88
2.8	0.26	0.29	0.32	0.35	0.38	0.42	0.45	0.49	0.53	0.57	0.61	0.65	0.69	0.74	0.78	0.83	0.88	0.93	0.99	1.04	1.10	1.16	1.22	1.29	1.35	1.42	1.49	1.57	1.64	1.72	1.80	1.89	1.97
2.9	0.30	0.33	0.36	0.39	0.43	0.46	0.50	0.54	0.58	0.62	0.66	0.70	0.75	0.80	0.85	0.90	0.95	1.00	1.06	1.12	1.18	1.24	1.30	1.37	1.43	1.50	1.58	1.65	1.73	1.81	1.89	1.98	2.07
3.0	0.33	0.37	0.40	0.43	0.47	0.51	0.54	0.58	0.63	0.67	0.71	0.76	0.81	0.86	0.91	0.96	1.02	1.07	1.13	1.19	1.25	1.31	1.38	1.45	1.52	1.59	1.66	1.74	1.82	1.90	1.98	2.07	2.16
3.1	0.37	0.40	0.44	0.48	0.51	0.55	0.59	0.64	0.68	0.72	0.77	0.82	0.87	0.92	0.97	1.03	1.08	1.14	1.20	1.26	1.33	1.39	1.46	1.53	1.60	1.67	1.75	1.83	1.91	1.99	2.08	2.16	2.26
3.2	0.41	0.44	0.48	0.52	0.56	0.60	0.64	0.69	0.73	0.78	0.83	0.88	0.93	0.98	1.04	1.09	1.15	1.21	1.27	1.34	1.40	1.47	1.54	1.61	1.68	1.76	1.84	1.91	2.00	2.08	2.17	2.26	2.35
3.3	0.45	0.49	0.52	0.56	0.61	0.65	0.69	0.74	0.79	0.84	0.89	0.94	0.99	1.05	1.10	1.16	1.22	1.28	1.35	1.41	1.48	1.55	1.62	1.69	1.77	1.84	1.92	2.00	2.09	2.17	2.26	2.35	2.45
3.4	0.49	0.53	0.57	0.61	0.66	0.70	0.75	0.79	0.84	0.89	0.95	1.00	1.06	1.11	1.17	1.23	1.29	1.36	1.42	1.49	1.56	1.63	1.70	1.77	1.85	1.93	2.01	2.09	2.18	2.26	2.35	2.45	2.54
3.5	0.53	0.57	0.62	0.66	0.71	0.75	0.80	0.85	0.90	0.95	1.01	1.06	1.12	1.18	1.24	1.30	1.37	1.43	1.50	1.57	1.64	1.71	1.78	1.86	1.94	2.02	2.10	2.18	2.27	2.36	2.45	2.54	2.64
3.6	0.58	0.62	0.66	0.71	0.76	0.81	0.86	0.91	0.96	1.01	1.07	1.13	1.19	1.25	1.31	1.37	1.44	1.51	1.57	1.64	1.72	1.79	1.87	1.94	2.02	2.10	2.19	2.27	2.36	2.45	2.54	2.64	2.73
3.7	0.62	0.67	0.71	0.76	0.81	0.86	0.91	0.96	1.02	1.08	1.13	1.19	1.25	1.32	1.38	1.45	1.51	1.58	1.65	1.72	1.80	1.87	1.95	2.03	2.11	2.19	2.28	2.36	2.45	2.54	2.64	2.73	2.83
3.8	0.67	0.71	0.76	0.81	0.86	0.91	0.97	1.02	1.08	1.14	1.20	1.26	1.32	1.39	1.45	1.52	1.59	1.66	1.73	1.80	1.88	1.95	2.03	2.11	2.20	2.28	2.37	2.45	2.54	2.64	2.73	2.83	2.92
3.9	0.71	0.76	0.81	0.86	0.92	0.97	1.03	1.08	1.14	1.20	1.26	1.33	1.39	1.46	1.52	1.59	1.66	1.73	1.81	1.88	1.96	2.04	2.12	2.20	2.28	2.37	2.46	2.55	2.64	2.73	2.82	2.92	3.02
4.0	0.76	0.81	0.86	0.92	0.97	1.03	1.09	1.14	1.20	1.27	1.33	1.39	1.46	1.53	1.60	1.67	1.74	1.81	1.89	1.96	2.04	2.12	2.20	2.29	2.37	2.46	2.55	2.64	2.73	2.82	2.92	3.02	3.12
4.1	0.81	0.86	0.92	0.97	1.03	1.09	1.15	1.21	1.27	1.33	1.40	1.46	1.53	1.60	1.67	1.74	1.82	1.89	1.97	2.04	2.12	2.21	2.29	2.37	2.46	2.55	2.64	2.73	2.82	2.92	3.01	3.11	3.21
4.2	0.86	0.92	0.97	1.03	1.09	1.15	1.21	1.27	1.33	1.40	1.46	1.53	1.60	1.67	1.74	1.82	1.89	1.97	2.05	2.13	2.21	2.29	2.37	2.46	2.55	2.64	2.73	2.82	2.92	3.01	3.11	3.21	3.31
4.3	0.91	0.97	1.03	1.09	1.15	1.21	1.27	1.33	1.40	1.47	1.53	1.60	1.67	1.75	1.82	1.89	1.97	2.05	2.13	2.21	2.29	2.38	2.46	2.55	2.64	2.73	2.82	2.91	3.01	3.11	3.20	3.31	3.41
4.4	0.97	1.02	1.08	1.14	1.21	1.27	1.33	1.40	1.47	1.53	1.60	1.67	1.75	1.82	1.90	1.97	2.05	2.13	2.21	2.29	2.38	2.46	2.55	2.64	2.73	2.82	2.91	3.01	3.10	3.20	3.30	3.40	3.50
4.5	1.02	1.08	1.14	1.20	1.27	1.33	1.40	1.46	1.53	1.60	1.67	1.75	1.82	1.90	1.97	2.05	2.13	2.21	2.29	2.38	2.46	2.55	2.64	2.73	2.82	2.91	3.00	3.10	3.20	3.30	3.40	3.50	3.60
4.6	1.07	1.14	1.20	1.26	1.33	1.39	1.46	1.53	1.60	1.67	1.74	1.82	1.89	1.97	2.05	2.13	2.21	2.29	2.38	2.46	2.55	2.63	2.72	2.81	2.91	3.00	3.10	3.19	3.29	3.39	3.49	3.59	3.70
4.7	1.13	1.19	1.26	1.32	1.39	1.46	1.53	1.60	1.67	1.74	1.82	1.89	1.97	2.05	2.13	2.21	2.29	2.37	2.46	2.55	2.63	2.72	2.81	2.90	3.00	3.09	3.19	3.29	3.38	3.49	3.59	3.69	3.80
4.8	1.19	1.25	1.32	1.38	1.45	1.52	1.59	1.67	1.74	1.81	1.89	1.97	2.05	2.12	2.21	2.29	2.37	2.46	2.54	2.63	2.72	2.81	2.90	2.99	3.09	3.18	3.28	3.38	3.48	3.58	3.68	3.79	3.89
4.9	1.24	1.31	1.38	1.45	1.52	1.59	1.66	1.73	1.81	1.89	1.96	2.04	2.12	2.20	2.28	2.37	2.45	2.54	2.63	2.72	2.81	2.90	2.99	3.08	3.18	3.28	3.37	3.47	3.57	3.68	3.78	3.89	3.99
5.0	1.30	1.37	1.44	1.51	1.58	1.65	1.73	1.80	1.88	1.96	2.04	2.12	2.20	2.28	2.36	2.45	2.54	2.62	2.71	2.80	2.89	2.99	3.08	3.17	3.27	3.37	3.47	3.57	3.67	3.77	3.88	3.98	4.09
5.1	1.36	1.43	1.50	1.57	1.65	1.72	1.80	1.87	1.95	2.03	2.11	2.19	2.28	2.36	2.44	2.53	2.62	2.71	2.80	2.89	2.98	3.07	3.17	3.26	3.36	3.46	3.56	3.66	3.76	3.87	3.97	4.08	4.19
5.2	1.42	1.49	1.56	1.64	1.71	1.79	1.87	1.94	2.02	2.10	2.19	2.27	2.35	2.44	2.52	2.61	2.70	2.79	2.88	2.97	3.07	3.16	3.26	3.36	3.45	3.55	3.65	3.76	3.86	3.96	4.07	4.18	4.28
5.3	1.48	1.55	1.63	1.70	1.78	1.86	1.94	2.01	2.10	2.18	2.26	2.35	2.43	2.52	2.61	2.69	2.78	2.88	2.97	3.06	3.16	3.25	3.35	3.45	3.55	3.65	3.75	3.85	3.95	4.06	4.17	4.27	4.38
5.4	1.54	1.62	1.69	1.77	1.85	1.93	2.01	2.09	2.17	2.25	2.34	2.42	2.51	2.60	2.69	2.78	2.87	2.96	3.05	3.15	3.24	3.34	3.44	3.54	3.64	3.74	3.84	3.95	4.05	4.16	4.26	4.37	4.48
5.5	1.60	1.68	1.76	1.83	1.91	1.99	2.08	2.16	2.24	2.33	2.41	2.50	2.59	2.68	2.77	2.86	2.95	3.05	3.14	3.24	3.33	3.43	3.53	3.63	3.73	3.83	3.94	4.04	4.15	4.25	4.36	4.47	4.58
5.6	1.67	1.74	1.82	1.90	1.98	2.06	2.15	2.23	2.32	2.40	2.49	2.58	2.67	2.76	2.85	2.94	3.04	3.13	3.23	3.32	3.42	3.52	3.62	3.72	3.82	3.93	4.03	4.14	4.24	4.35	4.46	4.57	4.68

Table KS2-7 (continued) Runoff(Q) for Various Runoff Curve Numbers and Rainfall Amounts

Runoff = (Rainfall - 0.2 * S)^2 / (Rainfall + 0.8 * S); where S = (1000 / CN) - 10

