

Appendix G
KDOT Rainfall Intensity Table For Leavenworth County

**RAINFALL INTENSITY
TABLES
FOR
COUNTIES IN KANSAS**

KANSAS DEPARTMENT OF TRANSPORTATION

Revised, September 1991

RAINFALL INTENSITY TABLES
FOR
COUNTIES IN KANSAS

Developed for the
Kansas Department of Transportation

by

Bruce M. McEnroe
John Patrick Jones

Department of Civil Engineering
University of Kansas
Lawrence, Kansas

These tables were developed from data published in Technical Memorandum NWS HYDRO-35 for the U.S. National Weather Service (Frederick et al. 1977) for durations of five (5) minutes through 60 minutes, and Technical Paper No. 40 (TP-40) of the U.S. Weather Bureau (Hershfield 1961) for longer durations as part of:

K-TRAN Research Program
Project KU-92-1

September, 1991

RAINFALL INTENSITY TABLE

LEAVENWORTH COUNTY
KANSAS

THIS TABLE CONTAINS AVERAGE RAINFALL INTENSITIES
IN INCHES PER HOUR.

DURATION, HR:MIN	RETURN PERIOD						
	1 YR	2 YR	5 YR	10 YR	25 YR	50 YR	100 YR
0:05	4.63	5.40	6.48	7.26	8.41	9.31	10.20
0:06	4.40	5.15	6.20	6.96	8.08	8.95	9.81
0:07	4.22	4.94	5.97	6.71	7.79	8.64	9.48
0:08	4.05	4.76	5.76	6.48	7.53	8.35	9.17
0:09	3.91	4.59	5.56	6.26	7.28	8.08	8.87
0:10	3.78	4.44	5.38	6.05	7.04	7.81	8.58
0:11	3.66	4.30	5.20	5.86	6.81	7.56	8.30
0:12	3.54	4.16	5.04	5.67	6.60	7.32	8.04
0:13	3.44	4.04	4.89	5.50	6.39	7.09	7.79
0:14	3.33	3.92	4.74	5.34	6.21	6.89	7.57
0:15	3.23	3.80	4.61	5.19	6.04	6.70	7.36
0:16	3.13	3.69	4.48	5.05	5.88	6.53	7.17
0:17	3.04	3.59	4.36	4.92	5.74	6.37	7.00
0:18	2.95	3.49	4.25	4.80	5.60	6.22	6.85
0:19	2.86	3.39	4.15	4.69	5.48	6.09	6.70
0:20	2.78	3.30	4.05	4.58	5.36	5.96	6.56
0:21	2.70	3.22	3.96	4.48	5.25	5.84	6.43
0:22	2.63	3.14	3.87	4.39	5.14	5.73	6.31
0:23	2.56	3.06	3.78	4.30	5.04	5.62	6.19
0:24	2.49	2.99	3.70	4.21	4.94	5.51	6.08
0:25	2.43	2.92	3.63	4.13	4.85	5.42	5.97
0:26	2.37	2.85	3.56	4.05	4.76	5.32	5.87
0:27	2.31	2.79	3.49	3.98	4.68	5.23	5.77
0:28	2.26	2.73	3.42	3.90	4.60	5.14	5.68
0:29	2.21	2.67	3.36	3.84	4.52	5.06	5.59
0:30	2.16	2.62	3.29	3.77	4.45	4.98	5.50
0:31	2.11	2.57	3.24	3.70	4.37	4.90	5.41
0:32	2.07	2.52	3.18	3.64	4.30	4.82	5.33
0:33	2.03	2.47	3.13	3.58	4.24	4.74	5.25
0:34	1.99	2.43	3.07	3.53	4.17	4.67	5.17
0:35	1.95	2.38	3.02	3.47	4.11	4.60	5.10
0:36	1.91	2.34	2.97	3.42	4.05	4.53	5.02
0:37	1.88	2.30	2.93	3.36	3.99	4.47	4.95
0:38	1.85	2.26	2.88	3.31	3.93	4.40	4.88
0:39	1.81	2.23	2.84	3.26	3.87	4.34	4.81
0:40	1.78	2.19	2.80	3.22	3.82	4.28	4.74
0:41	1.75	2.16	2.75	3.17	3.76	4.22	4.68
0:42	1.73	2.12	2.71	3.13	3.71	4.16	4.62
0:43	1.70	2.09	2.68	3.08	3.66	4.11	4.55
0:44	1.67	2.06	2.64	3.04	3.61	4.05	4.49
0:45	1.65	2.03	2.60	3.00	3.56	4.00	4.43

