CLIMATOLOGICAL DATA FOR JUNE, 1913.

DISTRICT NO. 5, UPPER MISSISSIPPI VALLEY.

GEO. M. CHAPPEL, District Editor.

GENERAL SUMMARY.

June, 1913, in the upper Mississippi Valley was a month of marked temperature extremes. In some parts of Illinois both the highest and the lowest June temperatures in the last 25 years were experienced; and this fact is rendered more notable because these extremes occurred within 8 days of each other. Except in the Dakotas, a temperature above 100° and below 40° occurred in each of the States of the district. As a whole the month was warm, having been one of the half dozen warmest Junes in the last 40 years. There was a deficiency in rainfall in all parts of the district save over limited areas, the dearth of moisture having been felt especially in southern Illinois, where considerable injury to crops resulted. Several local storms of more or less severity occurred, but as a whole the month was freer than usual from storms of that class. Lightning killed 3 persons on the 6th near Freeport, Ill., and at Tiskilwa, in the same State, on the following day there was a damaging hailstorm, corn and small fruit suffering most. A rainstorm approaching the proportions of a cloud-burst occurred at Grinnell, Iowa, on the 6th; in three and one-half hours 4.75 inches of rain fell. The resulting damage was considerable. On the 16th a severe hailstorm was experienced at Luxemburg, Iowa, and a tornado cloud was noted at Colesburg, a near-by town, about the same time. The cloud, however, was high in the air, and no damage resulted. An exceptionally heavy rain fell at Quincy, Ill., on the 24th–25th, 5.04 inches having been measured. Owing to the hilly character of the city some damage was caused by washouts and cave-ins. The cool wave that prevailed during the closing days of the first decade was attended by frosts as far south as central Illinois, and much injury resulted to vegetation in Wisconsin.

The following table presents in condensed form the leading features of climatological interest for the various parts of the district:

Parts of States within District 5.	Temperature.				Precipitation.					
	Mean.	Departure.	Highest.	Lowest.	Average.	Departure.	Greatest total.	Least total.	Average snowfall.	Average number of days with precipitation.
North Dakota	65.6	+3.0	99	29	2.23	−1.33	6.95	0.81	.....	8
Minnesota	68.0	+3.3	103	26	3.12	−0.71	6.75	0.78	.....	7
South Dakota	68.4	+0.1	96	34	1.67	−1.88	2.45	0.89	.....	6
Wisconsin	67.6	+2.3	100	23	3.17	−0.98	8.31	1.00	.....	7
Iowa	71.5	+2.7	102	33	3.48	−0.86	8.95	0.79	.....	7
Missouri	76.0	+3.1	107	34	3.07	−1.31	5.45	0.79	.....	6
Indiana	70.7	+2.9	104	35	1.64	−1.88	2.47	0.79	.....	5
Illinois	75.3	+2.3	106	33	2.67	−1.09	6.18	0.89	.....	6

TEMPERATURE.

The mean temperature for the month was 69.8°, or 2.7° higher than the normal. It was one of the half dozen warmest Junes since 1870, and with the exception of June, 1911, the warmest since 1901. The departure of the mean temperature from the normal was unusually uniform over the district, and ranged between 2° and 3°. The average temperature was above 75° south of the latitude of Hannibal, Mo. Cairo, Ill., with a mean of 78.3°, was the warmest point. Over the cooler portions of the district, including part of North Dakota, and northern Minnesota and Wisconsin, the mean temperature did not exceed 65°; the lowest average was 61.3°, at Bowbells, N. Dak.

The notable features of the temperature conditions of the month were the unusually low readings during the closing days of the first decade, the high temperatures that followed within a week, and a second warm period near the close of the month. A high barometer area of great magnitude, with readings higher than ever previously recorded in June, covered the district for several days from about the 7th, and caused the coolest June weather on record in parts of eastern Iowa and in Illinois. The line of freezing temperature extended southward almost to those States, 33° being reported from 2 stations therein. Immediately following this cool period was a warm wave of unusual intensity for so early in the season, record-breaking high temperatures for June occurring at many stations in the southern districts. The warm wave that prevailed near the close of the month was almost as intense as its predecessor, in fact, the heat was more oppressive, owing to the higher humidity that obtained.

PRECIPITATION.

The average precipitation for the district was 2.99 inches, or 0.98 inch less than the normal. The month was comparatively dry over much of the district. As illustrating this feature it may be stated that of the 235 stations in the district that have normals only 49 reported an excess of precipitation. Also, in each of the State areas that comprise the district the average rainfall was deficient. Except in the small South Dakota and Indiana areas the precipitation reached 5 or more inches at some point in each of the States. The greatest amount reported was 8.95 inches, at Lacona, Iowa. As a rule the driest part of each State had a little less than an inch of rainfall. Warren, Minn., reported the least amount, 0.78 inch. Most of the precipitation of the month was timely, but the latter half of the month was considerably wetter than the first half. The driest period covered the 7th–12th, when a great area of high pressure dominated

the weather over the district. The average number of rainy days was 7.

RIVERS.

The Illinois River at La Salle was above flood stage from the 1st to 7th, and most of the bottom lands in that vicinity will not be farmed this year, owing to the late floods. There was no "June" rise this year in the rivers of the Dubuque, Iowa, district, the rivers falling almost continuously throughout the month. In the Davenport, Iowa, district the stages averaged 5 feet lower at the close of June than at the beginning of the month. While the river was lower than usual in that district at the close of the month, there was still sufficient water for navigation purposes.

MISCELLANEOUS.

The prevailing winds were southwesterly. In the Iowa area the southwesterly component was very marked. The highest velocity reported was 64 miles an hour from the northwest, at St. Paul, Minn., on the 17th. Sunshine was much above the normal in all parts of the district. The average number of clear days was 19, partly cloudy, 8; cloudy, 3.

ERRATA.

Report for May, 1913: Wisconsin; monthly mean temperature at Merrill published 54.4, should be 53.8. Osceola, date of highest temperature published 28, should be 27. Iowa, Columbus Junction, greatest daily range of temperature published 36, should be 34. Delaware, monthly mean temperature published 56, should be 57.6. Charles City, total precipitation published 5.55, should be 5.53. Keokuk, days with 0.01 inch or more precipitation published 15, should be 16. Whitten, greatest daily range of temperature published 33, should be 39.

TABLE 1.—*Climatological data for June, 1913. District No. 5, Upper Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
North Dakota.																			
Amenia	Cass	954	17	67.8	+ 3.7	96	28	35	7	36	3.96	+ 0.13	2.10	0	7	19	4	7	C. E. Wood.
Bottineau	Bottineau	1,638	21	65.5	+ 7.4	95	12	35	7	37	1.82	− .59	0.48	0	11	7	16	7	H. F. Steinmeir.
Bowbells	Burke	1,958	1	61.3	.....	95	23	33	3	42	3.05	.....	0.75	0	11	14	6	10	G. H. Phelps.
Cando	Towner	1,488	12	66.8[e]	+ 5.9	98[e]	23	30[e]	7	45[e]	2.38	− 1.58	1.00	0	8	.....	.....	.....	E. T. Judd.
Crosby	Divide	.....	6	62.4	.....	89	11	35	7	37	3.33	.....	1.30	0	10	21	4	5	H. C. Kaschau.
Devils Lake	Ramsey	1,482	8	65.3	+ 2.7	96	28	34	7	41	1.28	− 2.25	0.35	0	11	17	9	4	U. S. Weather Bureau.
Donnybrook	Ward	1,760	14	63.4	+ 1.9	93	23	32	7	40	1.02	− 1.80	0.31	0	8	.....	.....	.....	C. J. De Vore.
Dunseith	Rolette	.....	17	65.0	+ 3.4	93[b]	12	36[b]	7	34[b]	1.23	− 1.79	0.67	0	7	.....	.....	.....	C. E. Goodsell.
Eckman (near)	McHenry	.....	7	66.6[k]	.....	99[k]	22	42[k]	14†	50[k]	2.53	.....	0.75	0	6	8	16	6	Geo. Yenny.
Fessenden	Wells	1,610	1	65.3	.....	99	23	31	7	49	1.90	.....	0.45	0	10	16	11	3	G. T. Seymour.
Forman	Sargent	1,249	21	68.4	.....	95	28	36	7	36	3.36	.....	0.90	0	10	16	9	5	A. Maltby.
Grafton	Walsh	827	21	65.9	+ 2.6	98	28	29	8	42	1.62	− 1.73	0.83	0	8	23	3	4	A. R. T. Wylie.
Granville	McHenry	1,504	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Christianson.
Hannah	Cavalier	1,568	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. Moffatt.
Hansboro	Towner	.....	5	63.8	.....	93	23	30	8	40	0.82	.....	0.25	0	6	26	2	2	Geo. Dale.
Hillsboro	Traill	901	7	67.8	.....	95	28	35	7	40	2.50	.....	1.20	0	7	24	6	0	F. E. Mayall.
Lakota	Nelson	1,579	12	62.8	+ 0.7	94	28	29	7	37	2.35	− 1.10	1.10	0	9	12	17	1	C. R. Pettes.
Langdon	Cavalier	1,615	17	63.6	.....	93	12†	30	7	42	2.63	.....	0.51	0	9	14	0	16	J. Woolner.
Larimore	Grand Forks	1,134	18	66.5	+ 3.9	99	28	30	7	41	2.30	− 1.15	0.60	0	10	21	5	4	J. M. Freeman.
Lisbon	Ransom	1,091	9	67.5	.....	98	28	34	9	42	5.31	.....	1.30	0	12	17	6	7	W. S. Adams.
McKinney	Renville	1,640	19	65.3	+ 4.4	96[b]	12†	29[b]	7	50[b]	1.65	− 1.81	0.65	0	5	.....	.....	.....	N. P. Swenson.
McLeod	Ransom	.....	1	67.2	.....	94	28	34	7	40	2.85	.....	1.15	0	9	20	6	4	Martin Reinholt.
Manfred	Wells	1,605	10	65.0	+ 2.4	97	23	31	7	44	2.30	− 1.13	0.79	0	8	22	4	4	P. B. Anderson.
Mayville	Traill	975	17	67.2	+ 1.9	97	28	32	7	44	1.70	− 1.31	0.60	0	7	24	6	0	W. C. Gould.
Milnor	Sargent	1,097	1	.....	.....	.....	.....	.....	.....	.....	4.01	.....	1.18	0	9	10	15	5	Hj. Edman.
Minot	Ward	1,557	17	65.8	+ 2.5	96	23	35	8	37	1.14	− 2.10	0.50	0	9	19	6	5	Louise Bates.
Minto	Walsh	820	20	66.8	+ 2.9	96	28	29	7	41	0.81	− 2.53	0.45	0	5	21	7	2	S. S. Marsh.
Oriska	Barnes	1,270	8	67.9	.....	98	28	32	7	40	2.27	.....	0.78	0	12	4	26	0	nw. J. J. Taylor.
Park River	Walsh	998	9	66.6	.....	98	28	29	8	42	1.11	.....	0.40	0	7	24	4	2	nw. P. J. Prochaska.
Pembina	Pembina	789	39	64.0	+ 1.3	95	28	32	7	45	1.74	− 1.91	0.42	9	9	20	4	6	s. C. W. Shumaker.
Power	Richland	1,020	21	66.5	+ 2.2	95	28	33	7	38	6.95	+ 3.47	2.95	0	7	18	10	2	se. J. A. Power.
Towner	McHenry	.....	11	65.9	+ 3.3	94	23	32	7	43	1.17	− 2.70	0.30	0	8	9	19	2	e. B. Bagley.
University	Grand Forks	830	21	66.6	+ 3.2	97	28	35	7	40	1.21	− 2.32	0.25	0	11	22	4	4	s. U. S. Weather Bureau.
Wahpeton	Richland	962	19	67.0[c]	+ 1.4	96[c]	28	35[c]	7	39[c]	4.36	+ 0.45	1.45	0	7	.....	.....	.....	ne. Fred E. Smith.
Walhalla	Pembina	966	6	.....	.....	.....	.....	.....	.....	.....	1.82	.....	0.50	0	6	.....	.....	.....	Ivanhoe Lee.
Westhope	Bottineau	.....	7	65.6	.....	95	23	35	7	41	2.30	.....	0.86	0	9	17	9	4	nw. W. A. Meddaugh.
Willow City	....do	1,471	21	64.9	+ 3.1	93	12†	29	7	40	1.61	− 1.92	0.80	0	9	10	16	4	w. M. A. Ostby.
Minnesota.																			
Albert Lea	Freeborn	1,229	22	70.9	+ 4.1	96	15†	39	8	32	5.44	+ 1.40	2.80	0	5	16	12	2	sw. Edward Carey.
Alexandria	Douglas	1,391	19	68.0	+ 3.0	94	18†	40	9	44	2.46	− 1.22	1.12	0	9	16	7	7	se. P. O. Unumb.
Angus	Polk	870	11	66.2	+ 3.8	97	28	33	7	52	1.75	− 1.01	0.60	0	10	17	12	1	s. John Nadvornik.
Bagley	Clearwater	.....	7	.....	.....	.....	.....	.....	.....	.....	2.98	.....	1.37	0	4	.....	.....	.....	Jens Nelson.
Baudette	Beltrami	1,084	3	66.4	.....	95	29	35	8	39	3.22	.....	0.66	0	8	21	9	0	nw. J. A. Gjelhaug.
Beardsley	Bigstone	1,090	17	69.6	+ 5.2	100	28	32	9	45	2.06	− 1.55	0.97	0	10	6	23	1	se. G. L. Fitzgerald.
Bemidji	Beltrami	1,400	9	.....	.....	.....	.....	.....	.....	.....	2.40	.....	0.65	0	8	.....	.....	.....	C. W. Warfield.
Bird Island	Renville	1,039	23	68.7	+ 2.8	96	18	35	8†	35	5.86	+ 2.11	2.00	0	10	17	9	4	sw. Dr. F. L. Puffer.
Brainerd	Crow Wing	1,215	7	67.8	.....	95	28	35	8	43	3.51	.....	1.16	0	10	22	5	3	se. Theodore Miller.
Caledonia	Houston	1,179	20	69.8	+ 3.1	92	29	41	8	26	2.89	− 1.29	0.83	0	5	16	7	7	sw. W. D. Belden.
Campbell	Wilkin	984	7	67.2	.....	97	18	33	7	45	5.16	.....	1.62	0	13	20	1	9	se. J. T. Neisess.
Cass Lake	Cass	1,300	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. W. Burns.
Collegeville	Stearns	1,282	20	68.4	+ 2.0	94	15	39	7	41	3.34	− 0.09	0.80	0	11	20	6	4	s. F. Tembreull.
Crookston	Polk	863	24	67.3	+ 3.2	97	28	36	7	37	1.84	− 1.63	0.80	0	8	22	1	7	s. A. G. Andersen.
Detroit	Becker	1,364	17	64.2	+ 1.5	93	28	31	7	39	5.32	+ 1.32	2.20	0	10	16	14	0	se. G. W. Peoples.
Ely	St. Louis	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Iver Wisted.
Fairmont (near)	Martin	1,240	26	70.0	+ 3.7	95	17	39	9	36	5.23	+ 1.15	2.15	0	7	17	11	2	s. W. F. Wherland.
Faribault	Rice	1,003	15	70.8[c]	+ 5.2	96[c]	15	39[c]	9	37[d]	3.00	− 1.36	1.40	0	3	26	3	1	..... Dr. A. B. Moulton.
Farmington	Dakota	902	25	70.9	+ 4.6	100	15	36	8	42	4.90	+ 1.02	2.08	0	6	17	6	7	sw. E. D. Akin.
Fergus Falls	Otter Tail	1,210	21	69.2	+ 3.9	96	28	42	7	37	3.39	− 0.23	1.10	0	13	22	7	1	se. C. E. Kissinger.
Fort Ripley	Crow Wing	1,136	5	66.5	.....	95[a]	28	28[a]	8	45	3.58	− 0.56	1.75	0	7	18	0	12	s. J. J. Tucker.
Fosston	Polk	1,289	3	63.4	.....	89	29	34	7	34	4.02	.....	1.41	0	9	18	10	2	sw. O. N. Hem.
Glencoe	McLeod	1,000	16	69.9	+ 4.5	97	25	36	8	40	.....	.....	.....	0	.....	26	1	3	s. L. V. Koos.
Grand Meadow	Mower	1,338	25	69.6	+ 3.0	94	16†	35	9	32	2.95	+ 2.27	1.10	0	7	24	5	1	s. C. F. Greening.
Gull Lake Dam	Cass	1,215	2	67.4	.....	96	29	32	8	43	3.30	.....	1.28	0	12	16	14	0	s. U. S. Engineer Corps.
Hallock	Kittson	815	14	65.6	+ 2.8	96	28	31	7	46	1.94	− 1.36	0.70	0	8	15	6	9	s. D. A. Robertson.
Halstad	Norman	870	7	66.2	.....	96[a]	28	35	7	39[a]	2.39	.....	0.96	0	8	22	0	8	s. A. G. Holstrom.
Hinckley	Pine	1,050	8	65.6	.....	95[a]	27	33[a]	8†	45[a]	2.25	.....	0.70	0	8	13[a]	12[a]	4[a]	s. W. R. Newman.
International Falls	Koochiching	1,112	10	66.4	+ 4.5	98	29	32	8	41	3.17	− 0.86	1.04	0	7	18	10	2	s. C. M. Ardies.
Itasca State Park	Clearwater	1,500	2	64.6	.....	94	28	29	7	40	4.45	.....	2.08	0	9	18	12	0	sw. J. A. Stillwell.
Lake Crystal	Blue Earth	.....	5	69.7	.....	94[a]	15†	41[a]	9†	38[a]	2.33	.....	1.10	0	5	24	4	2	s.[b] W. P. Cobb.
Leech Lake Dam	Cass	1,301	25	65.5	+ 2.7	94	28	32	8	38	3.02	− 1.07	0.87	0	9	17	12	1	sw. U. S. Engineer Corps.
Little Falls	Morrison	.....	4	68.8	.....	95	27†	37	7	40	.....	.....	.....	0	.....	23	5	2	s. Wm. Batters.
Littlefork	Koochiching	.....	3	66.8	.....	96	29	38	20†	48	2.51	.....	0.50	0	9	16	10	4	..... O. C. Olson.
Long Prairie	Todd	1,299	21	67.4	+ 2.7	95	18†	30	8	43	2.17	− 1.90	0.58	0	6	18	12	0	se. A. L. Sheets.
Lynd	Lyon	1,175	20	68.8	+ 3.5	96	16	31	8	43	2.65	− 1.23	1.40	0	5	22	7	1	sw. J. W. Rouse.
Mankato	Blue Earth	758	15	.....	.....	.....	.....	.....	.....	.....	2.91	− 1.85	1.13	0	4	26	2	2	sw. C. G. Staley.
Milaca	Mille Lacs	1,072	14	67.0[g]	+ 4.4	94[g]	28	33[g]	8	49[g]	2.04	− 2.40	0.94	0	5	10[g]	12[g]	1[g]	sw.[g] C. H. Foss.
Milan	Chippewa	955	19	67.8	+ 2.6	96	28	37	8†	36	0.38	− 2.84	0.52	0	6	14	16	0	se. O. K. Opjorden.
Minneapolis	Hennepin	918	22	70.6	+ 2.9	95	28	43	7	38	2.21	− 1.80	0.89	0	7	15	12	3	s. U. S. Weather Bureau.
Montevideo	Chippewa	900	23	70.0	+ 3.6	96	18	39	9	39	1.96	− 1.92	1.09	0	6	17	11	2	se. L. G. Moyer.
Moorhead	Clay	935	32	67.9	+ 3.6	96	28	35	7	34	3.07	− 1.06	0.89	0	9	23	7	0	se. U. S. Weather Bureau.
Mora	Kanabec	.....	8	66.4	.....	96	28	34	4†	49	1.82	.....	0.43	0	10	13	14	3	w. Hans Peterson.
Morris	Stevens	1,170	28	67.8	+ 2.0	97	28	38	7	41	1.19	− 2.67	0.60	0	7	23	4	3	s. D. T. Wheaton.
New London	Kandiyohi	1,215	19	69.0	+ 3.5	93	29	38	9	26	1.62	− 2.10	0.98	0	6	18	10	2	se. Harold Swenson.
New Richland	Waseca	1,180	19	70.6	+ 3.6	95	15	38	9	30	5.09	+ 0.84	2.24	0	5	19	11	0	s. N. O. Tyrholm.
New Ulm	Brown	791	33	71.6	+ 2.5	98	18†	40	8†	38	4.47	− 0.04	1.85	0	7	12	7	11	s. A. L. Henle.
Osakis	Douglas	1,343	5	68.1	.....	93	12†	39	8	44	2.09	.....	0.48	0	9	18	8	4	s. J. B. Johnson.
Park Rapids	Hubbard	1,426	23	66.5	+ 3.4	95	28	37	4	38	3.17	− 0.89	0.90	0	13	16	6	8	s. Dr. P. A. Walling.
Pierz	Morrison	.....	.....	71.3[i]	.....	93[i]	28	.....	44[i]	44[i]	2.40	.....	1.30	0	3	16[i]	2[i]	3[i]	s.[i] E. H. Kerkhoff.
Pine River Dam	Crow Wing	1,251	26	66.2	+ 2.1	93	28	33	8†	44	4.43	− 0.13	1.00	0	9	19	11	0	s. U. S. Engineer Corps.
Pokegama Falls	Itasca	1,280	26	64.2	+ 2.5	92	28	30	8	40	3.48	− 0.81	1.35	0	10	20	8	2	s. Do.
Redlake	Beltrami	1,152	5	65.8	.....	94	28	40	3†	39	3.53	.....	1.30	0	6	16	14	0	s. A. C. Goddard.
Red Lake Falls	Red Lake	.....	.....	68.0	.....	100	24	34	7	42	.....	.....	.....	0	.....	28	1	1	sw. E. G. Buse.
Red Wing	Goodhue	680	17	.....	.....	.....	.....	.....	.....	.....	2.84	− 1.36	1.00	0	8	15	6	9	sw. Louis Back.