Rainfall	Runoff Curve Number and Corresponding Runoff (inches)																																	
(inches)	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92
5.7	1.73	1.81	1.89	1.97	2.05	2.14	2.22	2.31	2.39	2.48	2.57	2.66	2.75	2.84	2.93	3.03	3.12	3.22	3.32	3.41	3.51	3.61	3.71	3.81	3.92	4.02	4.12	4.23	4.34	4.45	4.55	4.66	4.77
5.8	1.79	1.87	1.95	2.04	2.12	2.21	2.29	2.38	2.47	2.56	2.65	2.74	2.83	2.92	3.02	3.11	3.21	3.31	3.40	3.50	3.60	3.70	3.80	3.91	4.01	4.11	4.22	4.33	4.43	4.54	4.65	4.76	4.87
5.9	1.86	1.94	2.02	2.11	2.19	2.28	2.37	2.45	2.54	2.63	2.73	2.82	2.91	3.01	3.10	3.20	3.29	3.39	3.49	3.59	3.69	3.79	3.90	4.00	4.10	4.21	4.31	4.42	4.53	4.64	4.75	4.86	4.97
6.0	1.92	2.01	2.09	2.18	2.26	2.35	2.44	2.53	2.62	2.71	2.81	2.90	2.99	3.09	3.18	3.28	3.38	3.48	3.58	3.68	3.78	3.88	3.99	4.09	4.20	4.30	4.41	4.52	4.63	4.74	4.85	4.96	5.07
6.1	1.99	2.07	2.16	2.25	2.33	2.42	2.51	2.61	2.70	2.79	2.88	2.98	3.08	3.17	3.27	3.37	3.47	3.57	3.67	3.77	3.87	3.97	4.08	4.18	4.29	4.40	4.50	4.61	4.72	4.83	4.94	5.06	5.17
6.2	2.05	2.14	2.23	2.32	2.41	2.50	2.59	2.68	2.78	2.87	2.96	3.06	3.16	3.26	3.35	3.45	3.55	3.65	3.76	3.86	3.96	4.07	4.17	4.28	4.38	4.49	4.60	4.71	4.82	4.93	5.04	5.15	5.27
6.3	2.12	2.21	2.30	2.39	2.48	2.57	2.66	2.76	2.85	2.95	3.05	3.14	3.24	3.34	3.44	3.54	3.64	3.74	3.85	3.95	4.05	4.16	4.26	4.37	4.48	4.59	4.70	4.80	4.92	5.03	5.14	5.25	5.36
6.4	2.19	2.28	2.37	2.46	2.55	2.65	2.74	2.84	2.93	3.03	3.13	3.22	3.32	3.42	3.52	3.63	3.73	3.83	3.93	4.04	4.14	4.25	4.36	4.46	4.57	4.68	4.79	4.90	5.01	5.12	5.24	5.35	5.46
6.5	2.26	2.35	2.44	2.53	2.63	2.72	2.82	2.91	3.01	3.11	3.21	3.31	3.41	3.51	3.61	3.71	3.82	3.92	4.02	4.13	4.24	4.34	4.45	4.56	4.67	4.78	4.89	5.00	5.11	5.22	5.33	5.45	5.56
6.6	2.32	2.42	2.51	2.61	2.70	2.80	2.89	2.99	3.09	3.19	3.29	3.39	3.49	3.59	3.70	3.80	3.90	4.01	4.11	4.22	4.33	4.43	4.54	4.65	4.76	4.87	4.98	5.09	5.21	5.32	5.43	5.55	5.66
6.7	2.39	2.49	2.58	2.68	2.78	2.87	2.97	3.07	3.17	3.27	3.37	3.47	3.57	3.68	3.78	3.89	3.99	4.10	4.20	4.31	4.42	4.53	4.64	4.75	4.86	4.97	5.08	5.19	5.30	5.42	5.53	5.64	5.76
6.8	2.46	2.56	2.65	2.75	2.85	2.95	3.05	3.15	3.25	3.35	3.45	3.56	3.66	3.76	3.87	3.97	4.08	4.19	4.29	4.40	4.51	4.62	4.73	4.84	4.95	5.06	5.17	5.29	5.40	5.51	5.63	5.74	5.86
6.9	2.53	2.63	2.73	2.83	2.93	3.03	3.13	3.23	3.33	3.43	3.54	3.64	3.74	3.85	3.96	4.06	4.17	4.28	4.38	4.49	4.60	4.71	4.82	4.93	5.04	5.16	5.27	5.38	5.50	5.61	5.73	5.84	5.96
7.0	2.60	2.70	2.80	2.90	3.00	3.10	3.20	3.31	3.41	3.51	3.62	3.72	3.83	3.94	4.04	4.15	4.26	4.37	4.47	4.58	4.69	4.81	4.92	5.03	5.14	5.25	5.37	5.48	5.59	5.71	5.82	5.94	6.05
7.1	2.67	2.77	2.87	2.98	3.08	3.18	3.28	3.39	3.49	3.60	3.70	3.81	3.91	4.02	4.13	4.24	4.35	4.46	4.57	4.68	4.79	4.90	5.01	5.12	5.23	5.35	5.46	5.58	5.69	5.81	5.92	6.04	6.15
7.2	2.75	2.85	2.95	3.05	3.15	3.26	3.36	3.47	3.57	3.68	3.79	3.89	4.00	4.11	4.22	4.33	4.44	4.55	4.66	4.77	4.88	4.99	5.10	5.22	5.33	5.44	5.56	5.67	5.79	5.90	6.02	6.14	6.25
7.3	2.82	2.92	3.02	3.13	3.23	3.34	3.44	3.55	3.65	3.76	3.87	3.98	4.09	4.20	4.30	4.41	4.53	4.64	4.75	4.86	4.97	5.08	5.20	5.31	5.43	5.54	5.65	5.77	5.89	6.00	6.12	6.23	6.35
7.4	2.89	2.99	3.10	3.20	3.31	3.41	3.52	3.63	3.74	3.84	3.95	4.06	4.17	4.28	4.39	4.50	4.62	4.73	4.84	4.95	5.06	5.18	5.29	5.41	5.52	5.64	5.75	5.87	5.98	6.10	6.22	6.33	6.45
7.5	2.96	3.07	3.17	3.28	3.39	3.49	3.60	3.71	3.82	3.93	4.04	4.15	4.26	4.37	4.48	4.59	4.71	4.82	4.93	5.04	5.16	5.27	5.39	5.50	5.62	5.73	5.85	5.96	6.08	6.20	6.31	6.43	6.55
7.6	3.04	3.14	3.25	3.36	3.46	3.57	3.68	3.79	3.90	4.01	4.12	4.23	4.35	4.46	4.57	4.68	4.80	4.91	5.02	5.14	5.25	5.37	5.48	5.60	5.71	5.83	5.94	6.06	6.18	6.29	6.41	6.53	6.65
7.7	3.11	3.22	3.33	3.43	3.54	3.65	3.76	3.87	3.98	4.10	4.21	4.32	4.43	4.55	4.66	4.77	4.89	5.00	5.11	5.23	5.34	5.46	5.58	5.69	5.81	5.92	6.04	6.16	6.28	6.39	6.51	6.63	6.75
7.8	3.18	3.29	3.40	3.51	3.62	3.73	3.84	3.96	4.07	4.18	4.29	4.41	4.52	4.63	4.75	4.86	4.98	5.09	5.21	5.32	5.44	5.55	5.67	5.79	5.90	6.02	6.14	6.26	6.37	6.49	6.61	6.73	6.85
7.9	3.26	3.37	3.48	3.59	3.70	3.81	3.93	4.04	4.15	4.26	4.38	4.49	4.61	4.72	4.84	4.95	5.07	5.18	5.30	5.41	5.53	5.65	5.76	5.88	6.00	6.12	6.23	6.35	6.47	6.59	6.71	6.83	6.94
8.0	3.33	3.44	3.56	3.67	3.78	3.89	4.01	4.12	4.24	4.35	4.46	4.58	4.69	4.81	4.93	5.04	5.16	5.27	5.39	5.51	5.62	5.74	5.86	5.98	6.10	6.21	6.33	6.45	6.57	6.69	6.81	6.92	7.04
8.1	3.41	3.52	3.63	3.75	3.86	3.98	4.09	4.20	4.32	4.43	4.55	4.67	4.78	4.90	5.02	5.13	5.25	5.37	5.48	5.60	5.72	5.84	5.95	6.07	6.19	6.31	6.43	6.55	6.67	6.78	6.90	7.02	7.14
8.2	3.48	3.60	3.71	3.83	3.94	4.06	4.17	4.29	4.40	4.52	4.64	4.75	4.87	4.99	5.10	5.22	5.34	5.46	5.58	5.69	5.81	5.93	6.05	6.17	6.29	6.41	6.53	6.64	6.76	6.88	7.00	7.12	7.24
8.3	3.56	3.67	3.79	3.91	4.02	4.14	4.25	4.37	4.49	4.61	4.72	4.84	4.96	5.08	5.19	5.31	5.43	5.55	5.67	5.79	5.91	6.03	6.15	6.26	6.38	6.50	6.62	6.74	6.86	6.98	7.10	7.22	7.34
8.4	3.64	3.75	3.87	3.99	4.10	4.22	4.34	4.46	4.57	4.69	4.81	4.93	5.05	5.17	5.28	5.40	5.52	5.64	5.76	5.88	6.00	6.12	6.24	6.36	6.48	6.60	6.72	6.84	6.96	7.08	7.20	7.32	7.44
8.5	3.71	3.83	3.95	4.07	4.18	4.30	4.42	4.54	4.66	4.78	4.90	5.02	5.14	5.26	5.38	5.50	5.61	5.73	5.85	5.98	6.10	6.22	6.34	6.46	6.58	6.70	6.82	6.94	7.06	7.18	7.30	7.42	7.54
8.6	3.79	3.91	4.03	4.15	4.27	4.38	4.50	4.62	4.74	4.86	4.98	5.10	5.22	5.35	5.47	5.59	5.71	5.83	5.95	6.07	6.19	6.31	6.43	6.55	6.67	6.79	6.91	7.03	7.16	7.28	7.40	7.52	7.64

Table KS2-8 Time of Concentration (Tc) Input Variables
Computed Variable $l^{0.8}$ for Various Hydraulic Flow Lengths

200 to 4,000		4,000 to 8,000		8,000 to 12,000		12,000 to 16,000		16,000 to 20,000		20,000 to 24,000		24,000 to 26,000	
l	l^0.8	l	l^0.8	l	l^0.8	l	l^0.8	l	l^0.8	l	l^0.8	l	l^0.8
--	--	4,000	761	8,000	1,326	12,000	1,834	16,000	2,308	20,000	2,759	24,000	3,193
200	69	4,200	792	8,200	1,352	12,200	1,858	16,200	2,331	20,200	2,782	24,200	3,214
400	121	4,400	822	8,400	1,379	12,400	1,883	16,400	2,354	20,400	2,804	24,400	3,235
600	167	4,600	852	8,600	1,405	12,600	1,907	16,600	2,377	20,600	2,825	24,600	3,256
800	210	4,800	881	8,800	1,431	12,800	1,931	16,800	2,400	20,800	2,847	24,800	3,278
1,000	251	5,000	910	9,000	1,457	13,000	1,955	17,000	2,423	21,000	2,869	25,000	3,299
1,200	291	5,200	939	9,200	1,483	13,200	1,979	17,200	2,446	21,200	2,891	25,200	3,320
1,400	329	5,400	968	9,400	1,508	13,400	2,003	17,400	2,469	21,400	2,913	25,400	3,341
1,600	366	5,600	997	9,600	1,534	13,600	2,027	17,600	2,491	21,600	2,935	25,600	3,362
1,800	402	5,800	1,025	9,800	1,559	13,800	2,051	17,800	2,514	21,800	2,956	25,800	3,383
2,000	437	6,000	1,053	10,000	1,585	14,000	2,074	18,000	2,536	22,000	2,978	26,000	3,404
2,200	472	6,200	1,081	10,200	1,610	14,200	2,098	18,200	2,559	22,200	3,000		
2,400	506	6,400	1,109	10,400	1,635	14,400	2,122	18,400	2,581	22,400	3,021		
2,600	539	6,600	1,137	10,600	1,661	14,600	2,145	18,600	2,604	22,600	3,043		
2,800	572	6,800	1,164	10,800	1,686	14,800	2,169	18,800	2,626	22,800	3,064		
3,000	605	7,000	1,191	11,000	1,710	15,000	2,192	19,000	2,649	23,000	3,086		
3,200	637	7,200	1,219	11,200	1,735	15,200	2,216	19,200	2,671	23,200	3,107		
3,400	669	7,400	1,246	11,400	1,760	15,400	2,239	19,400	2,693	23,400	3,129		
3,600	700	7,600	1,272	11,600	1,785	15,600	2,262	19,600	2,715	23,600	3,150		
3,800	731	7,800	1,299	11,800	1,809	15,800	2,285	19,800	2,737	23,800	3,171		
4,000	761	8,000	1,326	12,000	1,834	16,000	2,308	20,000	2,759	24,000	3,193		

Table KS2-9 Tc Input Variables
Computed Variable $[(1000 / CN) - 9]^{0.7}$ for Various Curve Numbers

CN 60 to 69		CN 70 to 79		CN 80 to 89		CN 90 to 99	
CN	Value	CN	Value	CN	Value	CN	Value
60	4.16	70	3.21	80	2.40	90	1.69
61	4.06	71	3.12	81	2.33	91	1.62
62	3.95	72	3.04	82	2.25	92	1.55
63	3.85	73	2.95	83	2.18	93	1.48
64	3.76	74	2.87	84	2.11	94	1.41
65	3.66	75	2.79	85	2.04	95	1.34
66	3.57	76	2.71	86	1.97	96	1.28
67	3.47	77	2.63	87	1.90	97	1.21
68	3.38	78	2.56	88	1.83	98	1.14
69	3.29	79	2.48	89	1.76	99	1.07

Table KS2-10 Tc Input Variables
Computed Variable $1140(Y)^{0.5}$ for Various Land Slopes

0.3% to 3.9%		4% to 7.9%		8% to 11.9%		12% to 19.8%		20% to 26%	
Slope	Value	Slope	Value	Slope	Value	Slope	Value	Slope	Value
--	--	4.0	2,280	8.0	3,224	12.0	3,949	20.0	5,098
--	--	4.1	2,308	8.1	3,244	12.2	3,982	20.2	5,124
--	--	4.2	2,336	8.2	3,264	12.4	4,014	20.4	5,149
0.3	624	4.3	2,364	8.3	3,284	12.6	4,047	20.6	5,174
0.4	721	4.4	2,391	8.4	3,304	12.8	4,079	20.8	5,199
0.5	806	4.5	2,418	8.5	3,324	13.0	4,110	21.0	5,224
0.6	883	4.6	2,445	8.6	3,343	13.2	4,142	21.2	5,249
0.7	954	4.7	2,471	8.7	3,363	13.4	4,173	21.4	5,274
0.8	1,020	4.8	2,498	8.8	3,382	13.6	4,204	21.6	5,298
0.9	1,081	4.9	2,523	8.9	3,401	13.8	4,235	21.8	5,323
1.0	1,140	5.0	2,549	9.0	3,420	14.0	4,265	22.0	5,347
1.1	1,196	5.1	2,574	9.1	3,439	14.2	4,296	22.2	5,371
1.2	1,249	5.2	2,600	9.2	3,458	14.4	4,326	22.4	5,395
1.3	1,300	5.3	2,624	9.3	3,477	14.6	4,356	22.6	5,419
1.4	1,349	5.4	2,649	9.4	3,495	14.8	4,386	22.8	5,443
1.5	1,396	5.5	2,674	9.5	3,514	15.0	4,415	23.0	5,467
1.6	1,442	5.6	2,698	9.6	3,532	15.2	4,445	23.2	5,491
1.7	1,486	5.7	2,722	9.7	3,551	15.4	4,474	23.4	5,515
1.8	1,529	5.8	2,745	9.8	3,569	15.6	4,503	23.6	5,538
1.9	1,571	5.9	2,769	9.9	3,587	15.8	4,531	23.8	5,562
2.0	1,612	6.0	2,792	10.0	3,605	16.0	4,560	24.0	5,585
2.1	1,652	6.1	2,816	10.1	3,623	16.2	4,588	24.2	5,608
2.2	1,691	6.2	2,839	10.2	3,641	16.4	4,617	24.4	5,631
2.3	1,729	6.3	2,861	10.3	3,659	16.6	4,645	24.6	5,654
2.4	1,766	6.4	2,884	10.4	3,676	16.8	4,673	24.8	5,677
2.5	1,802	6.5	2,906	10.5	3,694	17.0	4,700	25.0	5,700
2.6	1,838	6.6	2,929	10.6	3,712	17.2	4,728	25.2	5,723
2.7	1,873	6.7	2,951	10.7	3,729	17.4	4,755	25.4	5,745
2.8	1,908	6.8	2,973	10.8	3,746	17.6	4,783	25.6	5,768
2.9	1,941	6.9	2,995	10.9	3,764	17.8	4,810	25.8	5,790
3.0	1,975	7.0	3,016	11.0	3,781	18.0	4,837	26.0	5,813
3.1	2,007	7.1	3,038	11.1	3,798	18.2	4,863		
3.2	2,039	7.2	3,059	11.2	3,815	18.4	4,890		
3.3	2,071	7.3	3,080	11.3	3,832	18.6	4,917		
3.4	2,102	7.4	3,101	11.4	3,849	18.8	4,943		
3.5	2,133	7.5	3,122	11.5	3,866	19.0	4,969		
3.6	2,163	7.6	3,143	11.6	3,883	19.2	4,995		
3.7	2,193	7.7	3,163	11.7	3,899	19.4	5,021		
3.8	2,222	7.8	3,184	11.8	3,916	19.6	5,047		
3.9	2,251	7.9	3,204	11.9	3,933	19.8	5,073		

Table KS2-11 Ia Values for Various Curve Numbers

Ia = 0.2 * ((1000 / CN) - 10)

Curve No.	Ia, in.	Curve No.	Ia, in.	Curve No.	Ia, in.	Curve No.	Ia, in.
60	1.333	70	0.857	80	0.500	90	0.222
61	1.279	71	0.817	81	0.469	91	0.198
62	1.226	72	0.778	82	0.439	92	0.174
63	1.175	73	0.740	83	0.410	93	0.151
64	1.125	74	0.703	84	0.381	94	0.128
65	1.077	75	0.667	85	0.353	95	0.105
66	1.030	76	0.632	86	0.326		
67	0.985	77	0.597	87	0.299		
68	0.941	78	0.564	88	0.273		
69	0.899	79	0.532	89	0.247		

Table KS2-12 Unit Peak Discharge (qu) (in cubic feet second [cfs]/acre/inch) for Tc = 0.1 to 2.3 hours

