CLIMATOLOGICAL DATA FOR JUNE, 1912.

DISTRICT No. 5, UPPER MISSISSIPPI VALLEY.

GEORGE M. CHAPPEL, District Editor.

GENERAL SUMMARY.

Generally speaking, the month was cool, dry, and sunshiny. Over the southern part of the district it was one of the coolest Junes on record. Moreover, in that part of Illinois contiguous to St. Louis, Mo., no other June in the last 40 years or more has been so cool.

On the whole the month was comparatively free from severe storms and other adverse weather conditions. While some thunderstorms of moderate severity occurred, it is not known that in any instance they were especially damaging. Owing to the prevailing dryness, the last decade was very favorable for outdoor pursuits, farmers in particular benefiting, in that the weather permitted of necessary cultivation of the soil on an extensive scale. The lack of moisture in most sections was not especially felt because not only had the precipitation of the previous month been generous but the prevailing coolness of the current month prevented that rapid drying out of the soil which otherwise would have occurred. By the close of the month, however, rain was beginning to be needed in some sections. The frosts and freezing temperature that occurred on the 7th in northern Minnesota and northern Wisconsin do not appear to have resulted in much injury to vegetation.

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	62.2	+0.4	104	28	1.73	−1.82	3.75	0.14	....	6
Minnesota	62.8	−2.2	106	23	1.64	−2.43	3.63	0.22	....	6
South Dakota	63.5	−2.8	95	34	1.64	−2.22	1.94	1.93	....	6
Wisconsin	63.0	−2.4	100	26	1.40	−3.06	3.93	0.12	....	6
Iowa	66.4	−2.3	101	37	2.65	−1.87	5.01	0.88	....	7
Missouri	69.7	−3.0	100	44	3.60	−0.44	5.26	2.16	....	9
Indiana	66.4	−1.6	90	37	2.75	−0.69	3.90	1.37	....	9
Illinois	68.1	−2.5	96	34	3.05	−0.61	6.52	1.09	....	9

TEMPERATURE.

Except in the extreme northern part of the district, where the mean temperature was about normal, the month was cooler than usual generally. The deficiency in temperature increased regularly toward the south, where in southern Illinois it averaged about 4° daily, and the month there was one of the coolest Junes in the last 40 years or more. The average temperature for the entire district was 64.1°, 2.2° less than the normal and 8.5° less than the average of the same month last year, which stands as the warmest June on record in this district. The highest mean temperature reported was 72.5°, at Quincy, Ill., and the lowest was 58.0°, at Deerskin Dam, Wis. At only a few stations was the mean temperature above 70° or below 60°.

The month was almost continuously cool until the last week, the unseasonable conditions being a matter of much comment. It is quite likely that had the last week of the month averaged as cool as did the rest of it, or if even normal temperatures had prevailed, the month would have gone on record as the coolest June in the district since authentic records were begun. As it was, however, the last week of the month was very warm, and the large deficiency in temperature that had accumulated up to that time became greatly reduced by the end of the month.

In a majority of cases the cool wave that covered the 6th–8th, inclusive, produced the lowest temperatures of the month, but in a few instances the lowest temperatures occurred either on the 4th, 5th, 9th, 16th, or 18th. The high pressure area that accompanied the principal cool wave was of great magnitude for the season and the resulting sea-level pressure at Des Moines, Iowa, on the 7th, 30.40 inches, is the highest on record for June at that station. On that date frost and freezing temperatures were quite general over the northern parts of Minnesota and Wisconsin, and light frost formed as far south as northern Iowa. The lowest temperature reported during the month was 23°, on the 5th, at Redwood Falls, Minn. The closing days were marked by hot, dry weather. Save at a few stations in the Indiana and Illinois areas the highest temperatures of the month prevailed at this time. The 28th and 29th, perhaps, were the dates when monthly maximum temperatures were most common. Twenty-three stations, most of which are in the northern half of the district, experienced a temperature of 100° or higher during the warm wave at the close of the month. The highest temperature reported was 106° on the 28th at Warren, Minn. Only a few stations reported the maximum temperature of the month as lower than 90°.

PRECIPITATION.

The normal precipitation for the upper Mississippi Valley in June is 4 inches. During the current month the average was 2.23 inches, or but little more than one-half the normal. To indicate how general was the prevailing dryness it may be stated that of the 234 stations in the district having normals but 23 reported an excess of precipitation; most of these stations are in southern Illinois. The driest part of the district was the Wisconsin area, where less than one-third the normal precipitation occurred. At several stations in that State as well as in Minnesota the month was the driest June since reliable records have been kept. At Medford, Wis., only 0.12 inch was recorded. The greatest amount reported for the month was 6.52 inches, at East St. Louis, Ill.

The great bulk of the month's precipitation occurred during the first two decades. The last decade was notably dry. The periods of rainfall were not well

defined, most of the rains falling during the first five days and from the 10th to the 21st, inclusive. In the northern States there was very little precipitation after the 16th. Only a few stations, about half a dozen, experienced rainfalls that equaled or exceeded 2.50 inches in 24 consecutive hours. The only snowfall reported was a trace at Warroad, Minn. The average number of days with an appreciable amount of precipitation was seven.

RIVERS.