TABLE 1.—*Climatological data for June, 1913. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota—Contd.																				
Redwood Falls	Redwood	1,050	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hockett Bros.
Reeds Landing	Wabasha	681	17	.....	.....	.....	.....	.....	.....	.....	2.23	− 1.69	0.90	0	4	21	0	9	se.	John Deschineau.
Rochester	Olmstead	991	8	70.1	.....	99	15	33	9	43	6.75	.....	4.18	0	3	20	3	7	se.	Mary P. Leslie.
Roseau	Roseau	1,040	3	64.1	.....	94	28	26	7	46	1.58	.....	0.30	0	10	25	5	0	s.	M. J. Hegland.
St. Charles	Winona	850	22	69.7	+ 2.9	96	15	33	9	37	2.49	− 2.43	1.00	0	5	24	5	1	n.	S. W. Gleason.
St. Cloud	Sherburne	1,020	36	70.4	+ 4.8	96	18	37	8	48	3.05	− 1.02	1.43	0	11	21	6	3	sw.	State Reformatory.
St. Paul	Ramsey	940	42	70.0	+ 2.6	95	15	43	8	35	3.05	− 1.36	1.38	0	7	19	9	2	sw.	U. S. Weather Bureau.
St. Peter	Nicollet	825	18	70.2	+ 2.9	95	15	37	9	32	3.20	− 1.10	1.00	0	4	21	8	1	s.	State Hospital.
Sandy Lake Dam	Aitkin	1,234	20	64.2	+ 1.4	93	28	33	4	39	3.99	+ 0.43	1.37	0	8	10	19	1	s.	U. S. Engineer Corps.
State Sanatorium	Cass	.....	5	65.2	.....	96[d]	27	38	7†	34	4.72	.....	1.70	0	8	21	1	8	s.	Dr. G. W. Beach.
Stillwater	Washington	694	7	.....	.....	.....	.....	.....	.....	.....	2.35	.....	0.74	0	5	26	1	3	s.	Oscar Ostrom.
Taylors Falls	Chisago	759	6	69.8	.....	97	28†	40	4†	37	2.46	.....	1.60	0	7	20	9	1	nw.	Minneapolis General Electric Co.
Thief River Falls	Pennington	1,137	2	66.0	.....	96	28	32	7	37	0.88	.....	0.47	0	6	23	0	7	s.	E. W. Lown.
Tracy	Lyon	.....	.....	72.2	.....	98	18	39	8	39	2.28	.....	0.85	0	7	14	14	2	s.	A. H. Rowland.
Warren	Marshall	859	1	69.0	.....	103[a]	28	33[a]	7	45[a]	0.78	.....	0.50	0	4	19	10	1	.....	P. H. Holm.
Warroad	Roseau	1,069	3	64.3	.....	95	29	31	8	40	1.98	.....	0.42	0	8	22	7	1	s.	G. A. Sawyer.
Winnebago	Faribault	1,100	15	70.3	+ 3.0	96	17	39	8†	38	6.17	+ 1.55	3.23	0	7	17	10	3	se.	H. H. Haight.
Winnibigoshish	Itasca	1,300	25	65.3	+ 2.3	94	28	34	7	44	3.65	− 0.14	0.95	0	8	23	5	2	se.	U. S. Engineer Corps.
Winona	Winona	700	17	75.6	+ 7.1	100	29	40	9	31	3.49	− 0.02	1.11	0	6	15	12	3	s.	P. C. Myers.
Worthington	Nobles	1,593	18	67.2	+ 1.9	90	17	38	8	34	3.97	− 0.29	2.12	0	6	21	7	2	s.	M. P. Mann.
Zumbrota	Goodhue	917	17	68.8	+ 2.8	95	15	32	9	39	4.39	.....	2.25	0	4	17	12	1	sw.	W. C. Rowell.
South Dakota.																				
Milbank	Grant	1,148	22	70.0	+ 0.1	96	28	34	9	43	0.89	− 1.88	0.50	0	5	16	9	5	nw.	Miss Mary Patridge.
Sisseton	Roberts	1,202	7	66.8	.....	96	28	36	10	41	2.45	.....	0.90	0	7	21	5	4	sw.	George Gray.
Wisconsin.																				
Antigo	Langlade	1,489	19	66.2	+ 1.8	95	28	30	8	37	2.77	.....	0.79	0	5	25	1	4	sw.	Elton C. Larzelere.
Barron	Barron	1,115	22	66.9	+ 3.1	92	28†	31	8	40	2.95	− 1.46	0.81	0	6	19	11	0	s.	Wm. A. Kent.
Beloit	Rock	750	47	69.6	+ 1.5	99	29	34	8	36	1.85	− 2.11	0.51	0	9	20	9	1	s.	Smith Observatory.
Big St. Germain Dam	Vilas	1,590	3	64.9	.....	94	29	29	8†	42	2.60	.....	0.64	0	7	21	7	2	sw.	Fred Hessen.
Brodhead	Green	812	15	70.8	+ 2.8	100	28†	34	8	40	1.77	− 1.51	0.41	0	7	20	10	0	sw.	Hector D. Kirkpatrick.
Burnett	Dodge	880	9	66.8	.....	94	28†	33	8	34	4.71	.....	1.42	0	8	12	14	4	sw.	George W. Smith.
Cornell	Chippewa	993	1	66.6[b]	.....	92[b]	28†	34[b]	9	38[b]	2.37	.....	1.16	0	10	27	3	0	sw.	Brunet Falls Mfg. Co.
Cottage Grove	Dane	888	2	.....	.....	.....	.....	.....	.....	.....	3.69	.....	1.58	0	8	21	6	3	sw.	John E. Mellish.
Darlington	Lafayette	867	7	69.1	.....	98	29	30	10	46	1.55	.....	0.85	0	4	13	12	5	sw.	Sever P. Nelson.
Deerskin Dam	Forest	1,685	3	62.2	.....	90	27	25	8†	48	3.20	.....	0.71	0	7	20	9	1	w.	Wm. E. O'Neal.
Delavan	Walworth	920	22	68.4	+ 1.2	99	29	31	8	40	2.06	− 1.20	0.70	0	9	12[m]	2[m]	3[m]	sw.	Elwood S. Austin.
Dodgeville	Iowa	1,220	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. H. Berryman.
Downing	Dunn	983	11	66.6	+ 2.0	95	28	28	8†	48	2.84	− 1.54	1.40	0	5	20	2	8	se.	Eugene F. Stoddard.
Eau Claire	Eau Claire	800	22	69.5	+ 2.4	96	15	38	8	40	2.27	− 2.13	0.62	0	6	19	11	0	s.	Robert D. Whitford.
Glen Flora	Rusk	1,475	1	65.0	.....	92	28	26	8	42	2.28	.....	1.77	0	4	21	7	2	sw.	G. A. Durgin.
Grand Rapids	Wood	980	14	68.0	+ 1.5	97	29	32	8	40	2.90	− 0.01	0.62	0	12	17	5	8	sw.	Geo. T. Nixom.
Grantsburg	Burnett	1,095	22	68.8[b]	+ 3.6	99[b]	28	30[b]	8	41[b]	1.00	− 3.66	0.40	0	5	22[b]	3[b]	3[b]	s.	Chester Ahlstrom.
Hancock	Waushara	1,091	21	70.6	+ 3.7	100	28†	34	8	34	3.02	− 1.03	1.02	0	9	18	6	6	sw.	Frederick B. Hamilton.
Hatfield	Jackson	973	19	67.8	+ 1.2	96	15	29	10	48	3.29	− 0.83	1.37	0	7	10	15	5	sw.	Wis. Ry., Light & Power Co.
Hayward	Sawyer	1,107	22	70.5	+ 6.9	96	29	32	14	57	.....	.....	.....	0	.....	.....	.....	.....	.....	A. E. Johnson.
Hillsboro	Vernon	1,000	22	67.0	+ 1.8	95	28†	30	9	43	4.02	− 0.03	1.81	0	7	17	12	1	sw.	*Emil V. Wernick.*
Koepenick	Langlade	1,683	22	64.2	− 0.1	92	29	26	8	46	3.30	− 0.28	1.70	0	7	.....	.....	.....	sw.	Edward S. Koepenick.
La Crosse	La Crosse	714	41	71.2	+ 3.0	97	28	40	8	33	2.90	− 1.53	1.49	0	7	12	13	5	s.	U. S. Weather Bureau.
Lake Mills	Jefferson	897	22	69.0	+ 2.3	98	29	33	8	35	3.34	− 0.49	1.16	0	8	16	12	2	sw.	S. Newton Dexter Smith.
Lancaster	Grant	1,070	22	70.2[a]	+ 2.5	96[a]	28†	38[a]	8†	35[a]	2.92	− 0.90	1.29	0	7	13[c]	12[c]	2[c]	sw.	Edward Pollock.
Long Lake	Oneida	1,592	5	64.0	.....	96	29	23	8†	49	3.64	.....	1.51	0	10	22	6	2	sw.	Louis Frank.
Madison	Dane	974	44	69.0	+ 1.7	95	28	38	8	26	3.73	− 0.37	1.59	0	7	13	12	5	sw.	U. S. Weather Bureau.
Marshfield	Wood	1,276	0	66.5[a]	.....	93	28†	32[a]	8	40[a]	2.70	.....	1.12	0	8	11	13	6	sw.	Agr. Exper. Station.
Mather	Juneau	962	9	66.8	.....	94	28†	30	10	42	2.03	.....	0.59	0	8	18	4	8	w.	Frank Evans.
Mauston	.....do	882	17	68.8	+ 2.9	94	28†	33	10	37	3.28	− 0.80	1.85	0	5	24	5	1	sw.	Eugene L. Hitchcock.
Meadow Valley	.....do	974	22	68.4	+ 2.8	99	29	31	8	46	2.52	− 1.33	0.90	0	8	10	19	1	sw.	Charles H. Hohnson.
Medford	Taylor	1,420	24	67.6	+ 2.4	94	28	31	8	37	2.07	− 2.55	0.68	0	6	26	4	0	s.	Wm. Zeit.
Merrill	Lincoln	1,267	7	68.4	.....	95	28†	31	8	42	2.91	.....	1.66	0	4	16	3	11	sw.	O. F. Lueck.
Minocqua	Oneida	1,604	9	66.6	.....	93	28†	30	8	36	3.74	.....	0.97	0	8	15	15	0	sw.	Benjamin W. Applebee.
Mondovi	Buffalo	738	5	68.6	.....	98	15	35	8†	43	2.70	.....	0.85	0	8	20	8	2	sw.	Dr. Chas. Hebard.
Mount Horeb	Dane	1,226	9	68.6	.....	96	29	30	8	34	3.09	.....	1.12	0	6	21	6	3	sw.	W. M. Lewis.
Muscoda	Grant	666	4	70.4	.....	98	19†	36	9	40	5.44	.....	2.53	0	4	23	1	6	sw.	Wm. Hessler.
Neillsville	Clark	996	23	69.8	+ 3.6	100	28	34	8†	44	2.00	− 2.59	0.95	0	3	.....	.....	.....	sw.	Wm. Heaslett.
New Richmond	St. Croix	990	8	70.9	.....	96	28†	39	7	35	5.19	.....	2.10	0	6	15	14	1	sw.	Franc A. R. Van Meter.
Osceola	Polk	806	22	69.4	+ 0.1	96	28†	35	8†	38	1.36	− 3.06	0.80	0	4	14	16	0	s.	Charles W. Staples.
Park Falls	Price	1,492	22	63.4[f]	.....	91[f]	16	31[f]	8	39[f]	3.93	.....	1.91	0	11	21	3	6	s.	Flambeau Paper Co.
Portage	Columbia	809	24	71.0	+ 3.6	98	28†	37	8†	35	2.50	− 1.28	1.24	0	7	24	4	2	sw.	James H. Martin.
Port Edwards	Wood	969	3	68.1	.....	99	29	33	8	43	2.61	.....	0.45	0	10	21	7	2	sw.	Nekoosa-Edwards Pa. Co.
Prairie du Chien	Crawford	628	22	70.1	+ 0.6	99	29	37	10†	44	2.45	1.46	1.05	0	5	17	0	13	s.	James A. Gillis.
Prairie du Sac	Sauk	750	5	70.0	.....	98	29	35	8†	41	4.15	.....	1.86	0	9	24	4	2	sw.	Wis. River Power Co.
Prentice	Price	1,551	15	65.4	+ 3.2	93	28†	28	8	40	2.70	− 1.59	0.75	0	8	18	4	8	s.	Joseph G. Lash.
Rest Lake	Vilas	1,600	0	64.3	.....	94	28	29	8	40	4.13	.....	2.15	0	6	17	8	5	w.	A. F. Miller.
Rhinelander	Oneida	1,550	7	65.8	.....	93	28†	30	8	38	3.66	.....	1.40	0	7	25	2	3	sw.	Rhinelander Power Co.
Shullsburg	Lafayette	1,019	7	68.6	.....	95	28†	32	8	35	4.72	.....	2.54	0	7	18	6	6	sw.	Harrison B. Chamberlin.
Solon Springs	Douglas	1,083	7	63.6	.....	96	29	29	8	45	4.70	.....	2.50	0	6	17	6	7	sw.	John M. Sayles.
Spooner	Washburn	1,104	19	67.6	+ 3.1	96	29	31	8	39	2.04	− 1.43	1.00	0	7	23	6	1	.....	Horace A. Bresee.
Stanley	Chippewa	1,082	9	66.6	.....	92	28†	31	8†	35	3.30	.....	1.22	0	7	20	10	0	sw.	W. Humphrey Scott.
Stevens Point	Portage	1,113	20	69.1	+ 3.1	98	29	33	8†	42	8.31	+ 4.39	3.00	0	11	11	15	4	sw.	Postmaster.
Sugar Camp Dam	Oneida	1,582	3	.....	.....	.....	.....	.....	.....	.....	3.88	.....	1.03	0	7	22	8	0	sw.	Lyman Haskins.
Tomahawk	.....do	1,451	0	67.2	.....	94	28†	29	8	41	1.80	.....	0.60	0	4	24	4	2	s.	Victor Extrom.
Trout Lake	Vilas	1,400	1	64.6	.....	90	28†	30	8†	35	3.20	.....	0.85	0	6	14	14	2	sw.	F. B. Moody.
Twin Lakes Dam	.....do	1,625	3	.....	.....	.....	.....	.....	.....	.....	2.72	.....	0.96	0	5	24	6	0	sw.	Albert D. Hansen.
Valley Junction	Monroe	930	21	69.0	+ 3.4	98	28†	30	10	44	2.48	− 1.55	1.72	0	5	22	5	3	w.	J. J. Donahue.
Viroqua	Vernon	1,412	23	69.5	+ 3.3	95	16	36	8	30	3.72	− 0.36	1.56	0	6	16	9	5	sw.	Henry E. Rogers.
Vudesare	Vilas	1,700	5	63.6	.....	92	28†	26	9	49	3.81	.....	2.06	0	6	20	5	5	w.	Louis L. Thomas.
Watertown	Jefferson	824	22	68.0	+ 1.7	94	29	35	8	34	4.09	+ 0.46	1.28	0	8	22	8	0	sw.	Charles J. Salick.
Waukesha	Waukesha	864	22	68.4	+ 2.2	97	29	34	8†	38	5.21	+ 2.05	2.05	0	11	14	16	0	sw.	Carroll College.
Wausau	Marathon	1,212	18	66.2	+ 1.2	94	29	33	8	36	3.49	− 0.25	1.32	0	7	24	2	4	se.	A. A. Babcock, jr.
Weyerhaeuser	Rusk	1,297	11	64.4	+ 0.3	92	28†	28	8	42	3.32	.....	0.72	0	9	19	9	2	sw.	Miss Etta Stiles.
Whitehall	Trempealeau	675	22	67.7	+ 1.4	95	29†	33	9	40	2.80	− 0.99	1.60	0	5	.....	.....	.....	s.	Hans J. Haugh.