Note: If Ia / P < 0.10, use Ia / P = 0.10 or if Ia / P > 0.50, use Ia / P = 0.50

Ia/P	Tc, hours																							
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3
0.10	1.59	1.25	1.06	0.92	0.83	0.75	0.69	0.64	0.59	0.56	0.54	0.52	0.50	0.48	0.46	0.43	0.41	0.39	0.37	0.35	0.34	0.33	0.32
0.11	1.59	1.24	1.05	0.91	0.82	0.74	0.68	0.63	0.59	0.56	0.53	0.51	0.49	0.47	0.45	0.43	0.41	0.39	0.37	0.35	0.34	0.33	0.32
0.12	1.59	1.23	1.04	0.91	0.82	0.74	0.68	0.63	0.58	0.55	0.53	0.51	0.49	0.47	0.45	0.43	0.41	0.39	0.36	0.34	0.34	0.33	0.32
0.13	1.59	1.22	1.04	0.90	0.81	0.73	0.67	0.62	0.58	0.55	0.52	0.50	0.48	0.46	0.44	0.42	0.40	0.38	0.36	0.34	0.33	0.32	0.31
0.14	1.59	1.22	1.03	0.89	0.80	0.72	0.67	0.62	0.57	0.54	0.52	0.50	0.48	0.46	0.44	0.42	0.40	0.38	0.36	0.34	0.33	0.32	0.31
0.15	1.59	1.21	1.02	0.88	0.79	0.72	0.66	0.61	0.57	0.54	0.52	0.50	0.48	0.46	0.44	0.42	0.40	0.38	0.36	0.34	0.33	0.32	0.31
0.16	1.58	1.20	1.01	0.88	0.79	0.71	0.65	0.60	0.56	0.53	0.51	0.49	0.47	0.45	0.43	0.41	0.39	0.37	0.35	0.33	0.32	0.32	0.31
0.17	1.58	1.19	1.00	0.87	0.78	0.70	0.65	0.60	0.56	0.53	0.51	0.49	0.47	0.45	0.43	0.41	0.39	0.37	0.35	0.33	0.32	0.31	0.30
0.18	1.58	1.18	1.00	0.86	0.77	0.70	0.64	0.59	0.55	0.52	0.50	0.48	0.46	0.44	0.42	0.40	0.38	0.36	0.35	0.33	0.32	0.31	0.30
0.19	1.58	1.17	0.99	0.85	0.76	0.69	0.64	0.59	0.55	0.52	0.50	0.48	0.46	0.44	0.42	0.40	0.38	0.36	0.34	0.32	0.31	0.31	0.30
0.20	1.58	1.17	0.98	0.85	0.76	0.69	0.63	0.58	0.54	0.51	0.49	0.47	0.45	0.43	0.42	0.40	0.38	0.36	0.34	0.32	0.31	0.30	0.30
0.21	1.58	1.16	0.97	0.84	0.75	0.68	0.62	0.57	0.54	0.51	0.49	0.47	0.45	0.43	0.41	0.39	0.37	0.35	0.34	0.32	0.31	0.30	0.29
0.22	1.58	1.15	0.96	0.83	0.74	0.67	0.62	0.57	0.53	0.50	0.48	0.46	0.44	0.43	0.41	0.39	0.37	0.35	0.33	0.31	0.31	0.30	0.29
0.23	1.58	1.14	0.96	0.82	0.73	0.67	0.61	0.56	0.53	0.50	0.48	0.46	0.44	0.42	0.40	0.38	0.37	0.35	0.33	0.31	0.30	0.30	0.29
0.24	1.58	1.13	0.95	0.82	0.73	0.66	0.61	0.56	0.52	0.49	0.47	0.45	0.44	0.42	0.40	0.38	0.36	0.34	0.33	0.31	0.30	0.29	0.29
0.25	1.58	1.12	0.94	0.81	0.72	0.65	0.60	0.55	0.52	0.49	0.47	0.45	0.43	0.41	0.40	0.38	0.36	0.34	0.32	0.31	0.30	0.29	0.28
0.26	1.57	1.11	0.93	0.80	0.71	0.65	0.59	0.54	0.51	0.48	0.46	0.44	0.43	0.41	0.39	0.37	0.36	0.34	0.32	0.30	0.29	0.29	0.28
0.27	1.57	1.11	0.92	0.79	0.70	0.64	0.59	0.54	0.51	0.48	0.46	0.44	0.42	0.40	0.39	0.37	0.35	0.33	0.32	0.30	0.29	0.28	0.28
0.28	1.57	1.10	0.92	0.79	0.70	0.63	0.58	0.53	0.50	0.47	0.45	0.44	0.42	0.40	0.38	0.37	0.35	0.33	0.31	0.30	0.29	0.28	0.27
0.29	1.57	1.09	0.91	0.78	0.69	0.63	0.58	0.53	0.50	0.47	0.45	0.43	0.41	0.40	0.38	0.36	0.34	0.33	0.31	0.29	0.29	0.28	0.27
0.30	1.57	1.08	0.90	0.77	0.68	0.62	0.57	0.52	0.49	0.46	0.44	0.43	0.41	0.39	0.38	0.36	0.34	0.32	0.31	0.29	0.28	0.28	0.27
0.31	1.53	1.06	0.88	0.76	0.67	0.61	0.56	0.51	0.48	0.45	0.43	0.42	0.40	0.38	0.37	0.35	0.33	0.32	0.30	0.28	0.28	0.27	0.26
0.32	1.50	1.05	0.87	0.74	0.66	0.60	0.55	0.50	0.47	0.44	0.42	0.41	0.39	0.38	0.36	0.34	0.33	0.31	0.29	0.28	0.27	0.26	0.26
0.33	1.46	1.03	0.85	0.73	0.64	0.58	0.53	0.49	0.46	0.43	0.41	0.40	0.38	0.37	0.35	0.34	0.32	0.30	0.29	0.27	0.27	0.26	0.25
0.34	1.43	1.02	0.84	0.71	0.63	0.57	0.52	0.48	0.45	0.42	0.40	0.39	0.37	0.36	0.34	0.33	0.31	0.30	0.28	0.27	0.26	0.25	0.25
0.35	1.39	1.00	0.82	0.70	0.62	0.56	0.51	0.47	0.44	0.41	0.40	0.38	0.37	0.35	0.34	0.32	0.31	0.29	0.28	0.26	0.25	0.25	0.24
0.36	1.37	0.98	0.80	0.68	0.60	0.55	0.50	0.46	0.43	0.40	0.39	0.37	0.36	0.34	0.33	0.31	0.30	0.28	0.27	0.26	0.25	0.24	0.24
0.37	1.34	0.95	0.78	0.66	0.59	0.53	0.49	0.45	0.42	0.39	0.38	0.36	0.35	0.33	0.32	0.31	0.29	0.28	0.27	0.25	0.25	0.24	0.23
0.38	1.32	0.93	0.76	0.65	0.57	0.52	0.47	0.43	0.41	0.38	0.37	0.35	0.34	0.33	0.31	0.30	0.29	0.27	0.26	0.25	0.24	0.24	0.23
0.39	1.29	0.90	0.74	0.63	0.56	0.50	0.46	0.42	0.40	0.37	0.36	0.34	0.33	0.32	0.31	0.29	0.28	0.27	0.26	0.24	0.24	0.23	0.23
0.40	1.27	0.88	0.72	0.61	0.54	0.49	0.45	0.41	0.39	0.36	0.35	0.34	0.32	0.31	0.30	0.29	0.28	0.26	0.25	0.24	0.23	0.23	0.22
0.41	1.23	0.85	0.70	0.59	0.52	0.47	0.44	0.40	0.38	0.35	0.34	0.33	0.32	0.30	0.29	0.28	0.27	0.26	0.25	0.23	0.23	0.22	0.22
0.42	1.19	0.83	0.67	0.57	0.50	0.46	0.42	0.39	0.37	0.34	0.33	0.32	0.31	0.30	0.28	0.27	0.26	0.25	0.24	0.23	0.22	0.22	0.21
0.43	1.16	0.80	0.65	0.55	0.49	0.44	0.41	0.37	0.35	0.33	0.32	0.31	0.30	0.29	0.28	0.27	0.25	0.24	0.23	0.22	0.22	0.21	0.21
0.44	1.12	0.78	0.62	0.53	0.47	0.43	0.39	0.36	0.34	0.32	0.31	0.30	0.29	0.28	0.27	0.26	0.25	0.24	0.23	0.22	0.21	0.21	0.20
0.45	1.08	0.75	0.60	0.51	0.45	0.41	0.38	0.35	0.33	0.31	0.30	0.29	0.28	0.27	0.26	0.25	0.24	0.23	0.22	0.21	0.21	0.20	0.20
0.46	1.03	0.72	0.57	0.49	0.43	0.39	0.36	0.34	0.32	0.30	0.29	0.28	0.27	0.26	0.25	0.24	0.23	0.22	0.21	0.20	0.20	0.19	0.19
0.47	0.98	0.68	0.55	0.47	0.41	0.38	0.35	0.32	0.30	0.29	0.28	0.27	0.26	0.25	0.24	0.23	0.22	0.22	0.21	0.20	0.19	0.19	0.18
0.48	0.94	0.65	0.52	0.44	0.40	0.36	0.33	0.31	0.29	0.27	0.27	0.26	0.25	0.24	0.23	0.22	0.22	0.21	0.20	0.19	0.19	0.18	0.18
0.49	0.89	0.61	0.50	0.42	0.38	0.35	0.32	0.29	0.27	0.26	0.25	0.25	0.24	0.23	0.22	0.22	0.21	0.20	0.19	0.19	0.18	0.18	0.17
0.50	0.84	0.58	0.47	0.40	0.36	0.33	0.30	0.28	0.26	0.25	0.24	0.24	0.23	0.22	0.22	0.21	0.20	0.19	0.19	0.18	0.18	0.17	0.17

Table KS2-13 qu (in cfs/acre/inch) for Tc = 2.4 to 4.6 hours

Note: If Ia / P < 0.10, use Ia / P = 0.10 or if Ia / P > 0.50, use Ia / P = 0.50

Ia/P	Tc, hours																						
	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6
0.10	0.31	0.31	0.30	0.29	0.28	0.27	0.26	0.26	0.25	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.19
0.11	0.31	0.30	0.29	0.28	0.28	0.27	0.26	0.25	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.20	0.19	0.19	0.18
0.12	0.31	0.30	0.29	0.28	0.27	0.26	0.26	0.25	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.19	0.18
0.13	0.31	0.30	0.29	0.28	0.27	0.26	0.25	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.20	0.19	0.19	0.18	0.18
0.14	0.30	0.30	0.29	0.28	0.27	0.26	0.25	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.19	0.18	0.18
0.15	0.30	0.29	0.28	0.28	0.27	0.26	0.25	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.19	0.18	0.18
0.16	0.30	0.29	0.28	0.27	0.26	0.26	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.19	0.18	0.18	0.18
0.17	0.30	0.29	0.28	0.27	0.26	0.25	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.19	0.18	0.18	0.17
0.18	0.29	0.29	0.28	0.27	0.26	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.19	0.18	0.18	0.18	0.17
0.19	0.29	0.28	0.27	0.27	0.26	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.18	0.17	0.17
0.20	0.29	0.28	0.27	0.26	0.26	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.18	0.17	0.17
0.21	0.29	0.28	0.27	0.26	0.25	0.25	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.18	0.17	0.17	0.17
0.22	0.28	0.28	0.27	0.26	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.18	0.17	0.17	0.17
0.23	0.28	0.27	0.26	0.26	0.25	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.18	0.17	0.17	0.17	0.16
0.24	0.28	0.27	0.26	0.25	0.25	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.18	0.17	0.17	0.17	0.16
0.25	0.28	0.27	0.26	0.25	0.25	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.17	0.17	0.17	0.16	0.16
0.26	0.27	0.27	0.26	0.25	0.24	0.24	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.17	0.17	0.17	0.17	0.16	0.16
0.27	0.27	0.26	0.26	0.25	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16
0.28	0.27	0.26	0.25	0.25	0.24	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.16
0.29	0.26	0.26	0.25	0.24	0.24	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.15
0.30	0.26	0.26	0.25	0.24	0.23	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.17	0.17	0.16	0.16	0.16	0.16	0.15
0.31	0.26	0.25	0.24	0.24	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.15	0.15
0.32	0.25	0.25	0.24	0.23	0.23	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.18	0.17	0.17	0.16	0.16	0.16	0.16	0.15	0.15
0.33	0.25	0.24	0.23	0.23	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.19	0.18	0.18	0.17	0.17	0.16	0.16	0.16	0.16	0.15	0.15	0.15
0.34	0.24	0.24	0.23	0.22	0.22	0.21	0.20	0.20	0.20	0.19	0.19	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.15	0.15	0.15
0.35	0.24	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.18	0.17	0.17	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15
0.36	0.23	0.23	0.22	0.21	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15
0.37	0.23	0.22	0.22	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.14
0.38	0.22	0.22	0.21	0.21	0.20	0.19	0.19	0.18	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.14	0.14
0.39	0.22	0.21	0.21	0.20	0.20	0.19	0.18	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.14	0.14	0.14
0.40	0.22	0.21	0.20	0.20	0.19	0.19	0.18	0.18	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14
0.41	0.21	0.21	0.20	0.19	0.19	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14
0.42	0.21	0.20	0.19	0.19	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13
0.43	0.20	0.20	0.19	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13
0.44	0.20	0.19	0.18	0.18	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13
0.45	0.19	0.19	0.18	0.18	0.17	0.17	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13
0.46	0.18	0.18	0.18	0.17	0.17	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13
0.47	0.18	0.18	0.17	0.17	0.16	0.16	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12
0.48	0.17	0.17	0.17	0.16	0.16	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12
0.49	0.17	0.17	0.16	0.16	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12
0.50	0.16	0.16	0.16	0.15	0.15	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11

Table KS2-14 qu (in cfs/acre/inch) for Tc = 4.7 to 6.9 hours

Note: If Ia / P < 0.10, use Ia / P = 0.10 or if Ia / P > 0.50, use Ia / P = 0.50

Ia/P	Tc, hours																						
	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9
0.10	0.18	0.18	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13
0.11	0.18	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13
0.12	0.18	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13
0.13	0.18	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13
0.14	0.18	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13
0.15	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13
0.16	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13
0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13
0.18	0.17	0.17	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12
0.19	0.17	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12
0.20	0.17	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12	0.12
0.21	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12	0.12
0.22	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12
0.23	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12
0.24	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12
0.25	0.16	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12
0.26	0.16	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12
0.27	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12
0.28	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.11
0.29	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.11
0.30	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.11	0.11
0.31	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11
0.32	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11
0.33	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11
0.34	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11
0.35	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11
0.36	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11
0.37	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11
0.38	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11
0.39	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.10
0.40	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.10	0.10
0.41	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10
0.42	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10
0.43	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10
0.44	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10
0.45	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10
0.46	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10
0.47	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
0.48	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
0.49	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09
0.50	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09