RAINFALL INTENSITY TABLE

LEAVENWORTH COUNTY
KANSAS

THIS TABLE CONTAINS AVERAGE RAINFALL INTENSITIES
IN INCHES PER HOUR.

ITIES

YR	100	DURATION, HR:MIN	RETURN PERIOD						
			1 YR	2 YR	5 YR	10 YR	25 YR	50 YR	100 YR
.31	10.2	0:46	1.62	2.00	2.57	2.96	3.52	3.95	4.38
.95	9.8	0:47	1.60	1.97	2.53	2.92	3.47	3.90	4.32
.64	9.4	0:48	1.58	1.95	2.50	2.88	3.42	3.85	4.27
.35	9.0	0:49	1.56	1.92	2.47	2.84	3.38	3.80	4.21
.08	8.7	0:50	1.53	1.90	2.43	2.81	3.34	3.75	4.16
.81	8.3	0:51	1.51	1.87	2.40	2.77	3.30	3.70	4.11
.56	8.0	0:52	1.49	1.85	2.37	2.74	3.26	3.66	4.06
.32	7.7	0:53	1.48	1.82	2.34	2.70	3.22	3.61	4.01
.09	7.4	0:54	1.46	1.80	2.32	2.67	3.18	3.57	3.96
.89	7.0	0:55	1.44	1.78	2.29	2.64	3.14	3.53	3.91
.70	6.7	0:56	1.42	1.76	2.26	2.61	3.10	3.49	3.87
.53	6.4	0:57	1.41	1.74	2.23	2.58	3.07	3.44	3.82
.37	6.1	0:58	1.39	1.72	2.21	2.55	3.03	3.40	3.78
.27	5.8	0:59	1.37	1.70	2.18	2.52	3.00	3.36	3.73
.96	5.5	1:00	1.36	1.68	2.16	2.49	2.96	3.33	3.69
.84	5.2	1:05	1.29	1.59	2.04	2.36	2.80	3.14	3.49
.73	4.9	1:10	1.23	1.51	1.94	2.23	2.65	2.98	3.30
.62	4.6	1:15	1.17	1.44	1.85	2.13	2.52	2.83	3.14
.51	4.3	1:20	1.12	1.38	1.76	2.03	2.40	2.70	2.99
.42	4.0	1:25	1.08	1.32	1.68	1.94	2.30	2.58	2.85
.32	3.7	1:30	1.04	1.27	1.62	1.86	2.20	2.46	2.73
.23	3.4	1:35	1.00	1.22	1.55	1.78	2.11	2.36	2.62
.14	3.1	1:40	0.96	1.18	1.49	1.71	2.03	2.27	2.51
.05	2.8	1:45	0.93	1.14	1.44	1.65	1.95	2.19	2.42
.96	2.5	1:50	0.90	1.10	1.39	1.59	1.88	2.11	2.33
.87	2.2	1:55	0.87	1.06	1.34	1.54	1.82	2.04	2.25
.78	1.9	2:00	0.85	1.03	1.30	1.49	1.76	1.97	2.18
.69	1.6	2:05	0.82	1.00	1.26	1.44	1.71	1.91	2.11
.60	1.3	2:10	0.80	0.97	1.22	1.40	1.66	1.85	2.05
.51	1.0	2:15	0.77	0.94	1.19	1.36	1.61	1.80	1.99
.42	0.7	2:20	0.75	0.92	1.16	1.32	1.56	1.75	1.94
.33	0.4	2:25	0.73	0.89	1.12	1.29	1.52	1.71	1.89
.24	0.1	2:30	0.71	0.87	1.10	1.26	1.48	1.66	1.84
.15	9.8	2:35	0.69	0.85	1.07	1.22	1.45	1.62	1.79
.06	9.5	2:40	0.68	0.82	1.04	1.20	1.41	1.58	1.75
.97	9.2	2:45	0.66	0.80	1.02	1.17	1.38	1.55	1.71
.88	8.9	2:50	0.64	0.79	0.99	1.14	1.35	1.51	1.67
.79	8.6	2:55	0.63	0.77	0.97	1.12	1.32	1.48	1.64
.70	8.3	3:00	0.61	0.75	0.95	1.09	1.29	1.45	1.60