TABLE 1.—*Climatological data for June, 1913. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit. Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Precipitation, in inches. Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Iowa.																				
Albia	Monroe	959	15	72.6	+ 3.0	97	17	38	8†	35	4.48	− 0.38	2.53	0	6	21	6	3	e.	J. I. Chenoweth.
Algona	Kossuth	1,213	39	71.0	+ 2.5	97	28	40	8†	32	2.52	− 1.88	1.39	0	2	26	3	1	s.	Dr. F. T. Seeley.
Alta	Buena Vista	1,513	22	71.2	+ 3.6	95	15†	39	8	35	0.79	− 4.43	0.40	0	7	18	12	0	s.	David E. Hadden.
Amana	Iowa	721	37	72.0	+ 3.6	96	17†	38	9†	38	5.10	+ 0.69	2.80	0	7	18	10	2	s.	C. Schadt.
Ames	Story	926	37	71.8	+ 2.4	98	17	39	9	37	1.74	− 2.79	0.80	0	7	22	7	1	se.	Iowa State College.
Baxter	Jasper	998	13	70.5	+ 2.9	96	19	36	9	35	3.39	− 1.11	1.84	0	8	21	9	0	sw.	W. R. Vandike.
Belle Plaine	Benton	886	23	71.3	+ 2.2	95	17	39	9	33	5.05	+ 0.88	2.13	0	9	18	10	2	s.	O. C. Burrows.
Belmond	Wright	1,184	3	70.8	.....	96	15†	38	9	37	1.11	.....	0.31	0	7	10	18	2	s.	Geo. P. Hardwick.
Bloomfield	Davis	881	6	73.6	.....	99	18	39	8	38	4.68	.....	2.65	0	9	20	7	3	sw.	Albert Power.
Bonaparte	Van Buren	.....	22	72.2	+ 1.0	95	18†	38	8	35	3.96	− 0.72	1.79	0	9	.....	.....	.....	.....	B. R. Vale.
Boone	Boone	1,134	8	72.4	.....	100	17	38	9	38	1.60	.....	0.51	0	7	17	4	9	.....	C. F. Henning.
Britt	Hancock	1,236	16	70.0	+ 2.9	94	15†	38	9	33	2.12	− 1.96	0.77	0	7	23	5	2	s.	L. M. Goodman.
Burlington	Des Moines	544	17	73.2	+ 2.7	98	29	39	8	33	2.43	− 2.65	1.05	0	7	23	1	6	s.	Max. E. Poppe, jr.
Carroll	Carroll	1,265	23	70.7	+ 2.1	94	15†	39	10	32	2.28	− 2.39	0.85	0	5	22	5	3	sw.	Mrs. Jos. J. Wolfe.
Cedar Rapids	Linn	733	31	73.1	+ 2.8	100	29	41	8†	39	4.43	+ 0.56	1.74	0	6	17	4	9	s.	R. S. Toogood.
Charles City	Floyd	1,015	22	70.3	+ 1.5	96	15	39	9	35	2.21	− 2.89	1.30	0	6	9	12	9	sw.	U. S. Weather Bureau.
Clear Lake	Cerro Gordo	1,241	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Oscar Stevens.
Clinton	Clinton	593	46	73.2	+ 3.5	102	29	38	8	41	4.62	+ 0.19	1.95	0	8	20	6	4	sw.	A. E. Reid.
Columbus Junction	Louisa	595	12	72.9	+ 4.2	97	29	38	8	31	6.13	+ 1.25	2.15	0	7	21	6	3	sw.	J. B. Johnston.
Davenport	Scott	580	42	72.8	+ 1.9	97	29	39	8	28	6.09	+ 1.98	1.59	0	11	15	8	7	sw.	U. S. Weather Bureau.
Decorah	Winneshiek	875	20	.....	.....	.....	.....	35	9	.....	1.80	− 2.20	0.85	0	5	.....	.....	.....	.....	F. H. Baker.
Delaware	Delaware	1,083	22	69.8	+ 2.0	94	28†	37	8	32	2.41	− 1.77	0.53	0	9	17	13	0	sw.	Nettie E. Ball.
Des Moines	Polk	861	35	73.1	+ 2.7	96	16	44	8	29	3.52	− 1.44	2.02	0	8	13	11	6	sw.	U. S. Weather Bureau.
Dubuque	Dubuque	639	40	71.4	+ 1.8	96	28	40	8	31	1.92	− 2.63	0.70	0	8	12	14	4	s.	Do.
Earlham	Madison	.....	11	70.3	+ 5.1	94	15	35	10	36	2.78	− 1.75	0.87	0	9	19	6	5	sw.	George Phillips.
Elkader	Clayton	727	34	69.0	− 0.1	100	29	33	9	41	1.85	− 2.18	0.52	0	8	21	9	0	se.	Chas. Reinecke.
Elma	Howard	1,182	3	69.8	.....	96	28	34	8	36	1.86	.....	0.84	0	7	17	12	1	se.	H. A. Moore.
Estherville	Emmet	1,298	18	68.4	+ 1.6	95	15	37	9†	35	3.90	+ 0.55	1.90	0	6	.....	.....	.....	s.	A. O. Peterson.
Fairfield	Jefferson	780	29	72.6	+ 2.7	100	19	39	8	33	4.49	− 0.64	2.77	0	8	19	2	9	sw.	R. M. McKenzie.
Fayette	Fayette	1,003	23	69.2	+ 1.9	97	29	35	10	35	1.70	− 2.93	0.65	0	9	23	6	1	sw.	R. Z. Latimer.
Forest City	Winnebago	1,226	19	71.5	+ 4.3	100	28	40	8†	32	2.73	− 1.90	1.59	0	6	26	4	0	se.	J. A. Peters.
Fort Dodge	Webster	1,126	13	72.6	+ 6.0	99	28	40	9	35	1.78	− 2.03	0.90	0	6	20	3	7	sw.	J. F. Monk.
Fort Madison	Lee	516	64	.....	.....	.....	.....	.....	.....	.....	4.17	− 0.21	1.90	0	6	9	13	8	s.	Miss L. A. McCready.
Gilman	Marshall	1,052	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. L. Wylie.
Grand Meadow	Clayton	1,180	22	68.9	+ 2.5	92	28†	38	8†	28	2.45	− 2.35	0.80	0	7	10	19	1	sw.	F. L. Williams.
Grinnell	Poweshiek	1,023	21	72.0	+ 3.7	98	16	37	8	36	8.94	+ 4.36	5.25	0	7	20	8	2	sw.	D. W. Brainard.
Grundy Center	Grundy	976	22	72.2	+ 4.0	97	15†	36	10	37	2.24	− 3.06	0.74	0	7	20	10	0	s.	J. B. Calderwood.
Guthrie Center	Guthrie	1,077	18	72.1	+ 3.1	97	15†	37	10	39	3.24	− 1.17	1.11	0	7	22	6	2	sw.	D. G. Beardsley.
Hampton	Franklin	1,155	23	71.8	+ 4.0	97	17†	38	10	35	2.39	− 2.52	1.30	0	8	12	16	2	sw.	E. C. Grenelle.
Humboldt	Humboldt	1,095	25	70.9	+ 2.1	99	17	34	9	36	1.12	− 3.59	0.31	0	5	19	10	1	s.	J. P. Peterson.
Independence	Buchanan	921	49	70.4	+ 2.0	96	29	36	9	37	1.38	− 3.40	0.45	0	8	20	7	3	se.	R. E. Dudley.
Indianola	Warren	969	22	72.4	+ 2.7	94	15	41	8†	40	6.25	+ 2.07	2.17	0	10	16	8	6	sw.	Prof. J. L. Tilton.
Iowa City	Johnson	683	53	70.8	+ 1.5	96	17†	38	8	37	6.28	+ 1.70	1.80	0	11	18	9	3	sw.	Prof. A. G. Smith.
Iowa Falls	Hardin	1,170	20	69.7	+ 2.2	95	15†	37	9	37	1.66	− 2.86	0.64	0	8	22	3	5	sw.	J. B. Parmelee.
Jefferson	Greene	1,052	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ora M. Hall.
Keokuk	Lee	614	42	74.8	+ 2.3	98	18	40	8	32	4.15	− 0.20	1.98	0	8	20	7	3	sw.	U. S. Weather Bureau.
Keosauqua	Van Buren	644	21	72.4	+ 0.7	97	28†	39	8	41	4.07	− 0.48	2.75	0	8	.....	.....	.....	.....	J. H. Landes.
Knoxville	Marion	920	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Casey and Belville.
Lacona	Warren	.....	14	.....	.....	.....	.....	.....	.....	.....	8.95	+ 3.94	4.00	0	7	9	17	4	.....	J. B. Alter.
Lansing	Allamakee	632	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. R. Serene.
Le Claire	Scott	576	13	.....	.....	.....	.....	.....	.....	.....	4.54	+ 0.45	1.63	0	8	.....	.....	.....	.....	Miss M. T. Disney.
Marshalltown	Marshall	947	21	72.4	+ 3.7	99	17†	39	10	39	2.12	− 2.24	0.65	0	9	22	5	3	sw.	Jacob Bige.
Mason City	Cerro Gordo	1,132	16	71.0	+ 3.8	99	15	33	10	42	2.67	− 3.22	1.56	0	5	21	7	2	s.	Dr. Roy Desart.
Monroe	Jasper	922	1	71.2	.....	96	16†	39	8	32	4.97	.....	1.69	0	10	24	2	4	s.	J. A. Dibel.
Mount Pleasant	Henry	729	32	72.1	+ 0.7	95	28†	38	8	34	4.08	− 0.40	1.95	0	8	20	6	4	sw.	J. W. Edwards.
Muscatine	Muscatine	554	53	.....	.....	.....	.....	.....	.....	.....	7.31	+ 2.45	2.50	0	10	.....	.....	.....	.....	William Molis.
New Hampton	Chickasaw	1,169	16	70.9	+ 4.6	94	15†	40	8†	33	2.71	+ 1.54	1.24	0	4	23	5	2	s.	A. F. Kennan.
Nora Springs	Floyd	1,064	.....	71.3	.....	100	28	40	9†	36	3.08	.....	2.16	0	6	22	7	1	s.	Arthur Betts.
Northwood	Worth	1,122	17	69.6	+ 3.6	97	15	38	9†	36	4.46	− 0.42	1.45	0	8	19	8	3	sw.	Chas. H. Dwelle.
Olin	Jones	760	15	71.8	+ 3.6	96	28†	37	8†	42	3.75	+ 0.01	1.90	0	8	16	14	0	sw.	Dr. F. W. Port.
Osage	Mitchell	1,184	26	70.4	+ 4.3	95	17†	38	10	37	2.92	− 1.61	1.32	0	5	19	10	1	s.	Lester Coonradt.
Oskaloosa	Mahaska	843	37	71.6	+ 2.1	95	16†	39	8	37	5.87	+ 1.76	2.42	0	10	18	5	7	sw.	Joseph Boyd.
Ottumwa	Wapello	649	18	.....	.....	.....	.....	.....	.....	.....	0.90	− 3.18	0.40	0	4	20	3	7	w.	Chester Potter.
Pella	Marion	877	11	71.6	+ 0.3	97	15	40	8†	38	4.42	+ 0.64	1.65	0	7	28	0	2	s.	J. H. Ver Steeg.
Perry	Dallas	975	12	71.6	+ 1.3	97	15	38	10	39	1.67	− 3.02	0.71	0	7	21	9	0	se.	S. J. Brumfield.
Pocahontas	Pocahontas	1,248	9	70.0	.....	95	17†	38	10	35	0.99	.....	0.41	0	5	24	5	1	sw.	F. E. Hronek.
Rockwell City	Calhoun	.....	17	71.7	+ 3.2	96	18†	40	9†	36	2.70	− 1.56	1.10	0	4	.....	.....	.....	.....	C. M. Randall.
Sac City	Sac	1,278	37	72.3d	+ 4.1	94	28	.....	.....	.....	1.30	− 3.56	0.50	0	7	19	10	1	sw.	E. N. Bailey.
Saint Charles	Madison	1,070	12	71.6	+ 3.0	95	15†	40	8†	35	7.79	+ 3.45	3.00	0	9	20	9	1	s.	R. D. Minard.
Sigourney	Keokuk	877	17	72.0	+ 1.2	95	15†	38	8	35	6.53	+ 2.55	3.55	0	6	12	16	2	s.	J. T. Parker.
Stockport	Van Buren	745	11	71.8	.....	95	18†	38	8	37	4.02	− 2.34	2.43	0	7	20	4	6	s.	C. L. Beswick.
Storm Lake	Buena Vista	1,440	24	72.0	+ 5.0	96	15	41	8	33	1.15	− 3.64	0.47	0	6	24	5	1	s.	Chauncy Case.
Tipton	Cedar	807	14	73.8	+ 3.9	97	28†	42	8	29	5.48	+ 1.54	2.99	0	6	18	12	0	s.	F. K. Gregg.
Toledo	Tama	856	19	71.0	+ 1.8	96	28	36	9	37	2.90	− 0.63	1.50	0	8	25	5	0	sw.	I. F. Giger.
Washington	Washington	769	31	72.8	+ 1.1	96	16†	38	8	35	6.09	+ 2.58	2.57	0	7	16	11	3	sw.	Wm. A. Cook.
Waterloo	Black Hawk	862	30	71.0	+ 2.8	96	28	39	10	34	1.61	− 2.25	0.60	0	6	23	1	6	se.	Ralph B. Slippy.
Waukee	Dallas	1,039	10	70.5	+ 1.0	93	15†	38	9	31	3.04	− 1.71	2.03	0	9	26	4	0	sw.	Samuel F. Fort.
Waverly	Bremer	948	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Earl C. Moore.
Webster City	Hamilton	.....	8	71.9	.....	100	17†	38	8†	42	1.71	.....	0.42	0	7	11	18	1	se.	C. D. Carpenter.
West Bend	Palo Alto	1,197	20	71.4	+ 4.0	98	16	38	9†	40	1.76	− 2.46	1.50	0	4	21	2	7	s.	Phil Dorweiler.
Whitten	Hardin	1,036	16	70.8	+ 2.9	96	28	38	9	33	3.19	− 1.14	0.97	0	7	19	9	2	se.	Dr. F. P. Butler.
Winterset	Madison	1,129	22	72.4	+ 2.3	97	15	40	8†	32	3.57	− 2.26	1.22	0	8	19	4	7	s.	Dr. R. S. Cooper.
Missouri.																				
Gorin	Scotland	700	28	.....	.....	.....	.....	.....	.....	.....	4.37	+ 0.74	2.22	0	6	18	4	8	sw.	J. W. Pulliam.
Hannibal	Marion	534	22	75.2	+ 1.9	99	18	43	11	41	2.31	− 1.21	1.78	0	6	19	8	3	sw.	U. S. Weather Bureau.
Louisiana	Pike	500	36	73.4	+ 1.9	98	18†	34	11	49	5.00	+ 0.81	1.85	T.	8	22	7	1	se.	J. T. Farrel.
Macon	Macon	881	1	76.1	.....	100	18	43	8†	36	3.33	.....	1.36	0	7	18	9	3	sw.	John A. Cook.
Mexico	Audrain	797	36	77.5	+ 4.2	104	29	41	11	44	0.79	− 4.55	0.28	0	5	20	1	9	sw.	J. F. Llewellyn.
Palmyra	Marion	652	2	76.0	.....	102	18	40	11	38	5.45	.....	1.83	0	7	12	13	5	sw.	W. B. Markell.
Steffenville	Lewis	576	20	76.8	+ 4.6	107	18	40	9	45	2.45	− 1.44	1.45	0	4	17	10	3	s.	Frank Hall.
Sublett	Adair	1,000	33	73.5	+ 1.7	98	15†	40	8†	39	3.65	1.08	1.20	0	5	13	10	5	sw.	Lewis Spriggs.
Vandalia	Audrain	776	3	77.8	.....	104	29	43	9	37	1.26	.....	0.63	0	3	17	6	7	s.	C. B. Ellis.
Warrenton	Warren	865	24	77.6	+ 4.3	103	17	43	9†	37	2.08	− 2.45	0.98	0	5	16	7	7	s.	Prof. J. H. Frick.