There was little of interest in river conditions at any time during the month. The usual "June rise" in the upper Mississippi did not occur this year. At Dubuque, Iowa, the stage steadily decreased from 11.3 feet on the 1st to 4.0 feet on the 30th. At Cairo, Ill., the highest stage during the month, 27.5 feet, occurred on the 1st and the lowest, 20.8 feet, on the 17th. By the 22d the river at that point had risen to 27.2 feet, but thereafter there was a decline, which continued at the close of the month, when the stage was 22.8 feet.

MISCELLANEOUS.

Wind directions were more variable than usual, but the prevailing direction for the month was northwesterly. The highest velocity reported was 46 miles an hour from the northwest, on the 3d, at Devils Lake, N. Dak.

The percentage of possible sunshine averaged above the normal, but not markedly so. For the entire district the average was about 70 per cent. The average number of clear days was 16; partly cloudy, 8; and cloudy, 6.

DRAINAGE AND ENGINEERING NOTES.

A reclamation project involving an outlay of possibly $100,000 for levees and other improvements on a tract of 3,500 acres of level, treeless bottom land in Marion County, Mo., was launched early in July. During flood seasons this tract often is almost overflowed, and it is proposed to protect it by 8 miles of levee, 12 feet high, extending 3 feet above the highest stage ever reached by the Mississippi. The construction work will include the building of the levee, digging of drainage canals, and laying out wagon roads. The success of the project is expected to prove of material benefit to Quincy, Ill., which is only 3½ miles from the northeast corner of the tract.

A flood and drainage conference called by the governor of Illinois met in Chicago on June 14. Resolutions appealing to the Federal Government to recognize the drainage of the Mississippi River as of equal national importance with the Panama Canal were adopted by the representatives of 15 States who were present. Prevention of Mississippi River floods by the construction of a waterway to divert the headwaters of the river into Lake Michigan was urged by the former president of the Chicago sanitary district. Three routes have been suggested by engineers who have studied the problem: A diversion channel could be cut through between St. Paul, Minn., and Green Bay, Wis., a distance of 250 miles; one might connect La Crosse with Milwaukee, 185 miles; and a third might run between Galena, Ill., and Chicago, 152 miles.

PROGRESS OF WORK—DRAINAGE OF AMERICAN BOTTOMS.

By CLARENCE J. ROOT, Section Director.

An article entitled "Draining the American Bottoms" appeared in the Monthly Weather Review (District No. 5) for May, 1911. Mr. W. McK. Brown, cooperative observer, Weather Bureau, and assistant engineer, the East Side levee and sanitary district, furnishes the following statement showing the status of the work on June 30, 1912:

The Cahokia Creek diversion channel is finished and the water from the Cahokia Creek was turned into the same on April 7, 1912. As before stated, this channel is 4½ miles long, 100 feet wide on the bottom, and runs from the bluffs at Poag, Ill., directly west to the Mississippi River, emptying into the same at a point about 1 mile south of the mouth of the Missouri River. This channel takes care of all the hill drainage of Cahokia Creek, amounting to 259 square miles, and empties into the Mississippi River at a point 15 miles north of the original mouth of Cahokia Creek.

A levee has been built across the old mouth of Cahokia Creek, a small culvert equipped with floodgates being placed in the bed of the creek to accommodate the drainage from the area south of the diversion channel. This levee and floodgate will prevent the Mississippi River from backing up the old channel of the Cahokia Creek into the town of East St. Louis.

Of the front levee south of the diversion channel, about 5 miles of the work has been completed, and 10 miles, reaching to the old mouth of Cahokia Creek in the south part of East St. Louis, is under construction and will be completed about June 1, 1913.

TABLE 1.—*Climatological data for June, 1912. District No. 5, Upper Mississippi Valley.*