Table KS2-15 qu (in cfs/acre/inch) for Tc = 7.0 to 9.2 hours

Note: If Ia / P < 0.10, use Ia / P = 0.10 or if Ia / P > 0.50, use Ia / P = 0.50

Ia/P	Tc, hours																						
	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2
0.10	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10
0.11	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10
0.12	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10
0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10
0.14	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10
0.15	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10
0.16	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10
0.17	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09
0.18	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09
0.19	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09
0.20	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09
0.21	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09
0.22	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09
0.23	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09
0.24	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09
0.25	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09
0.26	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09
0.27	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09
0.28	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09
0.29	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.30	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.31	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.32	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.33	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.34	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.35	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.36	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.37	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.38	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.39	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.40	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.41	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.42	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08
0.43	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08
0.44	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08
0.45	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.46	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.47	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.48	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.49	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.50	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08

Table KS2-16 qu (in cfs/acre/inch) for Tc = 9.3 to 10.0 hours

Note: If Ia / P < 0.10, use Ia / P = 0.10 or if Ia / P > 0.50, use Ia / P = 0.50

Ia/P	Tc, hours							
	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0
0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09
0.11	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09
0.12	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09
0.13	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.14	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.15	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.16	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.17	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.18	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.19	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.20	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.21	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08
0.22	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08
0.23	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08
0.24	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08
0.25	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08
0.26	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08
0.27	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08
0.28	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08
0.29	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
0.30	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
0.31	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
0.32	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
0.33	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
0.34	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
0.35	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
0.36	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
0.37	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
0.38	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
0.39	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
0.40	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08
0.41	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.42	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.43	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.44	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.45	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.46	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.47	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.48	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.49	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.50	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08

KS650.281 Estimating annual yield of runoff

This procedure may be used to estimate 50%, 80%, or 90% chance annual runoff for all counties in Kansas. For each county, the Antecedent Runoff Condition (ARC) II curve number must be used for all calculations. The procedure is based upon actual daily rainfall retrieved from a National Oceanic and Atmospheric Administration (NOAA) weather station. The annual runoff is the accumulation of the daily runoff that is computed from the rainfall based on the Natural Resources Conservation Service (NRCS) standard runoff equation, the input county's normal annual precipitation, and an input ARC II curve number adjusted daily for the previous 5-day rainfall to ARC I or ARC III values. A log-Pierson type III statistical procedure is used to analyze the data and assign an occurrence interval.

The percent chance firm yield is the runoff that can be expected from a drainage area for a given percent of time (for example, a value read from the 80% chance firm scale is the volume of runoff which a drainage area can be depended upon to yield 80 years in every 100).

For yields between 0 and 50% chance firm, use the mean annual runoff. To manually compute the desired runoff occurrence, use the following examples.

(a) Example 1

A dam is built in Clay County on a 200-acre drainage area with an ARC II curve number of 75. Determine the volume of runoff that can be expected at this site 50% of the time.

(1) Find the normal annual precipitation for Clay County from Table KS2-6. This amount is 31.9 inches.

(2) Intersect curve 75 on Figure KS2-4 with an annual precipitation of 31.9 inches. Project to the left and read 1.9 inches from the 50% chance firm scale.

This means that in any 1 year there is a 50% chance of at least 1.9 inches (32 acre-feet) of runoff at this site.

(b) Example 2

Determine the minimum amount of annual runoff that can be expected 2 years out of 10 on the average at a 450-acre site in Rooks County. The ARC II curve number is 75.

(1) Find the normal annual precipitation for Rooks County from Table KS2-6 to be 23.9 inches.

(2) Intersect curve 75 on Figure KS2-5 with an annual precipitation of 23.9 inches. Project to the left and read 1.25 (approximately 47 acre-feet). This is the mean annual runoff. Use this value for the 20% chance runoff at this site.