RAINFALL INTENSITY TABLE

LEAVENWORTH COUNTY
KANSAS

THIS TABLE CONTAINS AVERAGE RAINFALL INTENSITIES
IN INCHES PER HOUR.

DURATION, HR:MIN	RETURN PERIOD						
	1 YR	2 YR	5 YR	10 YR	25 YR	50 YR	100 YR
3:15	0.57	0.70	0.89	1.03	1.22	1.36	1.51
3:30	0.54	0.66	0.84	0.97	1.15	1.29	1.43
3:45	0.51	0.63	0.80	0.92	1.09	1.22	1.35
4:00	0.48	0.60	0.76	0.87	1.04	1.16	1.29
4:15	0.46	0.57	0.72	0.83	0.99	1.11	1.23
4:30	0.44	0.54	0.69	0.80	0.95	1.06	1.18
4:45	0.42	0.52	0.66	0.77	0.91	1.02	1.13
5:00	0.40	0.50	0.64	0.74	0.87	0.98	1.09
5:15	0.39	0.48	0.61	0.71	0.84	0.95	1.05
5:30	0.37	0.46	0.59	0.68	0.81	0.91	1.01
5:45	0.36	0.45	0.57	0.66	0.79	0.88	0.98
6:00	0.35	0.43	0.56	0.64	0.76	0.86	0.95
6:30	0.33	0.41	0.52	0.60	0.72	0.81	0.90
7:00	0.31	0.38	0.49	0.57	0.68	0.76	0.85
7:30	0.29	0.36	0.47	0.54	0.65	0.73	0.81
8:00	0.28	0.35	0.45	0.52	0.62	0.69	0.77
8:30	0.27	0.33	0.43	0.49	0.59	0.66	0.74
9:00	0.26	0.32	0.41	0.47	0.57	0.64	0.71
9:30	0.25	0.31	0.39	0.46	0.54	0.61	0.68
10:00	0.24	0.29	0.38	0.44	0.52	0.59	0.65
10:30	0.23	0.28	0.37	0.42	0.50	0.57	0.63
11:00	0.22	0.27	0.35	0.41	0.49	0.55	0.61
11:30	0.21	0.26	0.34	0.39	0.47	0.53	0.59
12:00	0.20	0.25	0.33	0.38	0.45	0.51	0.57
13:00	0.19	0.24	0.31	0.36	0.43	0.48	0.53
14:00	0.18	0.23	0.29	0.34	0.40	0.45	0.50
15:00	0.17	0.21	0.28	0.32	0.38	0.43	0.47
16:00	0.16	0.20	0.26	0.30	0.36	0.41	0.45
17:00	0.15	0.19	0.25	0.29	0.34	0.39	0.43
18:00	0.15	0.18	0.24	0.27	0.33	0.37	0.41
19:00	0.14	0.18	0.23	0.26	0.31	0.35	0.39
20:00	0.13	0.17	0.22	0.25	0.30	0.34	0.37
21:00	0.13	0.16	0.21	0.24	0.29	0.32	0.36
22:00	0.12	0.15	0.20	0.23	0.28	0.31	0.34
23:00	0.12	0.15	0.19	0.22	0.27	0.30	0.33
24:00	0.12	0.14	0.19	0.21	0.26	0.29	0.32