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.		
North Dakota.																				
Amenia	Cass	954	15	64.0	+ 0.8	100	29	35	8	47	2.86	− 0.77	0.83	0	6	21	0	9	e.	C. E. Wood.
Bottineau	Bottineau	1,638	17	62.3	+ 6.3	100	30	33	6†	40	0.87	− 2.90	0.40	0	8	14	8	8	se.	W. M. Mills.
Bowbells	Burke	1,958	....	62.2	.....	99	30	32	16	39	1.14	.....	0.97	0	5	26	0	4	.....	G. H. Phelps.
Cando	Towner	1,488	11	60.2	0.0	94	29	28[a]	4	42[a]	2.12	+ 0.15	1.11	0	5	23	3	4	se.	E. T. Judd.
Crosby	Divide	.....	6	61.5	.....	98	30	32	16	40	1.63	.....	1.22	0	4	26	2	2	nw.	H. C. Kaschau.
Devils Lake	Ramsey	1,482	7	61.6	− 1.0	94	28	35	6	34	2.94	− 0.59	0.90	0	9	10	16	4	se.	U. S. Weather Bureau.
Donnybrook	Ward	1,760	13	61.0	+ 1.4	98	24†	31	6	37	1.64	− 3.91	1.41	0	4	20	6	4	nw.	C. J. DeVore.
Dunseith	Rolette	.....	15	61.1	+ 0.9	97[a]	29	35[a]	4†	37[a]	1.14	− 1.91	0.52	0	7	16	7	7	nw.	C. E. Goodsell.
Edmore	Ramsey	1,524	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. M. Van Osdel.
Fessenden	Wells	1,610	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. T. Seymour.
Forman	Sargent	1,249	18	63.6	− 1.1	94	29†	35	6	34	2.78	− 0.73	1.35	0	6	20	4	6	nw.	A. Maltby.
Grafton	Walsh	827	21	61.0	− 1.7	100	28†	31	6	46	1.11	− 2.27	0.57	0	6	20	4	6	se.	A. R. T. Wylie.
Granville	McHenry	1,504	6	66.6	.....	99	30	37	18	42	1.51	.....	0.70	0	6	13	9	8	nw.	W. A. Christianson.
Hannah	Cavalier	1,568	7	58.8[h]	.....	98[h]	29	29[h]	6	46[h]	0.21	.....	0.10	0	4	.....	.....	.....	.....	J. Moffatt.
Hansboro	Towner	.....	4	60.6	.....	97	29	33	6	40	1.02	.....	0.54	0	5	22	4	4	nw.	Geo. Dale.
Hillsboro	Traill	901	7	62.6	.....	96	29	36	8	40	2.53	.....	1.08	0	8	19	7	4	nw.	F. E. Mayall.
Lakota	Nelson	1,579	6	59.1	.....	91	28†	33	7†	36	2.54	.....	0.88	0	9	12	16	2	se.	C. R. Pettes.
Langdon	Cavalier	1,615	17	61.2	.....	98	29	31	6	39	0.51	.....	0.25	0	3	14	0	16	w.	J. Woolner.
Larimore	Grand Forks	1,134	17	62.9	+ 1.3	98	28	36	6†	39	1.88	− 1.65	0.83	0	7	19	7	4	n.	J. M. Freeman.
Lisbon	Ransom	1,091	8	62.4	0.0	96	28	30	6	40	3.75	− 0.29	1.22	0	9	20	5	5	nw.	W. S. Adams.
McKinney	Renville	1,640	18	62.0	+ 1.7	104	29	31	6	50	1.04	− 3.23	0.92	0	2	15	12	3	nw.	N. P. Swenson.
McLeod	Ransom	.....	....	.....	.....	.....	.....	.....	.....	.....	3.67	.....	1.95	0	5	14	10	6	se.	Martin Reinholt.
Manfred	Wells	1,605	11	61.0	.....	97	30	35	8	46	3.31	.....	1.26	0	7	16	11	3	nw.	P. B. Anderson.
Mayville	Traill	975	16	63.4	+ 0.5	97	29	35	8	42	2.71	− 0.72	1.28	0	6	18	4	8	sw.	W. C. Gould.
Minot	Ward	1,557	14	62.8	0.0	98[a]	30	35[a]	6†	37[b]	1.62	− 2.14	1.04	0	6	14	5	11	w.	W. J. Ellison.
Minto	Walsh	820	19	63.1	− 0.4	99	28†	34	16	41	1.10	− 2.27	0.50	0	6	20	2	8	s.	S. S. Marsh.
Oriska	Barnes	1,270	7	61.4	.....	94	28	32	8	36	2.44	.....	1.22	0	6	15	12	3	.....	J. J. Taylor.
Park River	Walsh	998	9	63.4	.....	99	28	36	16	40	0.80	.....	0.31	0	6	21	6	3	sw.	P. J. Prochaska.
Pembina	Pembina	789	14	61.4	− 0.4	99	30	34	6	44	0.14	− 3.74	0.04	0	4	25	1	4	w.	C. W. Shumaker.
Power	Richland	1,020	20	62.0	− 1.9	96	29	34	7	35	2.81	− 1.08	1.32	0	4	21	3	6	se.	J. A. Power.
Pratt	McHenry	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. B. Ahern.
Towner	do	.....	4	62.0	.....	97	30	35	4†	40	1.66	.....	0.74	0	4	13	12	5	nw.	B. Bagley.