TABLE 1.—*Climatological data for June, 1913. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Indiana.																				
Collegeville	Jasper	.....	14	73.2	+ 4.9	104	28†	37	9	45	2.47	− 1.18	0.89	0	5	16	8	6	sw.	Otto Miller.
Knox	Starke	716	8	70.5	.....	95	16†	38	9†	33	1.73	.....	1.09	0	4	23	5	2	sw.	W. R. R. Tatman.
Laporte	Laporte	810	17	69.3	+ 0.8	98	14†	35	9	47	1.24	− 2.06	0.65	0	5	22	7	1	sw.	Wm. M. Walton, jr.
Plymouth	Marshall	790	10	69.0	.....	94	29	36	9†	34	1.99	.....	0.75	0	7	22	6	2	sw.	J. W. Siders.
South Bend	St. Joseph	726	20	71.5	+ 2.9	97	29	40	9†	33	0.79	− 2.39	0.58	0	5	20	8	2	sw.	Henry H. Swaim.
Illinois.																				
Aledo	Mercer	738	13	72.3	+ 2.7	96	28†	38	8	34	5.61	+ 2.10	2.27	0	8	7	19	4	s.	William B. Frew.
Alexander	Morgan	670	20	75.0	+ 2.8	100	17†	39	9	42	3.49	− 0.11	1.29	0	8	15	11	4	sw.	George H. Hall.
Antioch	Lake	861	12	69.4	+ 2.9	100	29	35	10	43	2.07	− 0.92	0.52	0	7	12	14	4	sw.	J. C. James.
Astoria	Fulton	650	14	72.2	+ 2.9	95	16†	39	8	37	3.66	− 0.26	1.60	0	7	18	5	7	s.	Edward V. Bohl.
Aurora	Kane	678	34	69.9	+ 1.1	98	29	37	9	40	1.05	− 2.59	0.75	0	3	27	1	2	ne.	Alice M. Holden.
Beardstown	Cass	448	.....	.....	.....	.....	.....	.....	.....	.....	2.38	− 0.84	1.25	0	7	.....	.....	.....	.....	Mrs. L. M. Rice.
Bement	Piatt	700	6	74.0[d]	.....	101[c]	29	36[e]	9	46[e]	1.50	.....	0.64	0	5	24	2	4	s.	N. N. Stevenson.
Bloomington	McLean	840	22	73.6	+ 1.7	99	16†	37	9	41	4.55	+ 0.84	2.18	0	6	22	3	5	ne.	Prof. H. N. Pearce.
Cairo	Alexander	359	41	78.3	+ 3.1	102	18	52	10	31	1.07	− 3.24	0.49	0	6	13	11	6	s.	U. S. Weather Bureau.
Camp Point	Adams	732	0	.....	.....	.....	.....	.....	.....	.....	4.14	.....	1.30	0	8	12	14	4	sw.	Capt. D. M. Morris.
Carbondale	Jackson	412	8	76.8	+ 3.0	102	18†	40	11	42	2.62	− 1.51	1.22	0	8	20	8	2	sw.	State Normal University.
Carlinville	Macoupin	663	23	76.4	+ 3.3	106	19	41	10†	47	1.01	− 3.04	0.57	0	3	22	5	3	sw.	Dr. J. D. Conley.
Carlyle	Clinton	470	28	.....	.....	.....	.....	.....	.....	.....	3.27	− 1.24	1.60	0	4	.....	.....	.....	.....	Harvey O. Jones.
Chester	Randolph	380	21	.....	.....	.....	.....	.....	.....	.....	2.80	− 1.26	1.78	0	9	.....	.....	.....	.....	Charles S. Gollon.
Clinton	De Witt	727	3	74.2	.....	100	29	38	8	37	1.92	.....	0.95	0	6	21	4	5	.....	J. Frank Ziegler.
Cobden	Union	656	30	78.1	+ 3.3	103	29	46[a]	10	36	0.90	− 3.91	0.25	0	5	18	8	4	sw.	John Buck.
Dakota	Stephenson	929	8	70.1	.....	100	28†	34	8	36	2.48	.....	0.66	0	8	20	9	1	sw.	Elmer G. Smith.
Decatur	Macon	685	22	75.2	+ 3.2	102	17†	40	9	46	2.90	− 0.63	1.23	0	6	25	1	4	sw.	Prof. J. H. Coonradt.
Dixon	Lee	725	23	70.6	+ 1.0	98	16†	39	8	40	3.15	− 0.22	1.45	0	7	19	5	6	.....	H. U. Bardwell.
Du Quoin	Perry	459	25	77.1	+ 2.0	103[a]	29	42	11	42[a]	1.72	− 1.87	0.76	0	5	.....	.....	.....	sw.	G. H. Knetzger.
Dwight	Livingston	600	20	71.9	+ 2.0	99	16†	36	9	40	2.40	− 1.31	0.99	0	9	16	7	7	sw.	Edward O. Welch.
East St. Louis	St. Clair	481	2	.....	.....	.....	.....	.....	.....	.....	1.64	.....	0.89	0	4	.....	.....	.....	.....	W. Mc. K. Brown.
Edwardsville	Madison	554	14	.....	.....	.....	.....	.....	.....	.....	4.86	+ 0.17	2.82	0	5	.....	.....	.....	.....	W. H. Morgan.
Elgin	Kane	716	6	70.8	.....	98	29	36	9	38	1.53	.....	1.05	0	4	17	11	2	sw.	Elgin Observatory.
Ewing	Franklin	449	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	Ewing College.
Fairview	Fulton	733	2	.....	.....	.....	.....	.....	.....	.....	2.12	.....	0.71	0	8	.....	.....	.....	.....	Abram Wilson.
Galva	Henry	842	21	71.4	+ 1.2	98	29	36	8	38	6.18	+ 2.30	1.41	0	10	23	2	5	s.	Prof. F. V. White.
Grafton	Jersey	422	20	.....	.....	.....	.....	.....	.....	.....	3.04	− 0.73	1.74	0	4	.....	.....	.....	.....	R. C. Goodrich.
Greenville	Bond	635	35	77.1	+ 3.6	103	17†	42	10	41	5.37	+ 0.52	2.02	0	8	26	1	3	s.	H. W. Reidemann.
Griggsville	Pike	650	28	76.0[b]	+ 3.3	98[a]	18†	41[b]	8	31[b]	4.54	+ 0.42	1.88	0	9	19	8	3	s.	George F. Kneeland.
Havana	Mason	475	21	74.6	+ 0.9	101	29	41	8†	39	3.15	− 0.59	1.30	0	7	21	4	5	s.	L. L. Eutenener.
Henry	Marshall	500	25	72.0	+ 1.6	97	29	39	8	37	3.74	− 0.34	1.32	0	6	21	4	5	se.	Dr. F. A. Powell.
Hillsboro	Montgomery	675	19	76.8	+ 3.8	103	17	43	9	40	3.18	− 0.67	2.65	0	5	20	3	7	s.	Ira L. Woodward.
Joliet	Will	609	22	69.4	+ 0.3	100	29	36	9	43	1.74	− 1.49	1.00	0	5	23	4	3	sw.	F. M. Muhlig.
Kishwaukee	Winnebago	730	25	69.4	+ 0.9	98	28	34	8	38	2.77	− 1.30	1.04	0	8	18	10	2	sw.	George Stevens.
La Grange	Cook	657	21	70.2	+ 2.0	98	30	36	9	39	0.89	− 2.84	0.64	0	3	20	8	2	sw.	Prof. F. E. Sanford.
La Harpe	Hancock	698	34	71.8	+ 0.4	96	28†	38	8†	38	3.54	− 0.67	1.24	0	6	24	3	3	sw.	George E. Campbell.
Lanark	Carroll	883	24	69.1	+ 1.2	98	29	33	8	42	1.62	− 2.30	0.60	0	8	24	3	3	sw.	M. N. Wertz.
La Salle	La Salle	536	8	71.7	+ 1.6	99	29	39	8	37	3.32	− 0.67	1.57	0	8	15	6	9	sw.	U. S. Weather Bureau.
Lincoln	Logan	575	25	73.5	+ 1.9	100	18†	35	11	50	2.31	− 1.21	1.81	0	5	21	6	3	sw.	Prof. C. S. Oglevee.
Macomb	McDonough	700	9	.....	.....	.....	.....	.....	.....	.....	3.08	.....	1.23	0	7	.....	.....	.....	.....	State Normal University.
Manteno	Kankakee	711	2	.....	.....	.....	.....	.....	.....	.....	2.05	.....	0.96	0	4	23	3	4	sw.	J. F. Schmeltzer.
Martinton	Iroquois	633	26	72.8	+ 2.8	103	29	38	9†	45	1.87	− 2.65	0.72	0	5	22	5	3	sw.	Joseph H. Peltier.
Mascoutah	St. Clair	425	23	77.2	+ 3.0	100	19†	44	10	40	1.92	− 2.52	0.95	0	4	18	12	0	s.	Dr. Robert F. Lischer.
Minonk	Woodford	745	20	72.3	+ 1.8	100	28†	36	9	39	2.00	− 1.17	0.94	0	7	20	5	5	sw.	John C. Danforth.
Monmouth	Warren	784	21	72.7	+ 1.8	99	29	36	8	37	2.49	− 0.99	0.80	0	8	18	3	9	s.	Dr. J. C. Hutchison.
Morris	Grundy	518	2	70.9	.....	101	28	35	9	39	1.62	.....	0.87	0	6	22	6	2	se.	E. G. Cryder.
Morrison	Whiteside	685	19	70.9	+ 2.1	100	28†	37	8†	42	4.17	+ 0.55	1.92	0	8	23	1	6	sw.	S. A. Maxwell.
Morrisonville	Christian	621	14	74.4	+ 3.4	100	17	41	9†	42	1.97	− 1.60	0.95	0	5	18	8	4	sw.	J. D. Lowis.
Mount Vernon	Jefferson	511	19	76.0	+ 1.9	102	21	46	11†	40	4.57	+ 0.41	3.80	0	4	20	7	3	s.	Theodore P. Stelle.
Nashville	Washington	503	13	.....	.....	.....	.....	.....	.....	.....	1.86	− 1.93	1.64	.....	3	.....	.....	.....	.....	H. M. Potter.
Oregon	Ogle	702	4	70.6[a]	.....	100	28†	35[b]	8†	36[b]	2.16	.....	0.85	0	7	17	10	3	s.	Samuel Ray.
Ottawa	La Salle	500	27	72.8	+ 1.9	102	29	38	9	39	2.36	− 1.11	1.39	0	7	20	0	10	sw.	Miss Maude M. Harris.
Pana	Christian	692	27	75.2	+ 3.3	100	17†	42	9	35	1.94	− 2.07	0.70	0	6	20	8	2	.....	Dr. G. N. Gilbert.
Paw Paw	Lee	930	1	.....	.....	.....	.....	.....	.....	.....	2.04	.....	0.97	0	7	.....	.....	.....	.....	A. C. McBride.
Peoria	Peoria	609	57	73.2	+ 2.3	99	29	40	8	37	2.50	− 1.80	0.93	0	8	18	4	8	s.	U. S. Weather Bureau.
Pontiac	Livingston	546	11	73.5	+ 2.8	101	28†	38	8	42	2.30	+ 0.07	0.67	0	8	17	4	9	sw.	George Butterworth.
Quincy	Adams	481	7	76.7	.....	100	19†	40	8	34	5.86	.....	5.04	0	6	.....	.....	.....	.....	Fred J. Brinkoetter.
Riley	McHenry	956	54	69.4	+ 2.2	98	29	36	8	32	2.04	− 1.92	1.23	0	8	15	12	3	sw.	John West James.
Roberts	Ford	774	2	.....	.....	.....	.....	.....	.....	.....	2.49	.....	0.91	0	8	22	3	5	sw.	R. E. Bradbury.
Rockford	Winnebago	763	21	70.0	+ 0.8	100	29	36	8†	36	1.59	− 2.44	0.61	0	7	19	8	3	.....	Dr. John R. Porter.
Rushville	Schuyler	670	22	74.5	+ 2.3	96	17†	40	8	35	1.95	− 1.45	0.72	0	6	24	3	3	s.	H. F. Dyson.
St. Charles	Kane	700	18	70.5	+ 1.5	100	28	36	9	42	1.45	− 1.73	0.80	0	5	17	12	1	.....	Dr. William H. Bishop.
St. Peter	Fayette	500	11	76.6	+ 3.9	102	16†	43	9†	46	2.40	− 1.43	1.50	0	5	15	14	1	nw.	M. L. Hansford.
Sparta	Randolph	538	27	77.2	+ 3.3	101	17†	43	10	39	2.76	− 0.72	2.60	0	7	20	8	2	se.	James A. Caldwell.
Springfield	Sangamon	644	33	76.2	+ 3.9	100	29	41	8	34	1.84	− 2.47	1.60	0	5	15	9	6	sw.	U. S. Weather Bureau.
Streator	La Salle	626	20	72.4	+ 1.6	101	29	39	8†	42	1.87	− 1.36	0.87	0	10	24	1	5	sw.	Miss Lora Sweetser.
Sullivan	Moultrie	530	13	76.3	+ 4.7	103	17	42	8†	42	2.13	− 1.56	0.48	0	7	22	7	1	sw.	C. A. Corbin.
Sycamore	De Kalb	855	33	70.6	+ 2.5	102	29	35	8†	47	1.94	− 2.07	0.96	0	4	20	1	9	w.	George E. Valentine.
Tiskilwa	Bureau	798	29	.....	.....	.....	.....	.....	.....	.....	5.12	+ 1.52	2.35	0	7	.....	.....	.....	.....	F. I. Smucker.
Walnut	....do	717	22	73.1[b]	+ 1.9	100[b]	29	37[a]	9	37[c]	3.27	− 0.41	1.39	0	8	20	8	2	se.	O. C. Nussle.
Warsaw	Hancock	501	15	.....	.....	.....	.....	.....	.....	.....	4.92	+ 0.60	1.49	0	7	.....	.....	.....	.....	W. R. Kirkbride.
Waterloo	Monroe	719	2	.....	.....	.....	.....	.....	.....	.....	2.70	.....	1.22	0	3	.....	.....	.....	.....	Prof. J. E. Raibourn.
White Hall	Green	573	5	76.0	.....	103	29	42	9†	45	1.08	− 2.34	0.78	0	3	25	1	4	sw.	Frank Dillman.
Windsor	Shelby	681	14	75.8	+ 4.3	104	17	37	11	50	2.18	− 1.45	0.65	0	7	11	13	6	sw.	Herbert Rose.
Winnebago	Winnebago	900	26	70.2	+ 1.8	100	28†	34	8	38	3.20	− 0.74	0.95	0	7	23	5	2	sw.	Frank Osborn.
Yorkville	Kendall	584	26	70.2	+ 1.7	101	29	34	9	44	1.31	− 2.53	0.99	0	5	22	4	4	w.	Herman A. Grimwood.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for June, 1913. District No. 5, Upper Mississippi Valley.*