Figure KS2-2 Annual Yield of Runoff for 90% Chance Firm

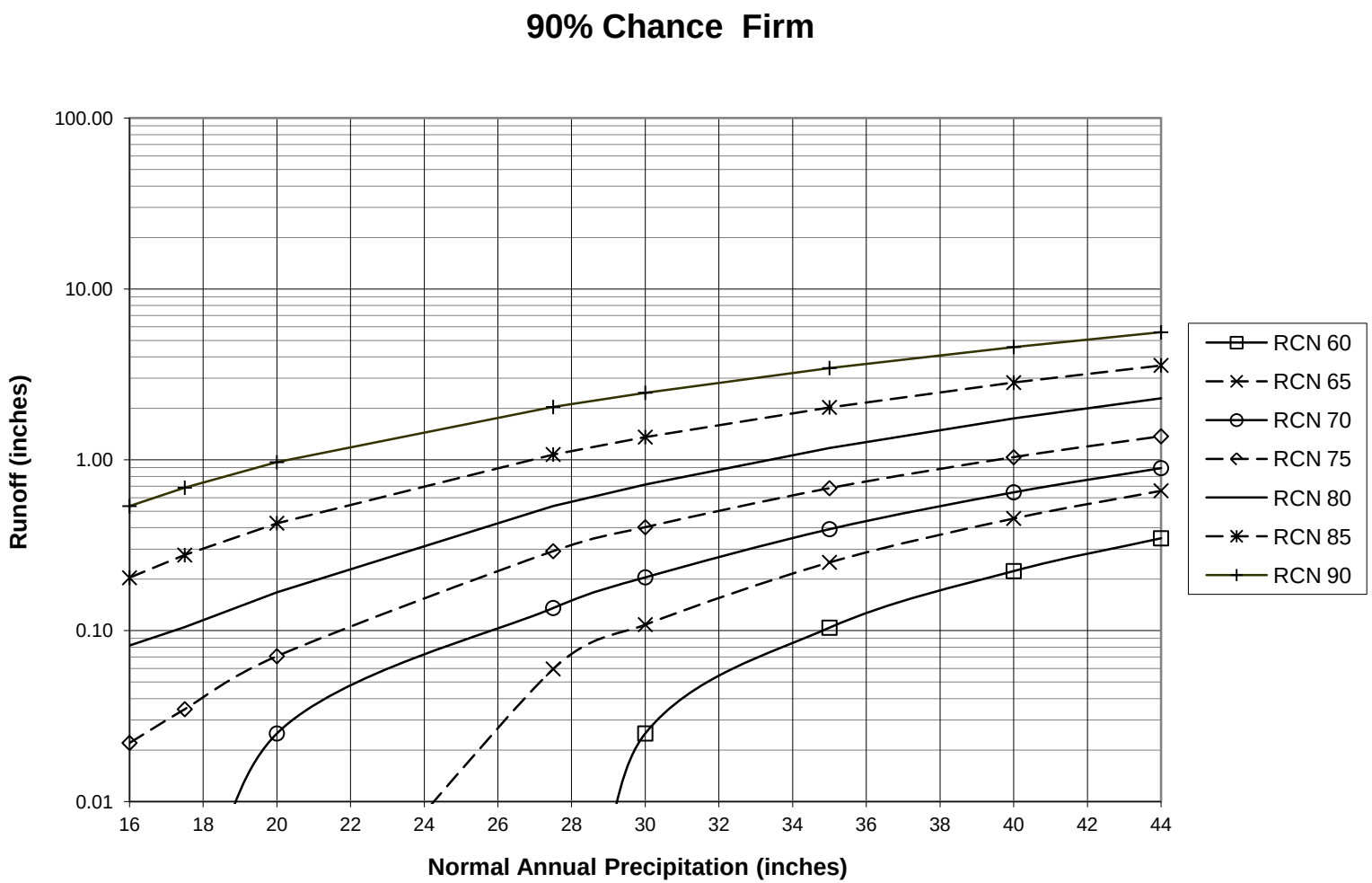


Figure KS2-3 Annual Yield of Runoff for 80% Chance Firm

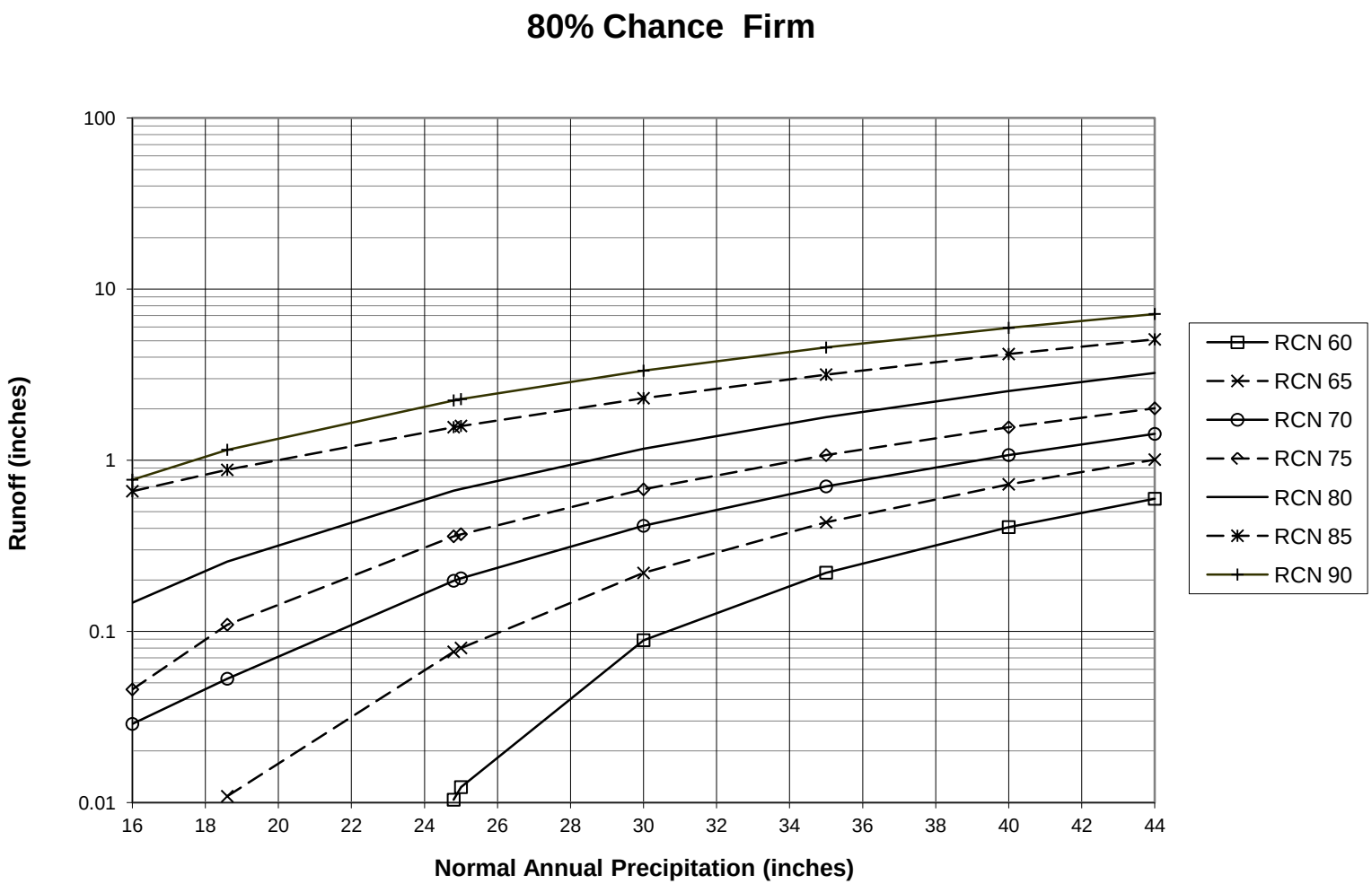


Figure KS2-4 Annual Yield of Runoff for 50% Chance Firm

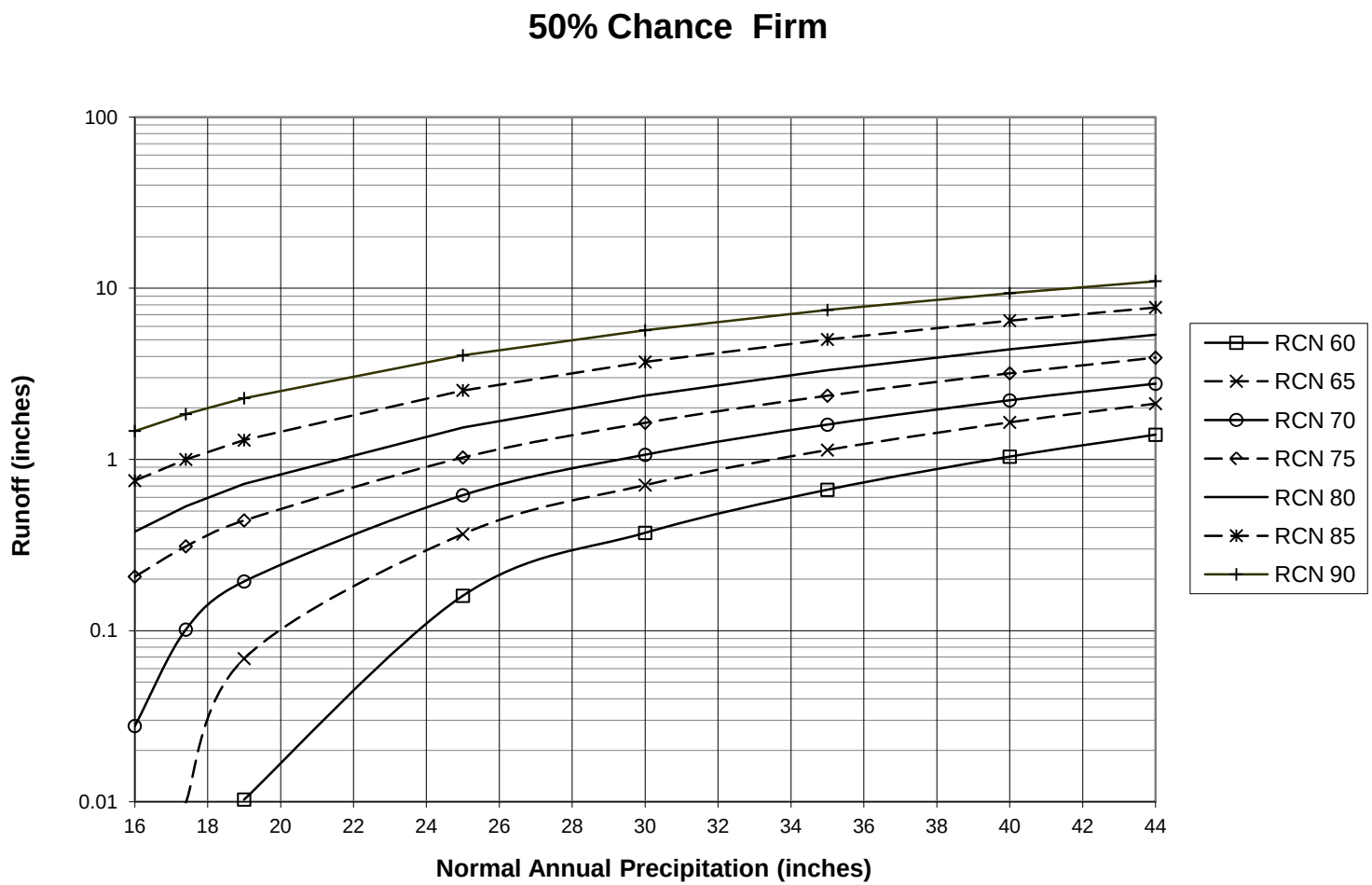
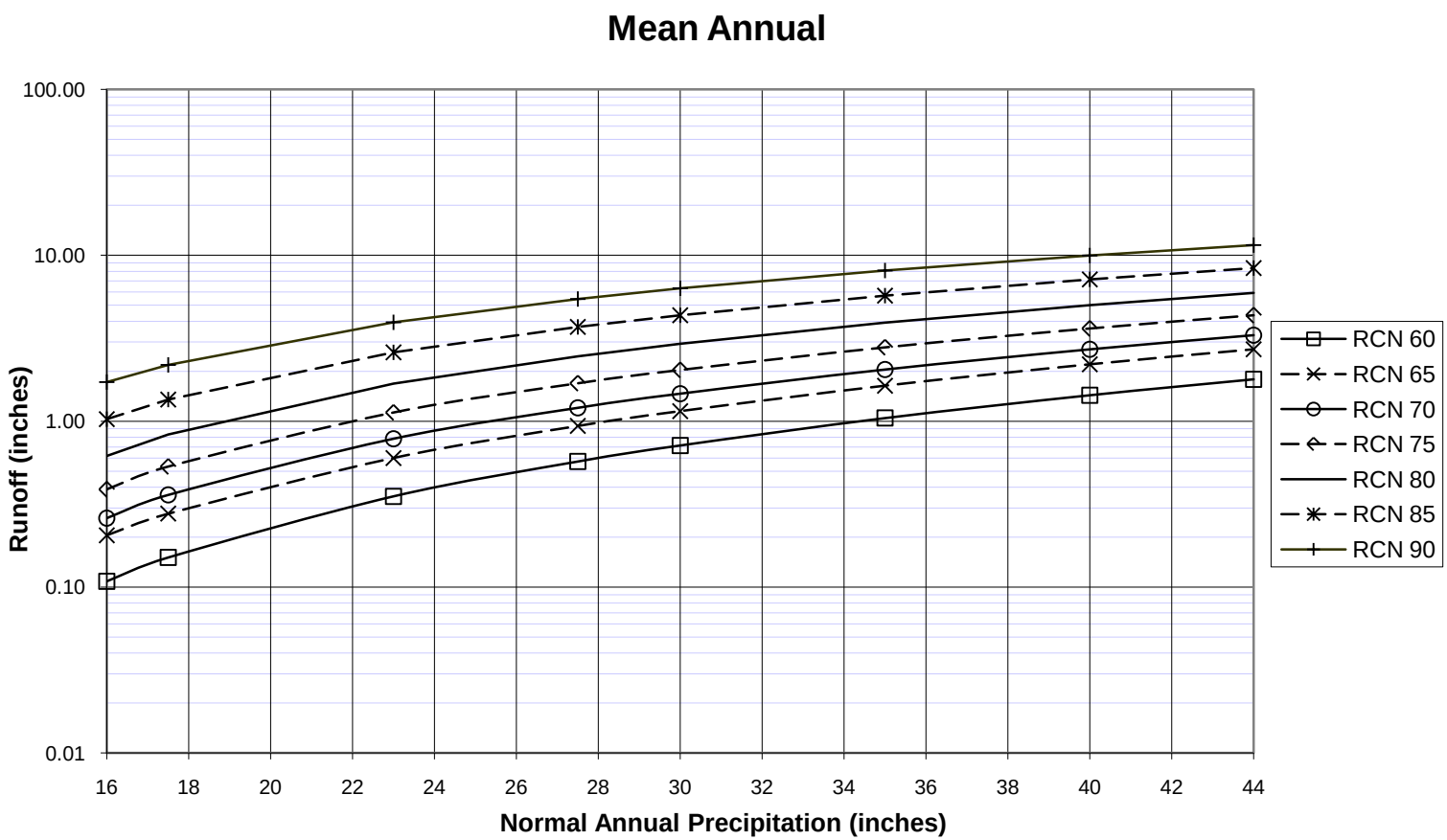


Figure KS2-5 Mean Annual Yield of Runoff



KS650.282 Procedure to find the average slope of watershed using the Web Soil Survey

(a) Procedure

(1) Using the Web Soil Survey (WSS), click on the "Start WSS" button.

(2) Under "Navigate By," click on "PLSS (section, township, range)" and enter the state and legal description where indicated. Click on the "View" button.

(3) Click the "Legend" side tab and under "Map Legend" scroll down to "Background" and click "Topographic Map."

(4) The icon is used to define the area of interest (AOI) under "Area of Interest Interactive Map." Delineate the drainage area by clicking on each point around the perimeter of the AOI. Double click when finished with the AOI. Note: To change the scale on the topographic map click on "Scale" and follow the directions.

(5) After the drainage area is displayed on screen (digitized), click on the "Soil Map" tab at the top of the screen. This will display the following soil data for the AOI:
--Map Unit Symbol
--Map Unit Name
--Acres in AOI
--Percent of AOI

(6) Calculate the "Slope to Use" from the slopes shown for each map unit.

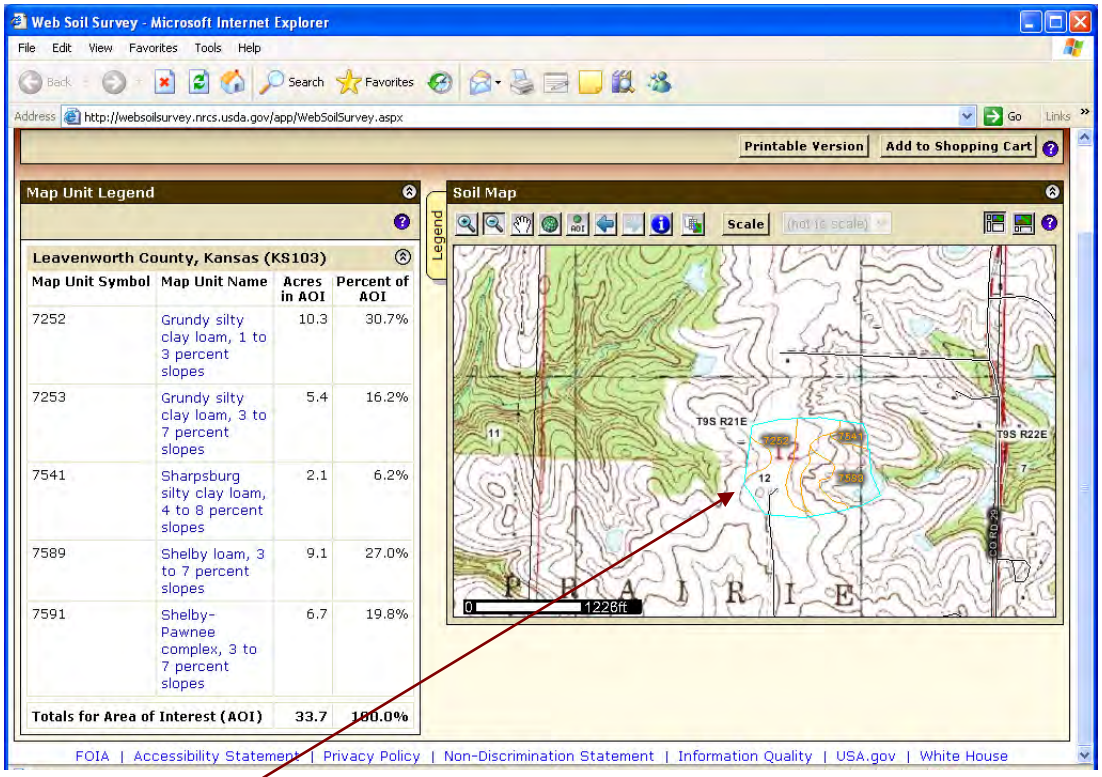
(7) Multiply the "Slope to Use" by the "Percent of AOI" for each map unit to obtain the "AOI Average Slope."

(8) Find the "Total Average Slope" by averaging those for each map unit and rounding to the nearest whole number.

(b) Example

A site is in the East Half of Section 12, Township 9 South, Range 21 East, in Leavenworth County.

Shown below is this site in WSS:



AOI

The average slope for this AOI would be found as follows:

Column A	Column B	Column C	Column D	Column E	Column F
Map Unit Symbol (from WSS)	**Map Unit Name (from WSS)**	**Slope (from WSS)**	**Slope To Use (Average of Column C)**	**Percent of AOI (from WSS)**	**AOI Average Slope (Column D x Column E)**
7252	Grundy	1 to 3%	2%	.307	0.614
7253	Grundy	3 to 7%	5%	.162	0.81
7541	Sharpsburg	4 to 8%	6%	.062	0.372
7589	Shelby	3 to 7%	5%	.27	1.35
7591	Shelby-Pawnee	3 to 7%	5%	.198	0.99
				Total Average Slope =	4.10 (Use **4**)

KS650.283 Procedure to find the average slope of watershed using topographic maps

(a) Procedure

The following steps can be used to find the average watershed slope by using topographic maps:

(1) Select several random slopes that typify the slopes found in the watershed.

In the watershed drawing below, the following slopes have been computed as typical slopes found in the watershed (elevations have been estimated in some cases):

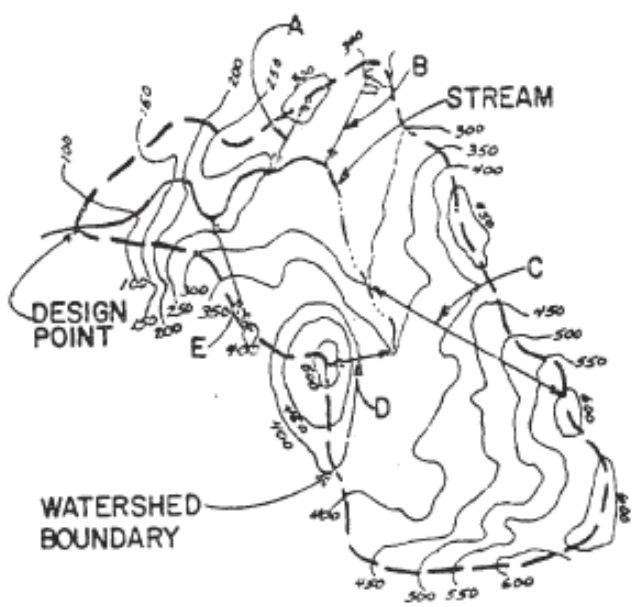
Slope A: (325 - 250) / 900 = 75 / 900 = 8%
Slope B: (325 - 270) / 1200 = 55 / 1200 = 5%
Slope C: (600 - 300) / 2400 = 300 / 2400 = 13%
Slope D: (525 - 350) / 700 = 175 / 700 = 25%
Slope E: (425 - 225) / 1300 = 200 / 1300 = 15%

(2) Determine the average watershed slope by adjusting each slope computed above for its proportion in the watershed.

From a visual examination, the following proportions have been assigned to the slopes computed in Step (1). A weighted product is then computed to obtain the average slope of the entire watershed:

	Product x 100
10% of watershed = 8% slope	0.80
20% of watershed = 5% slope	1.00
40% of watershed = 13% slope	5.20
20% of watershed = 25% slope	5.00
10% of watershed = 15% slope	1.50
Average slope of watershed =	13.50 %

Note that the watershed map below was reproduced from a United States Geological Survey (USGS) topographic quadrangle of the 7.5-minute series with a 10-foot contour interval. For clarity, only the 50-foot contours have been reproduced.