University	Grand Forks	830	20	63.2	+ 0.7	98	28	37	6†	38	1.19	− 2.92	0.44	0	10	19	6	5	s.	U. S. Weather Bureau.
Wahpeton	Richland	962	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Fred E. Smith.
Walhalla	Pembina	966	8	64.8[i]	.....	101[i]	28	37[i]	7	53[i]	0.51	.....	0.24	0	5	.....	.....	.....	w.	Ivanhoe Lee.
Westhope	Bottineau	.....	6	63.0	.....	102	24	33	6	40	0.86	.....	0.42	0	5	13	15	2	se.	W. A. Meddaugh.
Willow City	do	1,471	19	.....	.....	.....	.....	31	7	.....	1.09	.....	0.53	0	3	.....	.....	.....	se.	M. A. Ostby.
Minnesota.																				
Albert Lea	Freeborn	1,229	21	63.6	− 3.3	95	28	39	7	34	2.07	− 2.06	0.65	0	5	10	17	3	se.	Edward Carey.
Alexandria	Douglas	1,391	18	62.8	− 2.3	95	29	38	7	34	1.20	− 2.59	0.53	0	5	16	4	10	nw.	P. O. Unumb.
Angus	Polk	870	10	61.6	− 0.8	100	29	27	18	49	1.13	.....	0.64	0	7	17	8	5	s.	John Nadvornik.
Bagley	Clearwater	.....	6	59.2	.....	99	28†	30	18	49	1.34	.....	0.35	0	8	13	12	5	se.	Jens Nelson.
Baudette	Beltrami	1,084	1	60.8[d]	.....	99[d]	28	38[d]	4†	41[d]	1.34	.....	0.80	0	6	11[d]	12[d]	3[d]	nw.	C. S. Dahlquist.
Beardsley	Bigstone	1,090	16	64.0	− 0.4	98	28†	32	7	37	1.64	− 2.07	0.92	0	6	8	17	5	nw.	G. L. Fitzgerald.
Beaulieu	Mahnomen	1,200	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. P. A. Slattery.
Bemidji	Beltrami	1,400	9	.....	.....	.....	.....	.....	.....	.....	0.44	.....	0.12	0	9	.....	.....	.....	.....	C. W. Warfield.
Bird Island	Renville	1,039	22	62.8	− 3.3	95	29†	37	7	42	1.65	− 2.18	1.06	0	5	14	10	6	se.	Dr. F. L. Puffer.
Brainerd	Crow Wing	1,215	5	62.2	.....	95	29	36	7	38	1.42	.....	0.93	0	7	20	5	5	n.	Theodore Miller.
Caledonia	Houston	1,179	19	64.8	− 2.0	90	29	44	7	30	1.47	− 2.85	0.80	0	6	15	5	10	sw.	W. D. Belden.
Campbell	Wilkin	984	6	61.8	.....	96	28†	37	7†	40	1.46	.....	0.37	0	8	18	2	10	nw.	J. T. Neisess.
Cass Lake	Cass	1,300	5	.....	.....	.....	.....	.....	.....	.....	0.50	.....	0.35	0	4	.....	.....	.....	.....	C. W. Burns.
Collegeville	Stearns	1,282	19	64.4	− 2.1	100	29	42	17	38	0.99	− 2.56	0.56	0	5	17	5	8	nw.	Fridolin Tembreull.
Crookston	Polk	863	23	64.1	− 0.1	100	29	37	7	35	2.41	− 1.13	0.88	0	8	22	2	6	s.	A. G. Andersen.
Detroit	Becker	1,364	16	62.9	+ 0.2	99	29	32	7†	39	1.54	− 2.61	0.65	0	7	20	5	5	sw.	G. W. Peoples.
Ely	St. Louis	.....	1	62.8	.....	96	28	36	16	42	1.99	.....	0.62	0	8	17	7	6	w.	Iver Wisted.
Fairmont (near)	Martin	1,240	25	63.4	− 3.0	96	29	38	7	34	1.87	− 2.30	0.68	0	7	12	10	8	se.	W. F. Wherland.
Faribault	Rice	1,003	14	62.6	− 3.2	95[b]	30	35[b]	7	35[b]	0.53	− 4.07	0.28	0	4	19[b]	7[b]	2[b]	se.	Alice Chambers.
Farmington	Dakota	902	24	64.0	− 2.4	95	29†	40	7	36	2.12	− 1.83	0.85	0	6	16	2	12	sw.	E. D. Akin.
Fergus Falls	Ottertail	1,210	20	64.0	− 1.4	95	29	39	16†	29	1.78	− 1.92	1.09	0	8	17	8	5	se.	C. E. Kissinger.
Fort Ripley	Crow Wing	1,136	4	60.8	.....	98	29	29	7	42	2.34	− 1.94	0.90	0	3	19	0	11	s.	J. J. Tucker.
Fosston	Polk	1,289	2	61.6	.....	97	28†	34	18	37	1.53	.....	0.69	0	7	20	7	3	nw.	O. N. Hem.
Glencoe	McLeod	1,000	15	64.7	− 0.7	95	29	35	6	35	2.15	− 2.10	2.00	0	2	28	2	0	s.	F. B. Reed.
Grand Meadow	Mower	1,338	24	62.4	− 4.3	95	29	37	7	38	3.01	− 2.30	1.24	0	7	18	7	5	se.	C. F. Greening.