Stations.	Watershed.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
North Dakota.																																	
Amenia	Red	.05	T.		T.	.40									T.				.42	.44						.26		2.10			.29	3.96
Bottineau	Mouse		.24			.21									.25	T.		.05		.15				.48	.04	T.	.02	.34	.03	T.	.01	1.82
Bowbells	do		.10			.65										.27		.07		.20					.03	.22		.10	.75	.61	.05	3.05
Cando	Sheyenne				.02							.04	.02			.07		.63	.10						.50		1.00					2.38
Crosby	Mouse		.12										.31		.05			1.30	.10		T.			.04			T.	.44	.49	.31	.17	3.33
Devils Lake	Sheyenne	T.	.26			.01								T.		.02		.35	T.	.14			.01		.25	.01	.03	.04		.16		1.28
Donnybrook	Mouse														.13			.10	.14					.31	.07		.13		.08	.06		1.02
Dunseith	do		.19												.03				.05				.67				.10	.18	.01			1.23
Eckman (near)	do		.10												T.			.50	.75					.75			.34		.09			2.53
Fessenden	James	.35	T.		.02										.09	.14	.01	.34	.33	.09				T.		.45		.08			T.	1.90
Forman	Sheyenne		.06		.12	.25									T.		.28	.24		.25						.66		.90		.45	.15	3.36
Grafton	Red	.11		.03		.03										T.			.08	.05				.20				.29			.83	1.62
Granville	Mouse																															
Hannah	Pembina																															
Hansboro	Red	.25																	.10				.04			.05	.22	.16				0.82
Hillsboro	do		.06		T.	1.20											T.	.28		.55						.12		.22		.07		2.50
Lakota	Sheyenne		.20			.18												.25	.05	.27					T.	1.10	.06	.12		.12		2.35
Langdon	Pembina	.30	.26																.14	.31				.51		.51	.11	.42	T.		.07	2.63
Larimore	Red	.30	.07			.13	.03												.40	.60						.15	.04	.06			.52	2.30
Lisbon	Sheyenne	1.12	.25		.13	.21									.07	.05			.54	.16	.03					1.30		1.15			.30	5.31
McKinney	Mouse					.65													.10					.26			T.		.40	.24		1.65
McLeod	Sheyenne	T.	.10		.10	.23								T.	T.		.14	.42		.10					1.15	.25				.36		2.85
Manfred	do		.09											.79	.02	.20		.80		.18						.15		.07				2.30
Mayville	Red		.09			.60							.05					.43		.10						.18		.25				1.70
Milnor	do				.22	.34									T.	T.	.09	.28		.06					1.18	.48		.89		.47		4.01
Minot	Mouse		.06												.07	.18		.03	.05	.14					.08			.50	.03	T.		1.14
Minto	Red					.12												.08	.08						.08					.45		0.81
Oriska	Sheyenne		.07	.06		.78								.05	T.	.02	.15	.33	.02	.06					T.	.12		.53		.08	T.	2.27
Park River	Red					.07										T.		.10	.27	T.					.40	.05		.07		.15		1.11
Pembina	do	.42	.10			T.													T.	.36				.02	.03	.32	.01	.08	T.		.40	1.74
Power	Sheyenne	.13		.10	.40													.62		T.					2.95		2.10			.65		6.95
Towner	Mouse				.08											.05		.23	.20	T.				.20	.03	T.	.08	.30	T.			1.17
University	Red		.04			.12									.14			.25		.24					.01	.01	.04	.10	.10	.16		1.21
Wahpeton	do				.35													.17	.31	.36						1.07		.65			1.45	4.36
Walhalla	Pembina																.50									.40	.05	.47	.20	.20		1.82
Westhope	Mouse		.22			.56								.07					.13	.08					.14			.10	.86		.14	2.30
Willow City	do		.14			.08								T.			T.	.07				.80	.05	.04	T.	.19	.22	.02				1.61
Minnesota.																																	
Albert Lea	Mississippi		.05		T.												T.				1.50				2.80	.35	.74					5.44
Alexandria ‖	do	.22			.03	T.									.05	.30		T.	.08	.08	.16					1.12	T.				.42	2.46
Angus	Red	.05	.02			.25									T.			.13	.14	.60							.03	.34	.04	.15		1.75
Bagley	do																.13		1.37									.55		.93		2.98
Baudette	Rainy	.53	.65			.65	.66											T.	.03							.17		.35		.18		3.22
Beardsley	Minnesota	.05	.12		.05	.10									T.	.04	.06			.57						.06	T.	.04			.97	2.06
Bemidji ‖	Mississippi						.62							.02			.04	.09		.62						.05		.65			.31	2.40
Bird Island	Minnesota	.05	.04		.04										.41			T.		1.22	.06				1.26	2.00	.53				.25	5.86
Brainerd	Mississippi					.40									.12			.21	.38	.11					1.16	.53	.32	.05			.23	3.51
Caledonia ‖	do					T.	.83	T.										T.			.55	.60				.83	.08					2.89
Campbell ‖	Red	.65			.08	.15	.06								T.	.04		.20	.20	.42	.08					1.62	.22	.12			1.32	5.16
Cass Lake	Mississippi																															
Collegeville	do	.08			.04	.80	.16								.21			.24		.70					.67		.12	.02			.30	3.34
Crookston ‖	Red	.25	.02	T.		.27	.03								T.				.25	.80	T.							.15			.07	1.84
Detroit ‖	do	.10	T.			.50	.10								T.	.10		.15	.25	.07	T.				.05			1.80		2.20	5.32
Ely	Rainy																															
Fairmont (near)	Minnesota		.16				.05														1.67	.10			2.15		1.05				.05	5.23
Faribault ‖	Mississippi																				.30					1.40	1.30					3.00
Farmington	do		T.		T.										.10			T.		1.58	.12				.67	.35	2.08					4.90
Fergus Falls	do		.04		.06	.13									.02		.10	.29		.32					.15	.20	.44	.54		.46	.64	3.39
Fort Ripley ‖	Mississippi	.06													T.	.50			.19	.55	T.					1.75	.06				.47	3.58
Fosston	Red	.11	.02			.04												.15		1.26								1.41	.25	.64	.14	4.02
Glencoe	Mississippi																															
Grand Meadow	do		T.			.03	.20							.05				T.	T.		1.04				.26	.27	1.10					2.95
Gull Lake Dam	do	.09		.04		.10									.18		.02	.41	T.	.17					.38	1.28	.37	.04			.22	3.30
Hallock	Red		.12			.12													.20					.70			.05	.40	.10	.25		1.94
Halstad ‖	do	.15	.07			.96													.18	.18						.12		.30			.43	2.39
Hinckley	St. Croix						.03											.30	.05	.50					.70	.20	.40			.07		2.25
International Falls	Rainy		.68			.46	1.04												.15	.04								.20			.60	3.17
Itasca State Park	Mississippi					1.05									.01		.11	.19		2.08						.10		.20		.14	.57	4.45
Lake Crystal	Minnesota		.02																		.80				1.10	.16	.25					2.33
Leech Lake Dam	Mississippi		.07			.51									.14			.16		.87						.36	.07	.49			.35	3.02
Little Falls	do																															
Littlefork	Rainy	.31	.45			.25	.50												.05	.20						.04		.30			.41	2.51
Long Prairie	Mississippi														.25			.35		.29					.58	.45				.25		2.17
Lynd	Minnesota	.19	.06											T.							.80				T.		1.40				.20	2.65
Mankato ‖	do																				1.10					.67	1.13				.01	2.91
Milaca	Mississippi					.45											.20							.94				.25		.20	2.04
Milan	Minnesota		.08	T.										T.	.05	T.				.52	.01				T.	T.	.07				.15	0.88
Minneapolis	Mississippi		T.		.03									T.	.37			.25	T.	.27					.40	.03	.86				T.	2.21
Montevideo ‖	Minnesota	.18		.11	T.										.04	T.					1.09					.22					.32	1.96
Moorhead	Red		.05		.02	.16									T.		.19	.31		.28					.89			.80	.01	.36		3.07
Mora	St. Croix			.04			.10								.39			.16		.25					.08	.18	.16	.43			.03	1.82
Morris	Minnesota				.10	T.									.10			.02		.60						.01	.03			.33		1.19
New London	Mississippi																	.02		.16					.98	.17	.22	T.			.07	1.62
New Richland	Minnesota		T.												.11			T.			1.39				2.24	.59	.76					5.09
New Ulm ‖	do	.05		.03											.08						.90					1.85	1.51				.05	4.47
Osakis	Mississippi	.13	T.	.05		T.									.48			.18		.36					.20	.37	.02				.30	2.09
Park Rapids ‖	do	.06		.03		.15	.06								.03	.15			.27	.90	.10					.07		.85	.02		.48	3.17
Pierz	do														.70						.40				1.30							2.40
Pine River Dam	do		T.			.84									.30			.38		.40					1.00	.30	.56	.45			.20	4.43
Pokegama Falls	do	.05	.02			1.35									.01		T.	.05		.99						.44	.14	.32			.11	3.48
Red Lake	Red		.60												.23		T.	T.			.70						1.30			.30	.40	3.53
Red Lake Falls	do																															
Red Wing ‖	Mississippi	.02		.02		T.										.10			.06		1.00	.10				.54	1.00					2.84
Redwood Falls	Minnesota																															
Reeds Landing ‖	Mississippi																				.40	.33				.90	.60					2.23
Rochester ‖	do																					1.70				4.18	.87					6.75
Roseau	Red		.30			.30	.02												.17	.07				.11		.06		.25	.18	.12		1.58