SCALE: 1" = 2000'
CONTOUR INTERVAL = 50'

Table KS2-17 Peak Rates of Discharge (in cubic feet second [cfs]) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **3.5** inches

Applicable Counties: **Cheyenne, Sherman**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	6	10	13	16	18	21	24	26	28	30	32	35
71	7	11	14	18	20	23	26	29	31	33	35	38
72	7	11	15	19	22	25	28	31	34	36	39	42
73	7	12	17	21	24	27	30	33	37	39	42	45
74	8	13	18	23	26	29	33	36	40	42	45	49
75	8	14	19	24	28	31	35	39	43	45	48	53
76	8	15	20	26	30	34	38	42	46	48	52	57
77	9	16	22	28	32	36	40	45	49	52	56	61
78	10	18	24	30	34	38	43	49	53	56	60	65
79	10	19	25	31	36	41	46	52	56	60	64	70
80	10	20	26	33	38	44	49	55	60	65	69	75
81	11	21	28	36	41	47	53	59	64	70	74	79
82	11	22	29	38	43	50	57	63	68	74	79	85
83	12	23	31	40	46	53	60	66	72	78	84	90
84	13	25	33	42	49	57	64	71	77	83	89	96
85	13	26	35	44	52	60	67	75	82	88	94	102
86	14	27	37	47	55	64	71	80	88	94	100	109
87	14	28	39	50	58	68	76	85	93	99	106	115
88	15	29	41	52	61	72	80	89	98	104	112	121
89	16	31	43	55	65	76	85	95	104	111	119	128
90	16	32	45	57	68	80	90	100	110	118	129	130

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **3.6** inches

Applicable Counties: **Greeley, Rawlins, Wallace**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	6	11	14	17	20	22	26	29	32	35	36	37
71	6	12	15	19	22	24	28	31	34	37	38	40
72	7	13	17	21	24	26	30	33	36	39	41	43
73	7	13	18	22	26	28	32	35	38	42	45	47
74	8	15	20	24	28	31	35	39	42	46	49	52
75	8	15	21	25	30	33	37	42	45	49	52	56
76	8	16	22	26	32	36	40	45	48	52	56	60
77	9	18	24	29	35	39	43	48	52	56	60	65
78	10	19	25	31	37	42	46	52	56	60	65	70
79	10	20	26	33	39	44	49	55	59	64	69	74
80	11	21	28	35	41	47	53	59	64	69	74	79
81	11	22	30	37	43	50	56	63	69	74	79	84
82	12	23	31	39	45	53	59	66	72	78	83	89
83	13	24	33	42	48	56	63	70	76	82	88	94
84	13	25	35	44	51	59	67	74	80	87	93	100
85	13	26	37	46	54	63	71	79	85	93	99	107
86	14	28	39	49	57	67	75	84	90	98	105	113
87	14	29	41	52	61	71	79	89	96	104	112	120
88	15	30	43	54	64	74	83	93	101	110	118	126
89	16	32	45	57	67	78	88	99	108	117	126	133
90	17	33	47	59	70	82	92	103	113	123	131	139

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **3.7** inches

Applicable Counties: **Hamilton, Logan, Thomas**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	7	11	15	18	21	24	28	31	33	35	38	40
71	7	12	16	20	23	26	30	33	35	38	41	43
72	7	13	18	22	25	28	32	35	38	41	44	47
73	7	14	19	23	26	29	34	37	40	44	47	50
74	8	15	21	25	28	32	37	40	44	48	51	54
75	8	16	22	27	30	35	40	43	47	51	55	58
76	9	17	23	29	33	38	43	47	51	55	59	63
77	10	18	25	31	36	41	46	50	54	59	63	68
78	10	19	26	32	38	43	49	54	58	63	68	73
79	11	21	28	34	41	46	52	58	62	67	72	77
80	11	22	30	37	43	49	55	62	67	72	77	82
81	12	23	31	39	46	52	58	66	72	77	82	88
82	12	24	32	41	48	55	62	70	76	81	86	93
83	13	25	34	43	50	58	66	74	81	86	92	99
84	14	26	36	46	53	62	70	78	85	90	97	105
85	14	27	38	48	56	66	74	82	90	95	103	111
86	15	29	40	50	59	70	78	86	95	101	110	118
87	15	30	42	53	63	74	82	91	100	107	116	124
88	16	31	44	56	66	77	86	96	106	114	123	132
89	17	33	46	59	69	80	91	102	112	121	130	--
90	18	35	48	62	73	85	97	108	118	128	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **3.8** inches

Applicable Counties: **Decatur, Kearny, Scott, Sheridan, Stanton, Wichita**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	7	12	16	21	24	27	30	33	35	38	40	43
71	7	13	17	22	25	28	31	35	37	40	42	46
72	8	14	18	23	26	30	33	37	40	43	45	49
73	8	15	19	24	28	32	36	40	43	46	49	53
74	8	16	21	26	30	34	39	43	47	50	53	57
75	9	17	22	28	32	37	42	47	51	54	58	62
76	9	18	24	30	35	40	45	50	54	58	62	67
77	10	19	26	32	38	43	48	53	58	62	66	72
78	10	20	27	34	40	46	52	57	62	66	71	77
79	11	22	29	36	42	49	55	61	66	70	76	82
80	11	23	31	39	45	52	59	65	70	75	81	87
81	12	24	32	41	48	55	62	68	74	80	86	92
82	13	25	34	43	50	58	65	72	79	85	91	97
83	14	26	36	46	53	61	69	76	83	90	96	103
84	14	27	38	48	56	65	73	80	88	95	101	109
85	15	29	40	51	59	69	77	85	93	101	107	115
86	15	30	42	53	62	72	81	90	98	107	114	122
87	16	31	44	56	66	76	86	95	104	113	120	129
88	17	32	46	58	69	80	91	101	110	119	127	--
89	18	34	48	61	72	84	96	106	116	126	--	--
90	18	35	50	63	75	88	101	112	123	134	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **3.9** inches

Applicable Counties: **Gove, Lane, Morton, Norton**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	7	13	17	22	26	28	31	36	37	40	44	46
71	8	14	18	23	27	29	32	37	39	42	46	48
72	8	15	19	24	28	31	34	39	42	45	49	52
73	8	16	20	25	29	33	36	41	45	48	53	56
74	9	17	22	27	32	36	39	44	49	52	57	61
75	9	17	23	29	34	39	42	48	52	56	61	65
76	10	18	25	32	37	42	46	51	56	60	65	69
77	10	19	27	34	39	45	50	56	61	65	70	74
78	11	21	29	36	42	48	54	60	65	70	75	79
79	12	22	30	38	45	51	57	64	69	74	80	85
80	12	23	32	40	47	54	61	68	73	79	85	90
81	13	25	34	43	50	57	64	72	78	84	90	96
82	13	26	35	45	53	60	68	76	82	89	95	102
83	14	27	37	47	55	63	72	80	86	94	100	108
84	14	28	39	49	58	67	76	84	91	99	106	114
85	15	30	41	51	61	71	80	89	96	105	112	120
86	15	31	43	54	64	75	84	93	101	111	118	127
87	16	32	45	57	68	79	89	99	107	118	125	134
88	17	33	47	59	71	83	93	104	113	125	132	--
89	18	34	49	62	74	87	98	110	119	131	--	--
90	19	35	51	65	77	91	103	115	125	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **4.0** inches

Applicable Counties: **Finney, Graham, Grant, Trego**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	7	14	18	23	26	29	33	37	40	43	45	48
71	7	14	19	24	28	31	35	39	42	45	47	51
72	8	15	21	26	30	33	37	41	45	48	51	55
73	8	16	22	28	32	35	40	44	48	51	55	59
74	9	18	24	30	34	38	43	47	51	55	59	63
75	10	19	26	32	36	41	46	50	54	59	63	68
76	10	20	27	34	38	44	49	54	58	63	68	73
77	11	21	29	36	41	47	52	58	63	68	73	78
78	12	22	30	38	44	51	56	62	68	73	78	83
79	12	23	31	39	46	54	59	66	72	77	83	89
80	13	24	33	41	49	57	63	70	76	82	88	95
81	13	25	35	44	52	60	67	74	81	87	93	100
82	14	26	37	46	54	63	70	78	86	93	99	106
83	14	27	39	49	57	66	74	83	91	98	104	112
84	15	29	41	51	60	70	78	87	95	103	110	118
85	15	30	43	53	63	74	82	91	100	109	116	125
86	16	32	45	56	66	78	86	96	106	115	123	132
87	17	33	47	59	70	82	91	102	112	121	130	139
88	18	34	49	62	74	86	96	107	118	128	138	--
89	19	36	51	65	77	90	101	113	125	136	--	--
90	20	38	53	68	80	94	106	119	131	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **4.1** inches

Applicable Counties: **Haskell, Ness, Phillips, Rooks, Stevens**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	8	14	19	25	29	32	35	39	42	45	48	52
71	9	16	20	26	30	33	37	41	44	47	50	54
72	9	16	21	27	31	35	39	43	47	50	53	57
73	9	17	23	29	33	37	42	46	50	53	57	61
74	10	18	25	31	36	40	45	50	54	58	62	67
75	10	19	26	32	38	43	48	53	58	62	66	71
76	11	20	28	34	40	46	51	57	62	66	71	76
77	11	21	30	37	43	49	55	61	66	71	76	81
78	12	23	32	39	46	53	59	65	71	76	81	87
79	13	24	33	41	49	56	62	69	75	80	86	92
80	13	25	35	43	51	59	66	73	80	85	91	98
81	14	26	37	46	54	62	70	77	85	90	97	104
82	14	27	39	48	57	66	74	82	90	96	103	110
83	15	29	41	51	60	69	78	86	94	101	109	117
84	16	30	43	53	62	72	82	90	99	107	115	123
85	16	31	45	55	65	76	86	95	104	113	121	129
86	17	33	47	58	68	80	90	100	110	119	127	136
87	17	34	49	61	72	84	95	106	116	125	134	--
88	18	35	51	64	76	88	100	111	122	132	--	--
89	19	37	53	67	79	92	105	117	129	--	--	--
90	19	38	55	70	82	96	110	123	135	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **4.2** inches

Applicable Counties: **Ellis, Gray, Hodgeman, Seward, Smith**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	8	13	21	25	29	32	37	41	44	47	50	53
71	9	14	22	27	31	34	39	43	46	50	54	57
72	9	15	23	28	33	37	42	46	49	54	58	61
73	9	17	25	30	35	39	44	49	53	58	62	65
74	10	19	27	32	37	42	47	52	57	62	66	69
75	10	20	28	34	40	45	50	55	61	66	70	73
76	11	21	29	36	43	48	54	59	65	70	75	78
77	12	22	31	38	46	52	58	64	70	75	80	84
78	12	24	33	40	48	55	62	68	74	80	85	90
79	13	25	34	42	51	58	65	72	78	84	90	96
80	13	26	36	45	54	61	69	76	83	89	95	102
81	14	27	38	48	57	65	73	80	88	94	101	109
82	15	29	40	50	60	68	77	85	93	99	107	115
83	16	30	42	52	63	72	81	89	97	104	113	121
84	16	31	45	55	66	76	85	94	102	110	119	127
85	17	32	47	57	69	80	89	99	107	116	125	133
86	17	34	49	60	73	84	93	104	113	123	132	--
87	18	35	51	63	76	88	98	110	119	130	139	--
88	19	37	53	66	79	92	103	115	125	137	--	--
89	20	38	55	69	82	96	108	121	131	--	--	--
90	21	40	57	72	85	100	113	126	137	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **4.3** inches

Applicable Counties: **Osborne, Rush**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	9	16	21	27	32	35	39	43	46	50	54	57
71	10	17	22	28	33	36	41	45	48	52	56	60
72	10	18	24	30	35	38	44	48	51	55	59	64
73	10	19	25	32	37	40	46	51	54	59	63	68
74	11	20	27	34	39	43	49	54	58	64	68	73
75	11	21	28	36	41	46	52	57	62	68	72	77
76	12	22	30	38	44	50	56	62	67	73	77	83
77	12	23	32	40	47	54	60	67	72	78	83	89
78	13	25	34	43	50	58	64	71	77	83	88	95
79	14	26	36	45	53	61	68	75	82	88	94	101
80	15	27	38	47	55	64	72	80	87	93	100	107
81	15	28	40	50	58	67	76	84	92	98	106	113
82	16	30	42	52	61	70	80	88	97	103	112	119
83	16	31	44	54	64	74	84	92	101	108	118	125
84	17	32	46	57	68	78	88	97	106	114	124	131
85	17	33	48	60	71	82	92	102	111	120	130	--
86	18	35	51	63	75	86	96	107	117	126	137	--
87	18	36	53	66	79	90	101	112	123	133	--	--
88	19	38	55	69	82	94	106	117	129	--	--	--
89	20	39	57	72	85	98	111	122	135	--	--	--
90	20	40	59	75	89	102	115	127	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **4.4** inches

Applicable Counties: **Ford, Jewell, Meade, Russell**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	10	17	23	29	33	36	41	46	50	54	55	59
71	10	18	24	30	34	38	43	48	52	56	59	63
72	10	18	25	31	36	40	46	51	55	59	63	67
73	10	19	26	33	38	43	49	54	58	62	67	71
74	11	20	28	35	41	46	52	57	62	67	72	76
75	11	21	30	37	43	49	55	60	66	71	76	81
76	12	23	32	39	46	52	58	64	71	76	81	86
77	13	24	34	41	49	56	62	69	76	81	86	92
78	14	26	36	44	52	60	66	73	80	85	91	98
79	14	27	37	46	55	63	70	77	85	90	97	105
80	15	29	39	49	58	67	75	82	90	95	103	111
81	15	30	41	52	61	70	79	86	95	101	109	117
82	16	31	43	54	64	73	83	91	101	107	116	124
83	17	32	45	56	67	77	87	96	106	113	122	130
84	17	33	47	59	70	81	91	101	111	119	128	136
85	18	34	49	62	73	85	95	106	116	125	134	--
86	18	35	51	65	76	89	99	111	121	131	--	--
87	19	37	54	68	80	94	105	117	127	137	--	--
88	20	38	56	70	83	98	110	123	133	--	--	--
89	21	40	58	73	87	102	115	129	--	--	--	--
90	22	41	60	75	90	106	120	135	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **4.5** inches

Applicable Counties: **Clark, Edwards, Mitchell, Pawnee**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	9	17	23	29	34	38	43	48	51	55	58	62
71	10	18	25	31	36	40	45	50	54	58	61	66
72	10	19	26	32	38	42	47	53	57	62	65	70
73	10	20	27	34	40	45	50	56	60	65	69	75
74	11	21	29	36	43	48	53	60	64	69	74	80
75	11	22	31	38	45	51	56	64	68	74	79	85
76	12	23	33	40	48	54	60	68	73	79	84	90
77	13	25	35	43	51	58	65	73	78	84	90	96
78	14	27	37	46	54	62	70	78	83	89	96	103
79	15	28	38	48	57	65	74	82	88	94	102	109
80	15	29	40	50	60	69	78	86	93	99	108	115
81	16	30	42	53	63	73	82	90	98	105	114	121
82	17	32	45	56	66	76	86	95	103	111	121	128
83	17	33	47	58	69	80	90	99	108	117	127	134
84	18	35	50	61	73	84	94	104	114	124	134	--
85	18	36	52	64	76	88	98	109	120	130	--	--
86	19	38	55	67	80	92	103	114	126	136	--	--
87	20	39	57	70	84	96	108	120	132	--	--	--
88	21	40	59	72	87	100	113	125	138	--	--	--
89	22	42	61	75	90	104	118	131	--	--	--	--
90	22	43	63	78	93	108	123	137	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **4.6** inches