Gull Lake Dam	Cass	1,215	1	.....	.....	.....	.....	36	6†	.....	1.81	.....	0.62	0	4	15	12	3	nw.	U. S. Engineer Corps.
Hallock	Kittson	815	13	62.7	− 0.1	103	29	32	18	45	0.28	− 3.28	0.13	0	5	19	5	6	s.	D. A. Robertson.
Halstad	Norman	870	6	61.4	.....	99	29	34	7	40	2.80	.....	1.03	0	10	19	2	9	se.	A. G. Holstrom.
Hinckley	Pine	1,050	7	60.7	.....	93[a]	25†	35[a]	7	39[a]	3.15	.....	1.25	0	4	10[a]	15[a]	4[a]	ne.	W. R. Newman.
International Falls	Koochiching	1,112	9	62.4	.....	101	27	27	16	41	1.71	.....	0.74	0	8	15	9	6	w.	C. Ardies.
Itasca State Park	Clearwater	1,500	1	62.0	.....	98	29	31	7	47	2.04	.....	1.00	0	8	14	11	5	s.	J. A. Stillwell.
Lake Crystal	Blue Earth	.....	4	64.0	.....	93	29	39	7	34	1.59	.....	0.75	0	3	21	4	5	s.	W. P. Cobb.
Leech Lake Dam	Cass	1,301	24	.....	.....	97	29	.....	.....	.....	1.48	− 2.72	1.26	0	6	8	18	4	sw.	U. S. Engineer Corps.
Littlefork	Koochiching	.....	2	58.6	.....	98	28	28	18	47	2.14	.....	1.23	0	6	14	15	1	.....	O. C. Olson.
Long Prairie	Todd	1,299	20	63.8	− 1.0	99	29	32	7	45	1.45	− 1.76	0.70	0	5	17	6	7	se.	A. L. Sheets.
Lynd	Lyon	1,175	19	61.8	− 3.8	96	29	32	7	37	0.97	− 3.06	0.40	0	4	18	7	5	sw.	J. W. Rouse.
Mankato	Blue Earth	758	14	.....	.....	.....	.....	.....	.....	.....	1.87	− 3.11	0.84	0	6	19	3	8	sw.	Sadie H. Blake.
Milaca	Millelacs	1,072	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Foss.
Milan	Chippewa	955	18	62.6	− 2.7	94	29	35	7	39	2.44	− 1.35	1.15	0	6	5	23	2	se.	O. K. Opjorden.
Minneapolis	Hennepin	918	21	65.2	− 2.3	94	29	46	7	28	0.94	− 3.07	0.67	0	6	14	9	7	w.	U. S. Weather Bureau.
Montevideo	Chippewa	900	22	64.8	− 1.6	98	25†	36	7	39	0.96	− 3.05	0.30	0	8	16	8	6	se.	L. G. Moyer.
Moorhead	Clay	935	31	63.0	− 1.3	98	29	38	16	38	2.03	− 2.10	1.08	0	7	21	5	4	s.	U. S. Weather Bureau.
Mora	Kanabec	.....	7	61.2	.....	96	30	34	7	43	1.63	.....	0.66	0	8	17	12	1	sw.	Hans Peterson.
Morris	Stevens	1,170	27	63.6	− 2.3	93	29	39	7	34	3.50	− 0.37	2.10	0	6	22	4	4	s.	D. T. Wheaton.
New London	Kandiyohi	1,215	18	64.8	− 0.7	95	29	38	7	30	1.78	− 2.05	0.54	0	7	13	13	4	w.	Harold Swensen.
New Richland	Waseca	1,180	18	63.6	− 3.6	96	29	38	7	31	2.45	− 1.87	0.89	0	7	16	9	5	se.	N. O. Tyrholm.
New Ulm	Brown	791	32	65.7	− 3.5	100	29	38	7	36	2.39	− 2.18	1.28	0	7	19	1	10	s.	A. L. Henle.
Osakis	Douglas	1,343	4	62.3	.....	95	29	36	7	36	1.07	.....	0.38	0	7	15	7	8	se.	J. B. Johnson.
Park Rapids	Hubbard	1,426	22	62.2	− 0.9	101	29	35	7	43	1.31	− 2.88	0.60	0	10	16	6	8	s.	Dr. P. A. Walling.
Pine River Dam	Crow Wing	1,251	25	61.0	− 3.3	97	29	34	8	46	1.46	− 3.23	0.93	0	5	11	16	3	s.	U. S. Engineer Corps.
Pokegama Falls	Itasca	1,280	25	58.2	− 3.7	94	29	30	7	41	1.78	− 2.62	1.30	0	6	18	7	5	s.	Do.
Redlake	Beltrami	1,152	4	62.9	.....	99	29	36	17	32	1.91	.....	0.80	0	4	16	9	5	n.	A. C. Goddard.
Red Wing	Goodhue	680	16	.....	.....	.....	.....	.....	.....	.....	1.62	− 2.74	1.16	0	7	18	2	10	se.	Louis Bach.
Redwood Falls	Redwood	1,050	5	64.9	.....	98[a]	30	23[a]	5	45	1.78	− 2.70	0.60	0	5	12	12	6	nw.	Hockett Brothers.
Reeds Landing	Wabasha	681	16	.....	.....	.....	.....	.....	.....	.....	1.14	− 2.93	0.55	0	3	20	0	10	se.	John Deschneau.
Rochester	Olmstead	991	7	63.8	.....	95	29†	37	7	39	1.71	.....	0.54	0	7	19	5	6	s.	Mary Cram.