TABLE 2.—*Daily precipitation for June, 1913. District No. 5*—Continued.

Stations.	Watershed.	Day of month.																														Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Minnesota—Contd.																																
St. Charles	Mississippi						.04								T.						1.00				.10	.60		.75				2.05
St. Cloud	do	.01		.09	.03		.49								.04			.14		.56					1.43		.15	.02			.09	3.05
St. Paul	Mississippi		T.		.02									T.	.16			.75		.24	T.				.50	.01	1.37				T.	3.05
St. Peter	Minnesota																				.90				.30	1.00	1.00					3.20
Sandy Lake Dam	Mississippi		T.			1.37									.07			.15		.31						.42	.18	1.23			.26	3.99
State Sanatorium	do		T.	T.		1.05									.23			.10		1.70						.15	.15	.87			.47	4.72
Stillwater ‖	St. Croix															.74			.14		.13					.60	.74				T.	2.35
Taylors Falls	do					.15									.10			.14		.05					.32		1.60	.10			T.	2.46
Thief River Falls ‖	do																	.15		.47						.04		.10	.05	.07		0.88
Tracy	Minnesota	.10	T.												.10					.10	.85				.11		.71				.31	2.28
Warren	Red					.15												.08		.05									.50			0.78
Warroad	Rainy		.27			.32	.42													.24				.08		T.		.10	.21	.34		1.98
Winnebago ‖	Minnesota	.01		.04		T.									.01		T.				2.02	.16				3.23	.70				T.	6.17
Winnibigoshish	Mississippi	.35				.95									.35		T.	.02		.75						.30		.28		.65		3.65
Winona	do	T.					.19									.05					.75				1.11	.95	.44					3.49
Worthington ‖	Des Moines	.17		.20																	2.12					.09	1.27				.12	3.97
Zumbrota	Mississippi														T.						2.25				.20	.74	1.20					4.39
South Dakota.																																
Milbank	Minnesota	.20		.16											T.	.01			T.							T.	.02				.50	0.89
Sisseton	do	.60			.25														.10	.05	.28					.27					.90	2.45
Wisconsin.																																
Antigo ‖	Wisconsin							.35								.69					.79					.40	.54					2.77
Barron	Chippewa	T.			T.		.73								.81			.24		.25						.35	.57					2.95
Beloit	Rock					.51	.09	.08							.17			.14			.04	.27				.20					.35	1.85
Big St. Germain Dam	Wisconsin	.05		T.			.54								.45				T.	.64						.21	.61	.10		T.		2.60
Brodhead	Rock					.37	.25	.20								.41		.34			.10	.10									T.	1.77
Burnett	do					.20	.14								.15	.75	1.42		.08		1.37	T.				T.					.60	4.71
Cornell	Chippewa														.04	.05		.16	.04	.43	.04				.13	.24	1.16	.08				2.37
Cottage Grove	Rock					.34	.03								.02	.58	T.	1.58			.89				T.	.05					.20	3.69
Darlington	do						.20	T.								.85					T.	.10				T.					.40	1.55
Deerskin Dam	Wisconsin	.33					.71								.08					.70						.15	.48	.15				3.20
Delavan	Rock					.20	.25								.70	.04	.13				.12	.04				.12					.46	2.06
Dodgeville	do																															
Downing	Chippewa				T.										.04			.20			.10				T.	1.10	1.40					2.84
Eau Claire	do				T.										T.			.24		.16	.52				.30	.43	.62					2.27
Glen Flora	do														1.77			.17	.18	.16							T.					2.28
Grand Rapids ‖	Wisconsin	.05					.06	.24	T.							.36	.07		.10	.02	.62	.62				.42	.26	.08				2.90
Grantsburg	St. Croix														.10			.20		.40						.20		.10				1.00
Hancock	Wisconsin					.05	.65								.45		.05		.10		1.02					.10	.18				.42	3.02
Hatfield	Black						.27									.26			.03	.63	1.37				.57	.16						3.29
Hayward	St. Croix																															
Hillsboro	Wisconsin				T.	.05	.50								.15	.85					1.81				.40						.26	4.02
Koepenick	do					.30									.20	.10				.50	.20					.30	1.70					3.30
La Crosse	Mississippi				T.	.03	.60								T.	T.		T.		.07	1.42				.48	.13	.17					2.90
Lake Mills	Rock					.38	.10								T.	.62	.70			.28	1.16					.04					.06	3.34
Lancaster	Mississippi					.80	.11								.17	1.29					.17				.20						.18	2.92
Long Lake	Wisconsin	.06					.84								.02	.51			.05	1.51	.16					.05	.40	.04				3.64
Madison	Rock	T.				.31	.28								.75	T.	1.59				.72				T.	.01	T.				.07	3.73
Marshfield	Wisconsin	T.				T.	T.								.18	.09		.08	.05	.45	1.12					.29	.44					2.70
Mather ‖	do					T.	.07	.22								.25	.12		T.		.21	.47				.10	.59					2.03
Mauston	do						.42								.41	.15					1.85					.45						3.28
Meadow Valley	do				T.	.06	.25								.15	.61	.07				.90					.04	.44					2.52
Medford ‖	Black															.10			.68		.38				.16		.35	.40				2.07
Merrill ‖	Wisconsin																.08		T.	.10	1.66					.31	.76					2.91
Minocqua	do	.08		.03			.97								.62					.80						.33	.88	.03				3.74
Mondovi	Mississippi					.01												.10		.65	.85	.01			.47	.10	.51					2.70
Mount Horeb	Rock					.55	.36									1.12					.68					.08					.30	3.09
Muscoda ‖	Wisconsin					T.	.68	.30								2.53						1.93				T.	T.					5.44
Neillsville	Black															.35					.95					.70						2.00
New Richmond	St. Croix		T.		.03										2.10			.75	T.						.27	.74	1.30				T.	5.19
Osceola	St. Croix					T.									.38			.05	T.	T.					.13		.80				T.	1.36
Park Falls ‖	Chippewa			.08		.01	1.91									.63			.03	.08	.32					.53	.22	.02	.10		T.	3.93
Portage ‖	Wisconsin					T.	.15	.18								.74	.12	T.			.02	1.24			T.	.05						2.50
Port Edwards	do	T.				.10	.36								.22	.22			.10	.45	.45					.37	.28				.06	2.61
Prairie du Chien ‖	Mississippi						.28	.38								1.05						.42				.32						2.45
Prairie du Sac	Wisconsin					.23	.43	.02							.07	1.2	.03				1.86					.06					.24	4.15
Prentice ‖	Chippewa	.15					.37								T.	.54			.04	.05	.12					.75	.68					2.70
Rest Lake	do					T.	2.15								.56					.56						.25	.35	.26				4.13
Rhinelander	Wisconsin		.08				1.40								1.00					.18	.45					.22	.33					3.66
Shullsburg	Mississippi					.12	2.54									.35					.11	.31				.23					1.06	4.72
Solon Springs	St. Croix	T.				2.50	.15								.70			T.		.25							.20	.90				4.70
Spooner	do			T.			T.								.10			.19	1.00	.21						.07	.38	.09				2.04
Stanley	Chippewa														T.	.10		.29		.23	.82				.02	.62	1.22			T.		3.30
Stevens Point	Wisconsin					.05	.05								.20	.25	.23	1.20	1.20		3.00					1.50	.50				.13	8.31
Sugar Camp Dam	do	T.					.68								.80				1.03	.43	.40				.29		.25					3.88
Tomahawk	do						.50													.30						.40	.60					1.80
Trout Lake	do		T.			T.	.50								T.	.50		T.	T.	.65						.25	.85	.45				3.20
Twin Lakes Dam	do						.63								.96					.72							.25	.16				2.72
Valley Junction	do					.10	.06								.12						1.72						.48					2.48
Viroqua	Mi sissippi					.04	.86								.04						1.56					.90					.32	3.72
Vudesare	Wisconsin						2.06								.50		T.			.40	.20						.40	.25				3.81
Watertown ‖	Rock						.40									.52	.30	1.28	.30			1.22				.02	.05					4.09
Waukesha	Fox					.05	.38	.28							.43	.22	2.05		.15	.02	1.42					.07					.14	5.21
Wausau ‖	Wisconsin	.02														1.32			.25	.03	.64					.88	.24	.11				3.49
Weyerhaeuser	Chippewa	.07					.42								.72			.28	.72	.07	.30					.24	.50					3.32
Whitehall	Mississippi						.10									T.		.10			1.60				.50		.50					2.80
Iowa.																																
Albia ‖	Des Moines			.05		T.		.90	.05													.60	.35			2.53						4.48
Algona	do		T.				1.13																		1.39	T.	T.					2.52
Alta ‖	Raccoon			.09			.06								.40							.04				.03	.01				.16	0.79
Amana	Iowa	.30				T.	.43	.10								.14					T.	2.80			.61	.72					T.	5.10
Ames	Skunk	.25		.08		.01	.02	.10													.80				.48							1.74
Baxter	do	.33		.08		.02	.04														.26	.82		T.	.02	1.82					T.	3.39
Belle Plaine	Iowa	.90				.08	1.15	.14								T.					.02	.58			.45	1.68					.05	5.05
Belmond	do	.05	.02		.02										.16					T.	.28				.27	.31					T.	1.11
Bloomfield	Mississippi	.01		1.00		.11	.08	.30														.40	.04			2.65					.09	4.68