Applicable Counties: **Barton, Lincoln, Republic**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	10	18	25	32	36	40	45	50	53	57	61	64
71	10	18	26	33	38	42	47	52	56	60	64	68
72	11	19	27	34	40	44	50	55	60	64	68	73
73	11	20	28	36	42	47	53	58	64	68	72	78
74	12	22	30	38	45	50	56	62	68	72	77	83
75	12	23	32	40	47	53	60	66	72	77	82	89
76	13	24	34	42	50	56	64	70	76	82	87	94
77	14	26	36	45	53	60	68	75	81	87	93	100
78	14	27	38	48	56	64	72	79	86	92	99	106
79	16	29	40	50	59	68	76	84	91	98	105	112
80	17	31	42	52	62	72	80	88	96	103	111	118
81	17	32	44	55	66	76	84	93	101	109	117	125
82	18	33	46	58	69	79	88	98	107	115	124	132
83	18	34	48	60	72	82	92	102	112	121	130	--
84	19	36	51	63	75	86	96	107	118	127	137	--
85	19	37	53	66	78	90	100	112	123	134	--	--
86	19	38	55	69	82	95	105	118	129	140	--	--
87	20	40	58	72	86	99	110	124	135	--	--	--
88	21	41	60	74	89	103	115	130	--	--	--	--
89	22	42	62	77	93	108	121	136	--	--	--	--
90	22	43	64	80	96	112	126	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **4.7** inches

Applicable Counties: **Cloud, Ellsworth, Kiowa, Stafford**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	10	19	26	32	37	42	47	52	55	59	63	66
71	11	20	27	33	39	44	49	54	58	62	66	70
72	11	21	29	35	41	47	52	58	62	66	71	75
73	11	22	30	37	44	50	56	62	66	71	76	80
74	12	23	32	40	47	53	59	65	70	75	81	86
75	12	24	34	42	49	56	62	69	74	79	86	92
76	13	25	36	44	52	59	66	73	79	84	91	97
77	14	27	38	47	55	63	70	77	84	90	97	103
78	15	29	40	50	58	67	74	82	90	96	103	110
79	16	30	42	52	61	70	78	86	95	101	109	116
80	16	31	44	54	64	74	83	91	100	106	115	123
81	17	32	46	57	68	78	88	96	105	112	121	130
82	18	34	48	60	71	81	92	101	111	118	128	137
83	18	36	51	63	74	85	96	105	116	124	134	--
84	19	37	54	66	77	89	100	110	121	130	--	--
85	19	38	56	69	81	94	105	115	126	136	--	--
86	20	39	58	71	84	98	111	121	132	--	--	--
87	21	41	60	74	88	102	116	127	--	--	--	--
88	22	42	62	77	91	106	121	132	--	--	--	--
89	23	44	64	79	85	111	127	--	--	--	--	--
90	23	45	66	81	98	115	132	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **4.8** inches

Applicable Counties: **Comanche, Ottawa, Pratt, Rice, Washington**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	12	21	28	35	40	45	51	56	60	64	69	72
71	12	21	29	36	41	46	53	58	62	66	71	75
72	12	22	30	37	43	48	55	61	65	69	74	79
73	12	23	31	39	46	51	58	64	69	73	78	84
74	13	24	33	41	49	55	62	68	73	78	83	89
75	13	25	35	43	51	58	65	72	78	84	89	95
76	14	26	37	45	54	61	69	76	83	89	94	100
77	15	28	39	48	58	65	73	81	88	94	100	106
78	16	30	42	51	61	69	78	86	93	99	106	113
79	17	31	44	53	64	73	82	90	98	104	112	120
80	17	32	46	56	67	76	86	94	103	110	118	127
81	17	33	48	59	70	80	90	99	108	116	125	134
82	18	34	50	62	74	84	94	104	114	123	133	--
83	19	36	52	64	77	88	99	109	120	130	--	--
84	20	38	55	67	80	92	103	114	125	136	--	--
85	20	39	57	70	83	96	108	119	130	--	--	--
86	21	40	59	73	87	101	113	125	136	--	--	--
87	22	42	62	76	91	105	118	131	--	--	--	--
88	22	43	64	78	94	109	124	137	--	--	--	--
89	23	45	66	81	98	114	130	--	--	--	--	--
90	23	46	68	84	101	118	135	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **4.9** inches

Applicable Counties: **Clay, Saline**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	12	20	29	36	42	47	52	57	62	65	68	72
71	12	21	30	37	43	48	54	59	64	68	72	77
72	12	22	31	38	45	50	56	61	67	72	77	82
73	13	23	32	39	47	52	59	64	71	76	82	88
74	13	24	34	41	49	55	62	68	75	81	87	94
75	14	25	36	43	52	58	65	72	79	85	92	99
76	14	27	38	46	56	62	69	77	84	90	97	104
77	15	29	40	49	59	66	74	82	90	96	103	110
78	15	30	42	52	63	71	79	87	96	102	110	117
79	17	32	45	55	66	75	84	92	101	108	116	124
80	17	33	47	58	70	79	89	97	106	114	123	131
81	18	34	49	61	73	83	93	102	112	120	129	138
82	19	36	51	64	76	87	97	107	118	127	136	--
83	20	38	54	67	80	91	102	112	124	134	--	--
84	20	39	56	69	83	94	106	117	129	140	--	--
85	21	41	59	72	86	98	110	122	134	--	--	--
86	22	42	61	75	90	103	115	127	139	--	--	--
87	23	44	64	78	94	108	121	133	--	--	--	--
88	23	45	66	81	98	113	127	139	--	--	--	--
89	24	46	68	83	101	117	132	--	--	--	--	--
90	24	47	70	86	104	121	137	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **5.0** inches

Applicable Counties: **Barber, Marshall, McPherson, Reno**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	12	21	28	35	41	46	52	57	62	66	71	75
71	12	22	30	38	44	49	55	61	66	71	76	80
72	13	23	32	40	47	52	59	65	70	75	80	85
73	13	24	34	42	50	56	63	69	74	80	85	91
74	14	26	36	45	53	59	67	73	79	85	90	97
75	15	27	38	47	55	62	70	77	84	90	95	102
76	16	28	40	49	58	65	74	81	89	95	100	107
77	16	29	42	52	61	69	79	86	94	101	106	113
78	17	31	44	55	64	73	83	91	99	106	112	120
79	18	33	46	57	67	77	87	95	104	112	119	128
80	19	34	48	59	70	81	91	100	110	118	125	135
81	19	35	51	62	74	85	95	105	116	124	132	--
82	20	37	53	65	78	90	100	111	122	131	--	--
83	20	39	55	68	82	94	105	116	128	138	--	--
84	21	41	58	72	86	98	110	122	134	--	--	--
85	22	43	60	75	90	103	115	127	139	--	--	--
86	22	44	62	78	94	108	121	133	--	--	--	--
87	23	45	64	82	98	112	126	139	--	--	--	--
88	24	46	66	85	101	116	131	--	--	--	--	--
89	24	47	68	88	104	120	136	--	--	--	--	--
90	25	49	70	91	108	125	141	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **5.1** inches

Applicable Counties: **Brown, Dickinson, Doniphan, Geary, Kingman, Nemaha, Pottawatomie, Riley**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	13	22	30	38	44	49	56	61	66	71	76	80
71	13	23	31	40	46	51	58	64	69	74	79	85
72	13	24	32	42	49	54	61	68	73	78	84	90
73	14	25	34	44	51	57	65	72	78	83	89	95
74	14	26	36	46	54	60	69	76	82	88	94	100
75	15	27	38	48	56	63	72	80	86	92	98	105
76	16	29	40	50	59	66	76	84	91	97	103	110
77	16	30	42	53	63	71	81	89	96	103	109	116
78	17	32	45	56	67	76	86	94	102	109	116	124
79	18	34	48	59	70	80	90	98	107	115	123	132
80	18	35	50	62	74	84	94	103	112	120	130	--
81	19	36	52	65	78	88	99	108	118	126	137	--
82	20	38	54	68	81	92	103	113	124	133	--	--
83	21	40	57	71	84	96	108	118	130	--	--	--
84	22	41	59	74	87	100	113	124	136	--	--	--
85	22	42	61	77	90	104	118	130	--	--	--	--
86	23	44	64	80	94	109	123	135	--	--	--	--
87	24	46	67	83	98	114	128	--	--	--	--	--
88	25	47	69	85	101	118	133	--	--	--	--	--
89	25	48	71	88	105	123	138	--	--	--	--	--
90	26	50	73	91	108	127	--	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **5.2** inches

Applicable Counties: **Atchison, Harper, Harvey, Jackson, Marion**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	12	23	31	39	46	51	56	63	68	72	76	81
71	13	24	33	41	48	53	59	66	72	76	81	86
72	14	25	34	43	50	56	63	70	76	81	86	91
73	14	26	36	45	52	59	67	74	80	86	92	97
74	15	28	38	47	55	63	71	78	85	91	97	103
75	15	29	40	19	58	66	74	82	90	96	102	109
76	16	30	42	52	61	70	78	86	95	101	108	115
77	17	32	45	55	65	74	83	91	100	107	114	121
78	18	33	47	58	69	79	88	96	106	113	121	128
79	19	34	49	60	72	82	92	101	112	119	127	--
80	20	36	51	63	76	86	97	107	118	125	--	--
81	20	37	53	66	80	90	102	112	123	130	--	--
82	21	39	56	70	84	95	107	117	129	--	--	--
83	22	41	59	73	88	99	112	122	135	--	--	--
84	22	43	62	76	91	103	117	127	--	--	--	--
85	23	44	64	79	94	107	121	132	--	--	--	--
86	24	46	67	82	97	111	125	137	--	--	--	--
87	25	47	69	85	101	115	130	--	--	--	--	--
88	26	48	71	88	105	120	136	--	--	--	--	--
89	27	50	74	91	109	125	--	--	--	--	--	--
90	28	52	77	94	112	129	--	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **5.3** inches

Applicable Counties: **Jefferson, Leavenworth, Morris, Sedgwick, Shawnee, Wabaunsee, Wyandotte**

Curve	Drainage Area in acres											
Number	5	10	15	20	25	30	35	40	45	50	55	60
70	13	24	33	41	47	52	58	64	70	75	80	86
71	14	25	34	44	50	55	62	68	74	79	84	90
72	14	26	36	46	52	58	66	72	78	84	89	95
73	15	27	37	48	54	61	69	76	82	89	94	100
74	16	28	39	50	57	64	73	81	87	94	99	105
75	16	29	41	52	60	68	77	85	91	98	104	110
76	17	30	43	54	63	72	82	90	96	104	110	116
77	17	31	45	57	67	76	87	95	102	110	117	123
78	18	33	48	60	71	81	92	100	108	116	124	132
79	19	35	51	63	74	85	96	105	114	122	131	--
80	20	37	54	66	78	89	101	110	120	128	138	--
81	20	38	56	69	82	93	106	115	125	134	--	--
82	21	40	58	71	85	97	110	120	131	--	--	--
83	22	42	61	74	89	101	114	125	137	--	--	--
84	23	43	63	77	92	105	119	130	--	--	--	--
85	23	44	65	80	96	110	124	136	--	--	--	--
86	24	46	68	83	100	115	130	--	--	--	--	--
87	26	48	71	87	104	120	136	--	--	--	--	--
88	26	50	74	90	108	125	--	--	--	--	--	--
89	27	52	77	94	112	130	--	--	--	--	--	--
90	27	53	80	98	117	136	--	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **5.4** inches

Applicable Counties: **Butler, Chase, Douglas, Johnson, Lyon, Sumner**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	14	24	34	43	50	56	63	68	73	78	83	88
71	14	25	35	44	51	58	66	71	77	82	87	92
72	15	26	37	46	53	61	69	75	81	87	93	98
73	16	28	39	48	56	64	72	79	85	92	98	103
74	16	29	41	51	59	68	76	83	90	97	104	110
75	17	31	43	53	62	72	81	88	95	102	109	115
76	17	32	45	55	65	75	85	93	100	107	114	120
77	18	34	48	58	69	79	90	98	106	113	121	128
78	19	36	51	61	73	83	94	103	112	119	128	--
79	20	37	53	64	76	87	99	108	118	125	135	--
80	20	38	55	67	80	92	104	113	123	131	--	--
81	21	39	57	70	84	97	109	118	129	138	--	--
82	22	41	59	73	88	102	114	124	135	--	--	--
83	23	43	62	76	92	106	119	129	--	--	--	--
84	24	44	64	79	95	110	123	134	--	--	--	--
85	24	46	67	82	98	114	128	139	--	--	--	--
86	25	47	70	86	102	118	133	--	--	--	--	--
87	26	49	73	89	106	123	138	--	--	--	--	--
88	27	50	75	92	110	128	--	--	--	--	--	--
89	28	52	78	95	114	133	--	--	--	--	--	--
90	29	53	80	98	118	138	--	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **5.5** inches

Applicable Counties: **Cowley , Franklin, Greenwood, Miami, Osage**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	14	25	35	44	51	57	62	67	73	79	85	91
71	15	26	36	46	53	59	65	71	78	84	90	96
72	15	27	38	48	56	62	69	76	83	90	96	102
73	16	28	39	50	59	66	73	81	88	95	102	108
74	16	29	41	52	62	69	77	85	93	100	107	114
75	17	31	44	55	65	73	81	90	98	106	113	120
76	18	33	46	57	68	76	85	95	104	112	119	126
77	19	34	48	60	71	80	89	100	110	118	126	133
78	20	36	51	63	74	84	94	106	116	124	132	--
79	21	38	54	66	78	89	100	112	122	130	--	--
80	22	39	56	69	82	94	106	118	128	137	--	--
81	22	40	58	72	85	98	111	123	134	--	--	--
82	23	42	61	75	89	103	116	128	140	--	--	--
83	24	44	64	79	93	108	122	134	--	--	--	--
84	24	45	66	82	97	113	127	140	--	--	--	--
85	25	47	69	85	101	117	132	--	--	--	--	--
86	26	48	71	88	105	121	137	--	--	--	--	--
87	27	50	74	91	109	126	--	--	--	--	--	--
88	27	51	76	94	113	130	--	--	--	--	--	--
89	28	53	79	97	117	135	--	--	--	--	--	--
90	29	55	82	101	122	140	--	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **5.6** inches

