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Rainfall intensities at seven Canadian cities

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ANALYZED

RAINFALL INTENSITIES AT SEVEN CANADIAN CITIES

by D.W. Boyd

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These data were prepared for the Division of Building Research from records on file at the offices of the Climatological Services, Meteorological Division, Department of Transport, Toronto.

BUILDING RESEARCH
JUN 16 1955
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RAINFALL INTENSITIES AT SEVEN CANADIAN CITIES

The amount of rain that falls each day is measured at about fourteen hundred stations in Canada, but very few of these stations have recording rain gauges from which rainfall amounts for shorter periods of time can be obtained. Only five stations have these data for eight years or more in the period from 1941 to 1954.

The table gives the maximum amounts of rain, in inches, which occurred in periods of 5, 10, 15, 20 and 30 minutes in each month. The first line for each station indicates the number of years of records which were available for each month. Standard rain gauges are left out all year round but the recording gauges are frequently covered during the winter. Hence there are fewer winter reports. "T" indicates less than .01 inch.

The maximum rainfalls reported in fifteen years for each of these short periods are given in the last column. It is interesting that these maximum intensities occur in June or July at the inland cities and in August at the coastal cities.

RAINFALL INTENSITIES

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
Vancouver													
Yrs. of Record Period	9	9	8	9	8	8	8	8	6	7	7	6	
5 Min.	.04	.03	.05	.09	.05	.10	.16	.18	.07	.08	.09	.06	.18
10 "	.06	.06	.09	.12	.08	.14	.18	.20	.10	.11	.15	.07	.20
15 "	.08	.09	.11	.15	.10	.14	.18	.22	.20	.23	.20	.09	.23
20 "	.10	.11	.14	.15	.12	.17	.21	.33	.20	.23	.25	.12	.33
30 "	.14	.15	.18	.17	.18	.23	.27	.40	.30	.26	.29	.17	.40
Edmonton													
Yrs. of Record Period	5	2	4	11	11	11	11	11	10	8	7	6	
5 Min.	T	T	.01	.07	.08	.30	.34	.30	.13	.03	.02	T	.34
10 "	T	T	.02	.09	.14	.45	.67	.53	.18	.05	.04	T	.67
15 "	T	T	.02	.11	.17	.55	.91	.75	.22	.07	.05	T	.91
20 "	.01	T	.02	.18	.21	.60	1.06	1.00	.25	.09	.07	T	1.06
30 "	.01	T	.03	.20	.28	.63	1.50	1.36	.31	.13	.08	T	1.50
Regina													
Yrs. of Record Period	0	0	0	1	3	4	2	2	2	2	0	0	
5 Min.				.03	.07	.25	.21	.19	.05	.03			.25
10 "				.05	.12	.44	.32	.33	.09	.05			.44
15 "				.06	.16	.52	.36	.45	.11	.07			.52
20 "				.07	.19	.60	.42	.52	.14	.09			.60
30 "				.08	.24	.72	.49	.57	.31	.13			.72
Toronto													
Yrs. of Record Period	11	10	13	14	15	15	15	15	14	15	15	11	
5 Min.	.09	.05	.18	.29	.54	.34	.56	.50	.37	.16	.18	.09	.56
10 "	.13	.06	.24	.32	.60	.62	.91	.58	.51	.20	.22	.11	.91
15 "	.15	.08	.27	.44	.66	.84	1.13	.72	.53	.28	.29	.12	1.13
20 "	.18	.11	.29	.52	.69	1.01	1.24	.81	.54	.32	.35	.14	1.24
30 "	.19	.15	.38	.62	.70	1.20	1.46	1.08	.60	.46	.38	.19	1.46
Dorval													
Years of Record Period	0	0	0	8	9	11	12	11	10	11	10	0	
5 Min.				.07	.60	.45	.31	.25	.33	.15	.05		.60
10 "				.09	.61	.63	.46	.50	.35	.20	.10		.63
15 "				.13	.63	.72	.47	.66	.37	.23	.13		.72
20 "				.15	.64	.87	.53	.71	.45	.26	.15		.87
30 "				.20	.67	1.22	.56	.73	.47	.31	.23		1.22
Halifax													
Yrs. of Record Period	7	5	7	7	8	8	9	9	8	8	7	7	
5 Min.	.14	.12	.10	.12	.21	.22	.32	.34	.21	.34	.20	.09	.34
10 "	.22	.20	.14	.14	.25	.29	.48	.50	.30	.50	.24	.16	.50
15 "	.26	.28	.16	.18	.26	.35	.62	.62	.42	.60	.30	.18	.62
20 "	.29	.36	.18	.22	.29	.43	.72	.78	.51	.64	.40	.26	.78
30 "	.36	.42	.28	.28	.31	.50	.83	1.06	.63	.70	.45	.29	1.06
Gander													
Yrs. of Record Period	0	0	0	0	0	1	3	4	3	2	1	1	
5 Min.						.18	.22	.64	.08	.10	.02	.05	.64
10 "						.20	.35	.90	.10	.20	.03	.08	.90
15 "						.22	.48	1.10	.16	.22	.05	.09	1.10
20 "						.22	.52	1.50	.24	.24	.06	.10	1.50