TABLE 1.—*Climatological data for June, 1912. 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.
Minnesota—Continued.																				
Roseau	Roseau	1,040	3	60.6	.....	100	29	29	7†	51	0.22	.....	0.10	0	5	24	5	1	s.	M. J. Hegland.
St. Charles	Winona	850	21	63.4	− 3.6	94	29†	35	7	36	1.87	− 3.21	0.80	0	8	16	9	5	se.	S. W. Gleason.
St. Cloud	Sherburne	1,020	35	63.4	− 2.3	95	29	40	7	37	2.29	− 1.88	1.01	0	6	16	9	5	n.	J. H. Capser.
St. Paul	Ramsey	940	41	64.6	− 2.8	95	30	44	7	30	1.10	− 3.31	0.62	0	7	13	14	3	sw.	U. S. Weather Bureau.
St. Peter	Nicollet	825	17	64.8	− 2.6	94	25†	36	7	36	1.38	− 3.15	0.50	0	4	11	17	2	s.	State Hospital.
Sandstone	Pine	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. D. Hale.
Sandy Lake Dam	Aitkin	1,234	19	60.6	− 2.3	94	29	34	7	36	2.50	− 1.11	1.26	0	5	10	17	3	se.	U. S. Engineer Corps.
State Sanatorium	Cass	.....	4	61.0	.....	94	29	37	16	34	1.36	.....	1.05	0	5	19	7	4	se.	Dr. L. B. Ohlinger.
Stillwater	Washington	694	6	.....	.....	.....	.....	.....	.....	.....	1.47	.....	0.80	0	5	17	2	11	se.	Oscar Ostrom.
Taylors Falls	Chisago	759	5	63.0	.....	94	29	33	7	42	0.75	.....	0.30	0	3	21	4	5	s.	Mpls. Gen. Elec. Co.
Thief River Falls	Pennington	1,137	1	62.4	.....	102	28	30	18	42	0.37	.....	0.15	0	3	25	4	1	s.	E. W. Lown.
Tracy	Lyon	.....	.....	64.5	.....	98	30	40	7†	39	2.08	.....	0.93	0	4	18	0	12	se.	E. D. Davis.
Warren	Marshall	859	.....	64.8	.....	106	28	32	18	53	0.62	.....	0.32	0	4	14	11	5	.....	P. H. Holm.
Warroad	Roseau	1,069	2	60.7	.....	102	28	30	18	43	0.70	.....	0.27	T.	6	16	8	6	w.	G. A. Sawyer.
Winnebago	Faribault	1,100	14	64.4	− 3.1	96	29	40	7	37	2.62	− 2.13	1.07	0	7	15	9	6	se.	H. H. Haight.
Winnibigoshish	Itasca	1,300	14	61.4	− 1.7	95	28	36	7	38	1.34	− 2.33	0.88	0	5	22	4	4	nw.	U. S. Engineer Corps.
Winona	Winona	700	16	66.4	− 2.2	97	29	41	7	37	1.51	− 2.13	0.88	0	7	15	8	7	sw.	P. C. Myers.
Worthington	Nobles	1,593	17	62.5	− 3.0	94	25	36	7	35	0.83	− 3.63	0.27	0	5	15	5	10	nw.	M. P. Mann.
Zumbrota	Goodhue	917	16	62.4	− 3.9	92	29	35	7	40	3.63	.....	2.20	0	6	15	12	3	nw.	W. C. Rowell.
South Dakota.																				
Milbank	Grant	1,148	21	62.6	− 2.8	95	25	34	7	36	1.94	− 2.22	0.89	0	6	17	4	9	nw.	I. T. Patridge.
Sisseton	Roberts	1,202	6	64.4	.....	94	29	40	8†	32	1.33	.....	0.95	0	6	21	0	9	s.	George Gray.
Wisconsin.																				
Antigo	Langlade	1,489	18	61.2	− 3.1	93	29	32	7	40	0.44	.....	0.20	0	3	22	2	6	w.	Elton C. Larzelere.
Barron	Barron	1,115	21	61.0	− 2.4	91	29†	32	7	44	1.28	− 3.51	0.88	0	3	18	11	1	w.	Wm. A. Kent.
Beloit	Rock	750	46	66.8	− 1.2	95	28	44	7	40	1.78	− 2.27	0.95	0	4	19	0	11	e.	Smith Observatory.
Big St. Germain Dam	Vilas	1,590	2	59.7	.....	96	29	30	7	46	2.82	.....	1.34	0	9	18	7	5	nw.	Fred Hessen.
Brodhead	Green	812	14	66.6	− 1.0	94	29	42	7†	37	1.40	− 2.13	0.54	0	5	19	9	2	sw.	Hector D. Kirkpatrick.
Burnett	Dodge	880	8	63.0	.....	93	29	39	7	39	1.04	.....	0.49	0	8	14	8	8	sw.	Geo. W. Smith.
Cottage Grove	Dane	888	1	.....	.....	.....	.....	.....	.....	.....	1.10	.....	0.56	0	7	16	12	2	sw.	John E. Mellish.
Darlington	Lafayette	867	6	65.0	.....	93	30	38	8	39	1.21	.....	0.50	0	5	20	1	9	nw.	F. J. O'Neill.
Deerskin Dam	Forest	1,685	2	58.0	.....	91	29	27	7	55	2.19	.....	0.61	0	9	15	6	9	w.	Wm. E. O'Neal.