TABLE 2.—*Daily precipitation for June, 1913. District No. 5*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Iowa—Continued.																																
Bonaparte	Des Moines	.03				.47		.91														.06	.16	.04	.41	1.79					.09	3.96
Boone ‖	do	.38		.05			.28	.01													T.	.28				.51					.09	1.60
Britt	Iowa		.06		T.		.77								.07						.42				.25	.42	.13					2.12
Burlington ‖	Mississippi	.02				.25		.55								.10							.33	.13		1.05						2.43
Carroll ‖	Raccoon	.54		.08		T.	.38								T.							.43				.85					T.	2.28
Cedar Rapids ‖	Cedar	T.				T.	T.	.26								1.74					T.	1.08	.30			1.02					.03	4.43
Charles City	do		T.				.18								.03	.32					.38				.69	.61					T.	2.21
Clear Lake	do																															
Clinton	Mississippi	.05				.82		.23								.30		.19			T.	1.93				.42					.68	4.62
Columbus Junction	Iowa	.65				.85		.65														2.15			.31	1.00					.52	6.13
Davenport	Mississippi	.64				.88	.90	.61							.36	.04					.01	1.59		T.	.05	.46					.55	6.09
Decorah	do					.05	.85								T.						.50				.28	.12						1.80
Delaware	do					.49	.01								.38	.53					.02	.08			.34	.29					.27	2.41
Des Moines	Des Moines	.31		.03		.04	T.	.07													.77	.28		T.	1.74	.28					T.	3.52
Dubuque	Mississippi					.23	.68								.17						.03	.27		T.	.05	.13					.36	1.92
Earlham	Raccoon	.34		.40		T.	.07	.06													.19	.68			.26	.73					.05	2.78
Elkader	Mississippi					.30	.08								.42		.52		T.		.10	.12			.25						.06	1.85
Elma	Wapsipinicon		T.				.22								.08	T.					.84	.02			.35	.34	.01				T.	1.86
Estherville ‖	Des Moines	T.		.50													T.				.40	.10				1.90	.90				.10	3.90
Fairfield	Skunk	.06				.56	.01	.45														.45			1.08	1.69					.19	4.49
Fayette	Mississippi		T.			.20	.45								.08						.20	.05			.06	.30	.16				.20	1.70
Forest City ‖	Cedar			T.			.59								.07						.11	.37				1.44	.15					2.73
Fort Dodge ‖	Des Moines	.05					.18								.20						T.	.42			.03	.90						1.78
Fort Madison	Mississippi	T.				.30	T.	1.90								T.						T.	.60	T.	.15	1.12				T.	.10	4.17
Gilman	Iowa																															
Grand Meadow	Mississippi					.12	.63								.58		.02				.80				.10	.20	T.					2.45
Grinnell	Iowa			.07			4.75	.50													.16	.92			.60	1.94						8.94
Grundy Center	Cedar	T.		.14		.46	.14														.09	.11			.56	.74						2.24
Guthrie Center	Raccoon	.30		.43	T.	T.	.19								T.						.42	1.11			.47	.32					T.	3.24
Hampton	Cedar	.05			.08	.15									.19					.04	.36	.22			1.30							2.39
Humboldt	Des Moines						.13								.30						.31				.27	.11						1.12
Independence	Wapsipinicon		T.			.20	.04									.40					.09	.05			.10	.45					.05	1.38
Indianola	Des Moines	.41		.13		T.	.26	.81	T.						.05				.15		.18	1.92			.17	2.17						6.25
Iowa City ‖	Iowa	1.51				.09	.05	.08	.20							.61				.22	T.	.91	.79			1.80	.02					6.28
Iowa Falls ‖	do	.13		.03		.10	.28	.07								07					T.	.64				.34						1.66
Jefferson	Raccoon																															
Keokuk	Mississippi	.01		.09		.03		.65							T.						T.	T.	1.36		1.51	.49				T.	.01	4.15
Keosauqua ‖	Des Moines	.05				.46		.60	.02														.16	.03		2.70	.05					4.07
Knoxville	do																															
Lacona	do	.18		.22				.54													.50	3.50			.01	4.00					T.	8.95
Lansing	Mississippi																															
Le Claire ‖	do	.23				T.	1.29	.34	.39							.28					T.	.83	.50	T.	T.	.68	T.					4.54
Marshalltown ‖	Iowa	.24		.52		.28	.05	.07								.05					.04	.22				.65	T.					2.12
Mason City	Cedar					.31	.16														.42				.22	1.56						2.67
Monroe	Skunk	.34		.04		T.	.13	.92							.16				.34		.11	1.58			.14	1.21						4.97
Mount Pleasant	do	.02				.84		.50													T.	.70		.03	.53	1.42					.04	4.08
Muscatine ‖	Mississippi	2.50				.06	.60	.18	.44							.84					.02	.92	.70			1.05	T.					7.31
New Hampton	Wapsipinicon					T.	.76								T.						.20				1.24	.51						2.71
Nora Springs	Cedar		T.		T.	.06	.33								.04	T.					.49				1.52	.64						3.08
Northwood	do					T.	.58								.08				.02	.18	.50				.52	1.45	1.13					4.46
Olin	Wapsipinicon	.08				.10		.30								.21						1.90			.15	.90	T.				11	3.75
Osage	Cedar						.10								T.					T.	.96				.50	1.32	.04					2.92
Oskaloosa	Des Moines	.40		.06		.02	.02	.18											.07		.53	2.17			.36	2.06						5.87
Ottumwa	do		.33			T.		.40														.07		.10								0.90
Pella	do	.41		T.	T.	T.	T.	.71											.31		.40	1.25		T.	.20	1.14						4.42
Perry	Raccoon	.71			T.		.14														.13	.41			.04	.23					.01	1.67
Pocahontas	do			T.		.02	.22								.41						.04			.30								0.99
Rockwell City	do														.50					.80	.30					1.10						2.70
Sac City	do	.01	T.			.26								T.	.35						.50	.02			.01	.15					T.	1.30
St. Charles	Des Moines	.32		.37		T.	.07	.86											.25		.41	2.59			.12	2.80						7.79
Sigourney	Skunk	.40				T.		.35											T.		T.	3.55			.33	1.83					.07	6.53
Stockport	Storm Lake	.01		T.		.75	T.	.65														.16	.02	T.	.95	1.48				T.	T.	4.02
Storm Lake	Raccoon				.03		.47								.44						.08				.05	T.					.08	1.15
Tipton	Cedar	.12				.17		T.								.86						2.99				1.16					.18	5.48
Toledo	Iowa	.23		.12		.37	.02														.06	.60			.80	.70						2.90
Washington	Skunk	.28				.16		.53														2.57			.27	1.40					.88	6.09
Waterloo ‖	Cedar			T.		.27	.19	.13								.17						.25				.60	T.					1.61
Waukee	Raccoon	.26		.01		.02	.10	.07													1.43	.60		T.	T.	.53					.02	3.04
Waverly	Cedar																															
Webster City	Des Moines	.19		.03			.25								T.						.42	.06			.38	.38					T.	1.71
West Bend	do		.04		T.		1.59								.05										.08							1.76
Whitten	Iowa	.38		.27		.53	.37														T.	.32			.97	.35						3.19
Winterset	Des Moines	.51		.25		T.	.02	.18													.27	1.04			.08	1.22						3.57
Missouri.																																
Gorin	Mississippi			.04		.49		.82															.35		2.22						.45	4.37
Hannibal	do					T.		T.											.01		T.	.43	.02	T.	1.57	.21				.07		2.31
Louisiana	do	.23				1.03		T.											.01			.70	1.85	.06	1.10					.02		5.00
Macon	do	.01		.01		.80	T.								T.						T.	.10	.31		.74	1.36						3.33
Mexico ‖	do						.12																.28	T.	.15	.22	.02					0.79
Palmyra	do							.37															.90		1.83	1.11	.19	.08		.97		5.45
Steffenville	do	T.						T.													.45	T.	.20	1.45						.35	T.	2.45
Sublett	do					.25		1.00														T.	.40		1.20	.80						3.65
Vandalia	do																						.63		.33					.30		1.26
Warrenton	do		.04				T.																.53	.45	.08	.98					T.	2.08
Indiana.																																
Collegeville	Iroquois	.89						.62														.68		.17		.11						2.47
Knox	Kankakee	1.09															T.					.53	.01	T.		.10						1.73
Laporte	do							.06									.42					.65			.06	.05						1.24
Plymouth	do	.75						.07									.19				.36	.47			.02	.13						1.99
South Bend	do	.01						.13									.04					.58				.03						0.79
Illinois.																																
Aledo	Mississippi	.48				1.00		.68								.49						2.27			.08	.51					.10	5.61
Alexander	Illinois						.03	.03											T.		T.	1.29	.81	.08	.99	.04				.22		3.49
Antioch	do					.31	T.									.52	.35	.15	.36		.05	.33				T.						2.07
Astoria	do	T.				T.	T.	.87								.05			T.	T.	T.	.08	1.60	.10	.76	.20					T.	3.66
Aurora	do	T.														.10		T.			T.	.75			T.	.20						1.05

TABLE 2.—*Daily precipitation for June, 1913. District No. 5*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
Illinois.																																	
Beardstown ‖	Illinois							T.	.10	.30						T.	T.				.08	T.		.50	.05	.10	1.25	T.					2.38
Bement	Mississippi								.11													T.	.09	.64		.19					.47		1.50
Bloomington	Illinois																.06						.68	.71	.01	2.18	.91						4.55
Cairo	Mississippi			.01	T.			.46	.05	T.													T.	.49	T.	.04				.02	T.	T.	1.07
Camp Point	do					T.	.16		.30								.09				T.	T.	.39	.17	.62	1.30	1.11				T.		4.14
Carbondale	do				.55			1.22		.08														.22	.10	.10				.34	.01		2.62
Carlinville	Illinois																						T.	.57	.02	.42							1.01
Carlyle	Mississippi		T.	.03	T.		T.	T.																.13	1.51	1.60						T.	3.27
Chester ‖	do					.06			.16	.06	.04										.08			.22	1.78	.36	.04					T.	2.80
Clinton	Illinois		T.						.35													T.	.21	.95	.01	.36	.04						1.92
Cobden	Mississippi							T.	T.	.03													T.	.25	.22	.15					.25		0.90
Dakota	do		.02				.53	.42	.08								.33					T.	.40				.04					.66	2.48
Decatur ‖	Illinois								T.	.09											.02			.63	.43	.50	1.23						2.90
Dixon ‖	Mississippi							.53	.07								.55			.40			.80	.65			.15	T.					3.15
Du Quoin	do				.12			.03	.07	T.														.74	.76						T.	T.	1.72
Dwight	Illinois		.20				.03		.20								.04		.30				.99			.31	.25				.08		2.40
East St. Louis ‖	Mississippi							.21														T.		.03	.89	.51	T.						1.64
Edwardsville	do																			.05			.45	2.82	.24	1.30							4.86
Elgin	Illinois		T.				T.										.33			.03	T.		1.05				.12						1.53
Ewing	Mississippi																																
Fairview	Illinois		.01				T.		.71								.05	.55	.01	.34	.40												2.12
Galva ‖	do		1.24					.21	.68	.42							1.06					T.	.25	1.41		.02	.88	.01					6.18
Grafton ‖	Mississippi		T.	.14																				T.	1.12	.04	1.74	T.					3.04
Greenville	do		.63	.04			T.													.20			1.15	.88	.21	2.02	.24						5.37
Griggsville	Illinois		T.		.07		1.88	T.	.47								.03				.06		.48	.60	T.	.84	.11						4.54
Havana	do								1.00								.12			.07			T.	1.30	.08	.44	.14						3.15
Henry	do		.72				T.		1.29								.15						1.32			.21	.05						3.74
Hillsboro ‖	Mississippi			.06																				.12	.15	.20	2.65						3.18
Joliet	Illinois		.47				.03		.07							T.						T.	1.00				.17						1.74
Kishwaukee	Mississippi		.07				.43	.52	.03								.33					T.	1.04				.08					.27	2.77
La Grange	Illinois					T.																T.	.64			.02	.23						0.89
La Harpe	do		T.				.03		1.19								.04					T.	T.	1.24		.32	.72						3.54
Lanark	Mississippi		.09				.60	.03	.04								.14	T.				T.	.55				.12					.05	1.62
La Salle	Illinois		.47				.20	.08	.41								.15		.37			T.	1.57			T.	.07				T.		3.32
Lincoln	do		T.					T.	.13								T.					T.	.59	1.22		.13	.24						2.31
Macomb	do		T.					.07	.87								.02							1.23	.13	.33	.43						3.08
Manteno	do		.51						.37										T.				.96				.21						2.05
Martinton ‖	do			.35					.28	.42														.72	T.	.10	T.	T.					1.87
Mascoutah	Mississippi				T.		T.		T.											T.				.60	.95	.17	.20						1.92
Minonk	Illinois		.33						.52								.04						.94		.01	.09	.07						2.00
Monmouth	Mississippi						.08		.26								.80					.02	.70	.03	T.	.02	.58						2.49
Morris	Illinois		.29				.04		.30											T.			.87			.03	.09						1.62
Morrison	Mississippi		.08				1.27		.07								.38		.04			T.	1.92				.39					.02	4.17
Morrisonville	Illinois								.21											T.			.22	.51	.08	.95					T.		1.97
Mount Vernon ‖	Mississippi			.12																					3.80	.25	.40						4.57
Nashville	do			.04	T.					T.										T.					1.64	.18							1.86
Oregon	do		.05				.47	.01									.43						.85				.20					.15	2.16
Ottawa	Illinois		.13				.22		.31											.29			1.39		.01	.01							2.36
Pana	Mississippi								.21														.14	.45	.39	.70	.05						1.94
Paw Paw	Illinois		.05				.11	T.	T.								.18			.65		T.	.97			.05	.03						2.04
Peoria	do		.35					T.	.93								.18						.36	.01	.01	.54	.12						2.50
Pontiac	do		.33						.42								.03		.42				.67		.02	.39	.02				T.		2.30
Quincy ‖	Mississippi							.18	.40								T.							.23	.01		4.93	.11					5.86
Riley	do		T.				.28	.01									.31		.10			.01	1.23				.05				T.	.05	2.04
Roberts	Illinois		.15						.55								T.		T.			T.	.91	.04	.22	.46	.01				.15		2.49
Rockford ‖	Mississippi		.02					.45	.14								.34						.60	.01			.03						1.59
Rushville	Illinois		T.		T.				.41								.04					T.	.08		.72	.34	.36				T.		1.95
St. Charles	do		.01				T.		T.								.32			T.	.10	T.	.80			T.	.22					T.	1.45
St. Peter	Mississippi		.05				T.															.32	.33	.20	1.50	T.							2.40
Sparta	do							T.	.04	.02	.02												.04	.01	2.60	.03							2.76
Springfield	Illinois		T.				T.		T.											.19			.84	.76	T.	.03	.02						1.84
Streator ‖	do		T.	.15				.18	.05	.11							.17			.10			.11	.87		T.	.12	.01					1.87
Sullivan	Mississippi							T.	.04												.40		.04	.44	.48	.33	.40						2.13
Sycamore ‖	do		T.					.18									.61				T.		.96	.19			T.					T.	1.94
Tiskilwa	Illinois		.59				.47		.98								.40		T.			T.	2.35	T.	T.	.18	.15						5.12
Walnut	Mississippi		.12				.32		.16								.51		.29			T.	1.39			.36	.12						3.27
Warsaw ‖	do				.16				1.10															1.40	.03	.63	1.49					.11	4.92
Waterloo	do								T.	T.									T.			T.	T.	1.08	1.22	.40	T.						2.70
White Hall	Illinois								T.	T.											T.	T.	T.	.78	.02	.28							1.08
Windsor	Mississippi								.02											.04			.08	.62	.42	.35	.65						2.18
Winnebago	do		.12				.79	.51									.30						.95				.10					.43	3.20
Yorkville	Illinois		.01				T.																.99			.01	.15	.15					1.31