Applicable Counties: **Anderson, Coffey, Linn, Woodson**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	15	26	35	44	52	59	65	72	78	84	89	94
71	15	27	37	47	55	62	68	75	82	88	94	99
72	16	28	39	49	58	65	72	80	87	93	99	104
73	17	29	41	51	61	69	76	84	92	98	104	110
74	17	30	43	53	63	72	80	88	96	103	110	116
75	18	32	46	56	66	75	83	92	101	108	115	122
76	18	33	48	59	70	79	87	96	106	113	120	127
77	19	35	50	62	74	84	92	101	111	119	126	--
78	21	37	53	66	78	89	98	107	117	126	133	--
79	21	39	56	69	81	93	104	113	123	133	--	--
80	22	41	59	72	85	97	109	119	129	--	--	--
81	22	42	61	75	89	102	114	125	135	--	--	--
82	24	44	63	78	92	106	119	130	--	--	--	--
83	24	45	65	80	95	110	124	135	--	--	--	--
84	25	46	67	83	99	114	129	--	--	--	--	--
85	25	47	69	86	103	119	134	--	--	--	--	--
86	26	49	72	90	107	124	139	--	--	--	--	--
87	27	51	75	94	112	129	--	--	--	--	--	--
88	28	53	78	97	116	134	--	--	--	--	--	--
89	29	55	81	100	120	139	--	--	--	--	--	--
90	30	57	84	104	124	143	--	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **5.7** inches

Applicable Counties: **Allen, Bourbon, Chautauqua, Elk, Wilson**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	17	27	36	45	53	60	67	74	80	86	92	97
71	18	28	38	48	56	64	71	78	85	91	97	103
72	18	29	40	51	60	68	76	83	90	96	103	109
73	18	30	42	53	63	71	79	87	94	101	108	114
74	18	31	44	56	66	74	82	91	99	106	113	120
75	19	33	47	59	69	78	86	96	104	111	119	126
76	19	34	49	61	72	81	89	100	109	116	124	131
77	20	36	52	64	75	85	94	105	114	122	130	--
78	21	38	55	67	79	90	100	111	121	129	--	--
79	22	39	57	70	82	94	105	117	128	136	--	--
80	22	40	59	73	86	99	111	123	135	--	--	--
81	23	42	62	76	90	104	117	129	--	--	--	--
82	24	44	65	79	94	108	122	135	--	--	--	--
83	25	46	68	82	98	113	127	--	--	--	--	--
84	26	47	70	85	102	117	132	--	--	--	--	--
85	27	49	73	88	106	122	138	--	--	--	--	--
86	27	50	75	91	110	127	--	--	--	--	--	--
87	28	52	78	95	115	132	--	--	--	--	--	--
88	29	54	80	98	119	137	--	--	--	--	--	--
89	30	56	83	101	123	--	--	--	--	--	--	--
90	31	58	86	105	128	--	--	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **5.8** inches

Applicable Counties: **Crawford, Montgomery, Neosho**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	16	28	39	48	56	63	70	76	81	87	93	99
71	16	29	40	50	58	66	73	80	86	93	99	105
72	17	30	42	52	61	69	77	84	91	99	105	111
73	18	32	44	55	64	72	80	88	96	105	111	118
74	18	33	46	57	67	76	84	93	102	111	117	124
75	19	34	48	60	70	79	88	98	107	116	123	130
76	20	35	50	62	73	82	92	103	113	122	129	136
77	20	36	52	65	77	87	97	109	119	129	135	--
78	22	38	55	68	80	91	102	115	126	136	--	--
79	23	40	58	71	84	96	108	121	132	--	--	--
80	23	41	60	74	88	100	113	126	138	--	--	--
81	24	43	63	78	93	105	119	132	--	--	--	--
82	25	45	66	82	97	110	125	138	--	--	--	--
83	26	47	69	85	101	115	131	--	--	--	--	--
84	26	49	72	88	105	120	136	--	--	--	--	--
85	27	51	75	92	109	125	--	--	--	--	--	--
86	27	53	78	95	113	130	--	--	--	--	--	--
87	29	55	81	98	117	135	--	--	--	--	--	--
88	30	57	84	101	121	140	--	--	--	--	--	--
89	30	58	86	104	125	--	--	--	--	--	--	--
90	31	60	89	107	129	--	--	--	--	--	--	--

Table KS2-17 (continued) Peak Rates of Discharge (in cfs) for Small Watersheds Using Type II Storm Distribution and Moderate Slopes (3-7%)

10-Year, 24-Hour Rainfall of **5.9** inches

Applicable Counties: **Cherokee, Labette**

Curve Number	Drainage Area in acres											
	5	10	15	20	25	30	35	40	45	50	55	60
70	17	29	39	50	57	64	72	78	85	92	98	103
71	17	30	41	52	59	67	76	82	90	97	103	108
72	18	31	43	54	62	71	80	87	95	102	108	114
73	19	33	46	57	65	75	84	92	100	108	114	121
74	19	34	48	59	68	79	88	97	105	113	120	128
75	20	36	50	61	71	83	92	101	110	119	126	134
76	20	37	52	64	75	87	97	106	115	125	133	--
77	21	39	55	68	79	97	102	112	121	132	--	--
78	22	41	58	71	83	96	107	118	127	--	--	--
79	23	42	60	74	87	100	112	125	134	--	--	--
80	24	44	63	77	91	105	118	130	--	--	--	--
81	24	45	66	80	95	110	124	135	--	--	--	--
82	25	46	69	83	99	114	129	--	--	--	--	--
83	26	48	72	86	104	119	135	--	--	--	--	--
84	27	50	75	90	109	124	140	--	--	--	--	--
85	27	52	78	93	113	129	--	--	--	--	--	--
86	28	54	81	97	117	134	--	--	--	--	--	--
87	30	56	83	100	121	138	--	--	--	--	--	--
88	31	58	86	103	125	--	--	--	--	--	--	--
89	31	59	89	106	129	--	--	--	--	--	--	--
90	31	61	91	109	133	--	--	--	--	--	--	--

KS650.284 Procedure for estimating conservation practice effects on water conservation

(a) General

This procedure can be used to estimate the effects of conservation practices on the conservation of water available for plant growth. The portion involving terraces is based on the annual mean runoff using runoff curve numbers. It does not measure the effectiveness of terraces in controlling runoff from intense storms.

The portion involving crop residue is based upon experimental data at four locations in the Great Plains area. The mulch is most effective in reducing evaporation but also controls runoff to some extent.

(b) Effect of terraces on runoff

(1) Determine the weighted Antecedent Runoff Condition (ARC) II runoff curve number for conditions existing prior to applying terraces and after terraces are installed. Use data in Table KS2-1 and procedures on Form KS-ENG-137 and KS-ENG-137a, Hydrologic Summary Sheet, or Form KS-ENG-137b.

(2) Determine the normal annual precipitation from Table KS2-6.

(3) Enter the curve on Figure KS2-2, KS2-3, KS2-4, or KS2-5 with the normal annual precipitation and the weighted runoff curve number and read the mean annual runoff in inches before and after terracing.

(4) The difference in the mean annual runoff, before and after terracing, indicates the effectiveness of the terrace in conserving water.

(c) Effects of crop residue on evaporation and runoff

(1) Determine the average annual amount of crop residue in pounds per acre. This should be the pounds of residue on the soil surface at approximately the middle of the residue management operations. Start with the amount of residue immediately after harvest and estimate the residue losses from planned tillage operations through the first half of the tillage program. This should give the average amount of crop residue for the operator's residue management program. Table 2, Residue Reduction by Type of Activity, in Kansas Construction Specifications 344, Residue Management, Seasonal, can be used to make the annual residue estimates.

(2) Determine the normal annual precipitation from Table KS2-6.

(3) Enter the curve on Figure KS2-6 with the crop residue in pounds per acre and normal annual precipitation in inches and read the moisture level in inches.

(d) Effect of both terraces and crop residue on water conservation

The effect of both terraces and crop residue on water conservation is the sum of the individual effects:
KS650.284(b)(4) + KS650.284(c)(3)

(e) Example 1

Given: A 160-acre field in Scott County has 115 acres of soil classified as Keith silt loam and 45 acres of Randall clay. The crop rotation is wheat and summer fallow. Tillage operations result in a clean-tilled surface.

(1) Determine the mean annual runoff from the untreated field.

Compute the weighted runoff curve number:

Keith silt loam is hydrological soil group B (from page 2-60) with a runoff curve number of (84 + 74) / 2 = 79 (from Table KS2-1, for fallow and small grain with no terraces).

Randall clay is hydrological soil group D (from page 2-71) with a runoff curve number of (92 + 85) / 2 = 88.5 (from Table KS2-1, for fallow and small grain with no terraces).

Weighted runoff curve number = [(79 x 115 acres) + (88.5 x 45 acres)] / 160 acres = 81.7--use 82.

Determine the normal annual precipitation for Scott County from Table KS2-6. This amount is 20.2 inches.

Enter Figure KS2-5 with an annual precipitation of 20.2 inches and a runoff curve number of 82 and read the mean annual runoff as 1.2 inches.

(2) Determine how much runoff is conserved by adding storage-type terraces to the 160-acre field.

Compute the weighted runoff curve number.

The runoff curve number for the "B" soil is 60 (from Table KS2-1 for storage-type terraces).

The runoff curve number for the "D" soil is 70 (from Table KS2-1 for storage-type terraces).

Weighted runoff curve number = [(60 x 115 acres) + (70 x 45 acres)] / 160 acres = 62.8--use 63.

Enter Figure KS2-5 with an annual precipitation of 20.2 inches and runoff curve number of 63 and read the annual runoff as 0.09 inch.

The runoff saved by the terraces is the difference between the runoff from the treated and untreated field:
KS650.284(b)(3) - KS650.284(c)(2)
This value is 1.2 - 0.09 = 1.1 inches.

(3) Determine how much water is conserved by 2,500 pounds per acre of crop residue.

Enter the curve on Figure KS2-6 with 2,500 pounds per acre of crop residue and a normal annual precipitation of 20.2 inches. Read the moisture saved as 1.2 inches.

(4) Determine how much water is conserved by using storage terraces and 2,500 pounds of crop residue as compared to an untreated field.

The water conservation is the total of water saved by the terraces and water saved by the residue:
KS650.284(c)(3) + KS650.284(d)
This value is 1.1 + 1.2 = 2.3 inches.

The acre-feet of water conserved = (2.3 inches) x (1 foot/12 inches) x (160 acres) = 31 acre-feet.

(f) Example 2

Given: The field in Example 1 is tilled by methods that leave 750 pounds per acre of crop residue on the surface.

Determine how much water is saved by increasing the crop residue to 3,000 pounds per acre.

Enter the curve on Figure KS2-6 with 750 pounds per acre of crop residue and a normal annual precipitation of 20.2 inches. Read the moisture saved as 0.4 inch.

Enter the curve on Figure KS2-6 with 3,000 pounds per acre of crop residue and a normal annual precipitation of 20.2 inches. Read the moisture saved as 1.4 inches.

The effect of increasing the crop residue on the surface from 750 to 3,000 pounds per acre is the difference in moisture saved between the two residue levels:
KS650.284(b)(2) - KS650.284(b)(1)
This value is 1.4 - 0.4 = 1.0 inch.

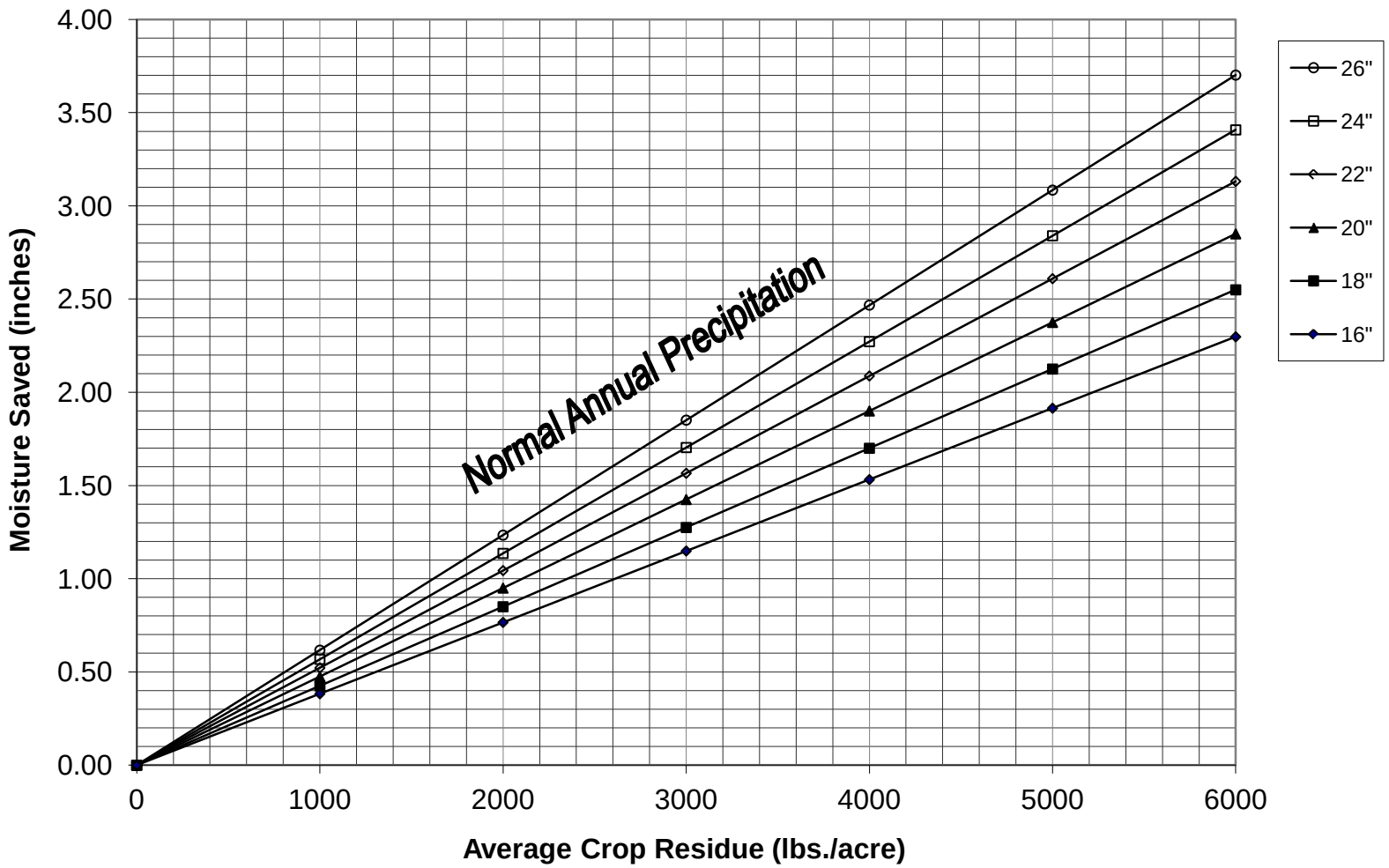



Figure KS2-6 Moisture Saved by Crop Residue (Includes Evaporation and Runoff)