Delevan	Walworth	920	21	64.4	− 3.0	93	29†	41	7†	42	1.60	− 1.86	0.92	0	7	18	3	9	nw.	Elwood S. Austin.
Dodgeville	Iowa	1,116	12	64.8	− 2.0	93	30	38	7	38	0.70	− 3.85	0.30	0	4	21	0	9	ne.	Thomas Gibbon.
Downing	Dunn	983	10	61.0	− 3.4	90	29†	32	7	48	1.68	− 3.03	0.90	0	6	15	0	15	sw.	Eugene F. Stoddard.
Eau Claire	Eau Claire	800	21	64.4	− 2.4	94	29	36	7	38	1.14	− 3.52	0.32	0	6	15	12	3	w.	Robert D. Whitford.
Grand Rapids	Wood	1,021	13	63.4	− 2.9	97	29	36	7	45	0.32	− 2.80	0.10	0	5	21	5	4	n.	Willis B. Raymond.
Grantsburg	Burnett	1,095	21	63.4	− 1.4	98	28	32	7	45	2.16	− 2.64	0.83	0	5	12	12	6	sw.	Theodore Olsen.
Hancock	Waushara	1,091	20	66.0	− 0.6	94	29†	36	7	39	0.68	− 3.57	0.33	0	5	17	8	5	sw.	Frederick B. Hamilton.
Hatfield	Jackson	973	18	62.7	− 4.2	98	29	30	7	46	1.06	− 3.44	0.73	0	4	6	14	10	sw.	Walter S. Woods.
Hayward	Sawyer	1,197	21	60.3	− 3.1	95	25	29	7	46	2.28	− 1.85	1.25	0	6	14	11	5	sw.	Wm. E. Swain.
Hillsboro	Vernon	1,000	21	62.4	− 2.7	94	29	33	7	41	1.46	− 3.01	0.50	0	5	17	12	1	sw.	Emil V. Wernick.
Koepenick	Langlade	1,683	21	58.6	− 5.9	90	29	30	7	48	0.81	− 3.15	0.50	0	3	5	22	3	w.	Edward S. Koepenick.
Lac du Flambeau	Vilas	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. J. Lovett.
La Crosse	La Crosse	714	40	65.4	− 2.9	95	29	41	7	33	1.56	− 2.87	0.98	0	8	14	6	10	s.	U. S. Weather Bureau.
Lake Mills	Jefferson	897	21	64.6	− 2.0	92	29	41	7	35	1.38	− 2.76	0.41	0	9	16	11	3	sw.	S. Newton Dexter Smith.
Lancaster	Grant	1,070	21	65.1	− 2.5	92	30	40	7	35	1.42	− 2.72	1.24	0	3	14	11	5	sw.	Edward Pollock.
Long Lake	Oneida	1,592	4	58.2	.....	95	29	26	7	52	2.28	.....	0.61	0	10	19	2	9	w.	Louis Frank.
Madison	Dane	974	43	64.8	− 2.5	91	29	47	7	27	1.13	− 2.97	0.66	0	7	14	8	8	w.	U. S. Weather Bureau.
Mather	Juneau	962	8	62.6	.....	95	29	34	7	47	0.46	.....	0.30	0	5	20	1	9	w.	Frank Evans.
Mauston	do	882	16	62.2	− 3.2	94	29	34	7	43	1.12	− 3.46	0.60	0	5	18	8	4	nw.	Eugene L. Hitchcock.
Meadow Valley	do	974	21	63.6	− 1.8	96	29	32	7	44	0.40	− 3.73	0.14	0	4	9	18	3	nw.	Charles H. Johnson.
Medford	Taylor	1,420	23	62.2	− 2.9	95	29	32	7	41	0.12	− 4.98	0.12	0	1	26	2	2	w.	Wm. Zeit.
Merrill	Lincoln	1,267	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. M. Wilson.
Minocqua	Oneida	1,604	8	60.8	.....	93	29†	32	7	39	2.54	.....	0.51	0	13	13	16	1	w.	Benjamin W. Applebee.
Mondovi	Buffalo	738	4	63.4[a]	.....	97	29	34[a]	7	42[a]	3.31	.....	2.63	0	6	21	5	4	w.	Dr. Charles Hebard.
Mount Horeb	Dane	1,226	8	64.2	.....	93	29	38	7	38	0.75	.....	0.35	0	6	15	6	9	w.	W. M. Lewis.
Muscoda	Grant	666	3	66.4	.....	96	30	39	7	43	1.47	.....	0.62	0	6	23	1	7	nw.	Wm. Hessler.
Neillsville	Clark	996	22	64.6	− 1.3	98	29†	32	7	48	0.62	− 3.29	0.50	0	2	.....	.....	.....	nw.	Wm. Heaslett.
New Richmond	St. Croix	990	7	63.2	.....	96	29	35	7†	43	1.71	.....	0.57	0	6	17	11	2	sw.	Franc A. R. Van Meter.
Osceola	Polk	806	21	63.8	− 0.9	98	29	33	7	43	1.02	− 3.73	0.40	0	4	15	9	6	nw.	Charles W. Staples.
Park Falls	Price	1,492	21	61.3	.....	95	29	29	7	42	3.93	.....	0.90	0	10	17	2	8	nw.	Flambeau Paper Co.
Portage	Columbia	809	23	66.6	− 0.1	96	29	42	7	37	0.72	− 3.39	0.30	0	7	20	4	6	w.	James H. Martin.
Port Edwards	Wood	969	2	64.8	.....	95	29	35	7	45	0.22	.....	0.17	0	2	19	3	8	s.	Nekoosa-Edwards Paper Co.
Prairie du Chien	Crawford	7,690	21	66.6	− 2.8	100	30	42	7†	43	0.52	− 3.72	0.38	0	4	16	4	10	s.	James A. Gillis.