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for June, 1913. District No. 5, Upper Mississippi Valley.*

Date.	North Dakota.										Minnesota.																	
	Bottineau. §§		Devils Lake.		Lisbon. §§		Minot. §§		Pembina. §§		Collegeville.		Crookston. §§		Grand Meadow.		Montevideo. §§		Moorehead.		New Ulm. §§		Pine River Dam.		St. Paul.		Winnibigoshish.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	77	45	72	46	78	56	77	45	72	52	78	58	72	40	79	58	76	52	73	51	77	58	74	56	75	60	72	48
2....	72	49	68	50	81	50	72	52	66	48	74	50	70	54	75	47	80	50	78	48	73	46	72	48	73	52	68	45
3....	70	39	66	42	63	45	70	40	62	34	69	50	65	46	67	54	74	49	67	46	72	53	75	42	71	53	65	45
4....	74	39	72	50	74	50	75	50	74	41	69	49	73	43	71	45	76	49	74	46	78	51	78	34	64	52	70	38
5....	82	55	87	46	96	54	85	55	74	52	85	55	81	54	79	66	90	55	85	59	84	57	81	51	85	57	75	48
6....	62	38	58	39	76	54	64	42	52	34	72	53	59	42	70	59	53	53	67	44	67	64	79	49	73	52	64	45
7....	66	35	62	34	67	35	68	36	54	32	62	39	62	36	64	43	70	41	65	35	62	44	61	38	61	44	65	34
8....	72	40	69	38	67	38	72	35	70	36	62	41	71	42	64	39	65	40	69	40	70	40	64	33	63	43	68	38
9....	79	46	72	47	72	34	76	44	68	41	67	41	73	44	65	35	69	39	72	41	70	40	70	33	66	44	74	42
10....	80	49	77	51	72	40	82	56	74	42	70	46	77	48	75	43	75	42	76	44	73	42	71	45	71	45	72	42
11....	89	53	85	55	83	46	88	60	82	44	78	49	85	54	80	49	81	46	82	49	82	44	79	50	77	49	79	41
12....	95	60	92	62	88	61	92	63	94	54	83	58	89	60	82	56	85	60	89	58	85	54	85	57	82	55	84	40
13....	90	62	88	61	84	61	80	58	90	58	80	60	90	64	81	61	84	55	86	60	82	57	85	55	83	57	85	58
14....	88	55	89	53	92	58	89	56	90	55	81	60	88	64	84	63	88	60	91	64	84	65	86	58	81	64	78	60
15....	81	55	82	58	92	56	81	57	81	58	94	66	92	63	93	65	95	63	92	64	96	63	88	58	95	66	88	58
16....	83	46	81	54	78	58	80	50	78	52	80	65	81	54	94	64	87	60	76	54	90	64	80	52	86	68	84	60
17....	81	48	72	47	78	56	84	52	76	40	79	58	70	48	90	60	85	58	74	52	93	63	70	48	84	61	78	45
18....	69	48	73	51	85	53	74	53	74	50	89	48	76	53	94	63	96	57	86	56	98	63	85	47	95	60	82	50
19....	80	56	77	54	75	60	78	56	80	55	88	59	78	60	90	66	93	78	78	62	95	71	77	57	82	66	74	57
20....	83	56	79	50	80	55	82	51	85	44	80	59	80	50	78	65	82	63	81	56	85	66	81	56	83	62	83	55
21....	87	54	80	50	84	52	84	55	88	44	80	58	80	48	79	61	84	55	82	50	82	61	79	49	84	61	82	50
22....	91	55	87	57	87	45	93	61	88	63	84	60	87	50	82	59	85	55	87	53	88	59	84	46	85	62	85	48
23....	94	62	95	66	94	60	96	60	90	63	81	62	90	67	83	52	85	56	88	61	88	66	81	60	80	62	83	58
24....	85	64	88	64	90	64	84	61	92	62	80	64	94	70	81	64	86	60	90	64	85	65	82	68	80	65	85	60
25....	78	53	78	59	85	56	77	56	80	58	86	65	86	63	84	63	88	65	82	58	92	67	82	66	86	68	84	65
26....	61	51	65	53	82	60	60	52	70	51	84	67	80	64	86	65	88	65	87	63	92	66	84	63	87	64	88	64
27....	69	51	71	52	87	59	65	52	72	52	90	75	83	60	90	70	94	78	89	59	96	72	86	66	91	77	89	64
28....	90	55	96	59	98	59	81	54	95	54	91	63	97	60	94	71	95	76	96	74	98	75	93	68	94	74	94	65
29....	83	66	86	70	90	68	83	64	92	70	88	75	94	68	93	70	92	73	91	67	95	75	92	66	92	76	93	64
30....	76	57	77	58	83	56	76	58	78	62	82	65	82	64	83	69	84	65	82	62	83	70	82	67	83	69	78	60
Mns.	79.3	50.7	78.1	52.5	82.0	53.0	78.9	52.8	78.0	50.0	79.5	57.3	80.2	54.4	81.0	58.2	82.8	57.3	81.2	54.7	83.8	59.4	79.5	52.9	80.4	59.6	79.0	51.6

Date.	Wisconsin.														Iowa.													
	Eau Claire.		Grantsburg.		Hancock.		La Crosse.		Madison.		Prentice.		Wausau.		Algona.		Cedar Rapids. §§		Charles City.		Davenport.		Des Moines.		Dubuque.		Keokuk.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	77	60	84	46	80	61	81	56	77	56	76	54	75	60	78	60	83	64	79	52	83	65	81	65	82	64	81	67
2....	75	46	76	41	78	50	81	50	78	52	76	48	74	48	78	46	85	54	78	47	82	57	81	56	82	56	84	61
3....	74	54	73	47	74	54	74	53	71	57	71	44	69	51	74	57	77	57	74	51	81	60	75	63	74	60	84	60
4....	70	44	72	35	74	50	78	48	73	51	68	34	68	41	76	54	79	52	75	51	77	54	77	57	75	52	81	58
5....	78	53	84	54	70	55	75	58	66	57	72	52	69	52	84	58	80	56	82	59	77	60	86	63	74	62	87	65
6....	78	55	80	58	78	60	80	55	79	56	74	62	80	58	80	61	88	63	79	56	86	67	85	65	82	64	87	69
7....	65	42	64	34	74	41	64	46	56	40	62	33	58	37	64	46	61	53	63	44	67	43	65	52	64	46	73	46
8....	66	38	69	30	59	34	64	40	55	38	62	28	60	33	64	40	63	41	62	42	62	39	63	44	61	40	62	40
9....	68	39	72	31	63	37	67	41	60	40	62	35	63	36	67	40	66	41	65	39	64	41	65	44	63	42	64	44
10....	73	39	75	43	73	39	71	40	70	46	69	32	71	35	71	43	71	43	71	40	70	44	70	44	69	43	72	44
11....	80	40	81	46	79	47	79	46	74	49	74	35	76	43	77	58	82	47	77	43	76	50	76	50	77	46	77	49
12....	84	47	87	56	83	50	82	50	77	55	79	41	81	48	80	49	87	48	82	47	80	52	80	51	80	49	83	51
13....	85	52	88	59	86	56	84	55	81	57	83	50	84	52	82	53	89	49	82	50	84	57	82	57	83	55	85	61
14....	82	62	80	64	86	62	83	65	82	60	83	59	77	57	85	61	93	57	87	63	87	64	88	65	86	63	88	65
15....	96	59	.....	.....	96	63	95	66	87	65	88	55	87	59	95	64	96	66	96	62	90	65	96	72	91	68	95	73
16....	90	62	.....	.....	95	65	93	70	90	65	88	53	88	60	92	77	97	70	93	66	95	73	96	70	92	71	95	71
17....	87	59	94	56	89	60	90	64	81	65	85	45	83	57	94	.....	99	70	95	64	95	71	94	66	90	66	96	68
18....	90	60	93	65	91	60	89	65	85	61	86	55	83	56	94	.....	99	66	95	67	94	66	95	70	87	64	98	71
19....	86	69	86	54	95	70	95	70	90	70	86	59	76	59	94	.....	96	70	92	66	94	75	88	69	93	71	94	75
20....	81	67	86	55	75	64	77	67	77	65	75	63	75	65	82	74	89	71	77	68	91	71	88	69	79	67	94	72
21....	83	59	84	50	83	59	82	64	75	62	81	54	80	57	84	63	77	66	81	65	73	63	77	68	78	61	84	67
22....	84	55	88	50	84	60	82	61	77	60	81	45	81	53	86	66	80	57	82	57	79	56	78	61	80	56	68	62
23....	82	58	86	61	81	55	83	57	79	57	78	53	79	56	84	53	78	63	82	55	78	61	79	66	77	57	87	67
24....	80	61	85	64	85	61	87	68	82	63	81	56	82	58	84	66	78	64	88	66	83	71	86	70	87	69	88	67
25....	85	68	86	67	84	68	84	68	80	67	82	65	79	65	88	67	89	66	84	63	84	67	84	66	83	68	90	66
26....	87	67	90	66	92	68	90	69	88	72	84	63	82	61	91	72	94	67	89	69	90	74	90	75	89	75	92	75
27....	93	73	95	73	95	74	93	74	72	73	90	70	91	66	94	.....	98	75	92	72	93	76	91	73	93	75	95	76
28....	95	72	99	58	100	73	97	72	95	73	93	68	92	66	97	71	98	73	95	72	97	77	94	74	96	72	97	76
29....	94	74	98	75	100	75	96	74	95	74	93	69	94	71	94	.....	100	75	95	74	97	77	92	77	96	74	98	76
30....	91	77	90	66	95	72	88	73	91	72	90	72	87	73	86	70	93	77	85	70	92	71	88	75	91	72	93	77
Mns..	82.0	57.0	83.8	53.7	83.2	58.1	82.8	59.5	78.8	59.3	79.1	51.7	78.1	54.4	83.2	58.8	85.5	60.7	82.6	58.0	83.4	62.2	83.0	63.2	81.8	60.9	85.7	64.0

TABLE 3.—*Maximum and minimum temperatures for June, 1913. District No. 5*—Continued.

Date.	Hannibal, Mo.		Laporte, Ind.		Illinois.															
					Cairo.		Greenville.		La Salle.		Monmouth.		Mount Vernon. §§		Peoria.		Springfield.		Winnebago.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	85	65	81	49	96	73	97	66	84	60	83	61	95	72	79	65	89	69	80	56
2	85	60	80	42	90	70	90	64	82	55	83	56	87	60	86	59	90	63	82	48
3	84	57	79	48	82	70	89	65	82	55	83	57	80	64	83	59	87	62	75	58
4	84	60	75	44	86	67	90	57	77	51	81	49	85	65	80	54	84	58	79	46
5	90	68	80	49	89	70	90	64	80	62	85	61	88	64	88	63	89	64	69	56
6	92	70	92	57	91	67	96	66	90	60	85	65	92	66	92	67	96	69	85	65
7	72	47	83	46	88	64	85	58	60	42	79	44	85	66	74	43	78	46	65	44
8	65	43	63	37	65	57	75	49	60	39	64	36	70	53	64	40	67	41	59	34
9	66	44	68	35	68	53	72	44	63	39	64	38	58	47	66	40	68	42	62	35
10	74	47	70	36	73	52	79	42	70	39	71	39	75	47	73	44	76	43	73	37
11	76	43	71	36	76	53	82	46	77	44	79	42	79	46	77	45	79	48	80	42
12	85	44	80	39	84	57	89	48	82	45	83	48	84	46	83	45	86	52	82	47
13	87	55	92	57	86	59	90	57	85	53	89	53	88	50	86	49	89	57	85	50
14	91	63	98	51	88	61	94	55	86	60	89	54	90	50	88	59	91	60	86	56
15	96	69	97	62	90	64	98	62	90	66	93	63	94	60	91	64	96	68	90	62
16	96	67	98	64	94	65	100	62	96	72	94	64	98	65	96	64	99	71	98	70
17	97	63	85	63	98	67	103	66	97	68	96	66	99	64	96	68	99	68	90	72
18	99	70	86	56	102	72	103	68	91	62	97	66	100	68	94	64	97	70	92	57
19	95	72	93	62	99	71	101	70	96	68	95	69	101	67	96	70	99	72	94	67
20	95	72	86	64	96	73	99	66	91	71	90	71	101	67	93	69	96	73	84	68
21	93	69	74	63	96	74	100	69	71	59	.....	67	102	71	82	64	94	68	74	60
22	76	65	76	53	89	66	82	68	78	53	74	57	87	70	72	60	72	63	76	50
23	86	69	81	50	85	72	86	68	78	61	84	64	79	65	83	65	84	68	83	53
24	86	66	83	65	88	71	83	67	83	69	84	67	82	68	81	69	82	70	87	63
25	91	68	85	65	90	74	89	69	84	69	88	67	88	70	87	66	90	71	85	66
26	93	74	92	68	95	74	93	65	91	73	93	69	94	67	92	72	94	70	91	72
27	97	77	95	60	98	78	98	71	95	73	95	69	96	71	96	72	96	73	95	70
28	97	73	92	70	97	76	99	73	98	73	98	77	98	72	98	73	99	77	100	69
29	97	73	96	68	100	75	99	75	99	75	99	73	98	76	99	74	100	79	100	70
30	96	75	97	70	98	76	99	75	96	75	94	73	98	76	96	75	99	76	94	72
Means	87.5	62.9	84.3	54.3	89.2	67.4	91.7	62.5	83.7	59.7	85.9	59.5	89.0	63.1	85.7	60.7	88.8	63.7	83.2	57.2

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.