Prairie du Sac	Sauk	750	4	65.7	.....	96	25	39	7	43	1.46	.....	0.75	0	11	14	9	7	s.	Wis. River Power Co.
Prentice	Price	1,551	14	58.8	− 3.3	96	29†	28	7	44	1.44	− 3.65	0.31	0	10	9	5	16	nw.	Joseph G. Lash.
Rhinelander	Oneida	1,550	6	61.6	.....	93	29	31	7	44	1.28	.....	0.25	0	9	15	4	11	w.	Rhinelander Power Co.
Shullsburg	Lafayette	1,019	6	64.2	.....	89	29†	40	7†	33	2.38	.....	0.48	0	10	15	6	9	s.	Harrison B. Chamberlin.
Solon Springs	Douglas	1,083	6	59.7	.....	95	25	28	7	47	2.30	.....	0.90	0	4	12	8	10	sw.	John M. Sayles.
Spooner	Washburn	1,104	18	61.5	− 2.4	92	25†	33	7	42	1.46	− 2.33	0.47	0	8	15[a]	8[a]	6[a]	.....	Horace A. Bresee.
Stanley	Chippewa	1,082	8	61.8	.....	92	29	31	7	41	1.17	.....	0.76	0	4	20	4	6	se.	W. Humphrey Scott.
Stevens Point	Portage	1,113	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sugar Camp Dam	Oneida	1,582	2	.....	.....	.....	.....	.....	.....	.....	1.75	.....	0.40	0	8	16	5	9	sw.	Lyman Haskins.
Trout Lake	Vilas	.....	.....	60.7	.....	90	24	34	6	36	2.09	.....	1.05	0	6	13	12	5	sw.	F. B. Moody.
Twin Lakes Dam	do	1,625	2	.....	.....	.....	.....	.....	.....	.....	1.83	.....	0.63	0	6	17	12	1	nw.	Albert D. Hansen.
Valley Junction	Monroe	930	20	63.2	− 2.1	93	29	34	7	41	0.93	− 3.21	0.36	0	8	15	8	7	nw.	Frederick Muermann.
Viroqua	Vernon	1,412	22	65.4	− 0.3	95	29	38	7	32	2.82	− 1.61	1.70	0	10	12	11	7	nw.	Henry E. Rogers.
Vudesare	Vilas	1,600	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Louis L. Thomas.
Watertown	Jefferson	824	21	64.3	− 1.9	90	29	41	7	30	1.39	− 2.49	0.38	0	9	16	12	2	e.	Chas. J. Salick.
Waukesha	Waukesha	864	21	63.6	− 2.5	90	29	40	7	33	0.92	− 2.47	0.50	0	5	15	14	1	sw.	Carroll College.
Wausau	Marathon	1,212	17	63.0	− 1.6	94	29	35	7	38	0.56	− 3.62	0.16	0	6	21	4	5	w.	Geo. H. Halder.
Weyerhaeuser	Rusk	1,297	10	59.2	.....	94	29	28	7	45	1.27	.....	0.63	0	10	16	11	3	nw.	Miss Etta Stiles.
Whitehall	Trempealeau	675	21	62.6	− 3.6	94	29	33	7	44	0.80	− 3.50	0.30	0	3	.....	.....	.....	w.	Hans J. Haugh.
Iowa.																				
Albia	Monroe	959	14	68.4	− 1.2	97	26	42	7	37	1.50	− 3.36	1.20	0	6	19	6	5	e.	J. I. Chenoweth.
Algona	Kossuth	1,213	38	65.1	− 3.4	94	28†	37	7	32	2.30	− 2.10	1.25	0	6	18	5	7	nw.	Dr. F. T. Seeley.
Alta	Buena Vista	1,513	21	65.1	− 2.5	95	28	41	7	35	3.41	− 1.81	1.22	0	9	14	12	4	nw.	David E. Hadden.
Amana	Iowa	721	36	67.3	− 2.1	93	28	42	9	34	1.64	− 2.77	0.63	0	7	17	11	2	nw.	C. Schadt.
Ames	Story	926	36	66.6	− 2.8	99	28	41	7	40	2.98	− 1.55	1.56	0	9	12	12	6	s.	Iowa State College.
Baxter	Jasper	998	12	66.4	− 1.2	101	28	42	5	40	3.60	− 0.90	1.02	0	12	13	14	3	sw.	W. R. Vandike.

TABLE 1.—*Climatological data for June, 1912. 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—Continued.																				
Belle Plaine	Benton	828	22	66.8	− 2.3	95	27	42	7	41	2.24	− 1.93	0.84	0	6	14	8	8	nw.	S. P. Van Dike.
Belmond	Wright		2	64.3		96	29	40	7	35	2.31		1.12	0	6	5	19	6	w.	Geo. P. Hardwick.
Bloomfield	Davis		5	69.8		97	26	45	7	36	2.12		0.75	0	8	11	9	10	e.	Albert Power.
Bonaparte	Van Buren		21	68.0	− 3.2	94	26	45	7†	33	2.21	− 2.47	1.34	0						B. R. Vale.
Boone	Boone	1,134	7	65.4		95	26†	42	7	33	3.13		0.79	0	8	17	5	8		C. F. Henning.
Britt	Hancock	1,236	15	63.4	− 3.7	96	29	39	7	36	2.78	− 1.30	0.79	0	8	19	6	5	s.	L. M. Goodman.
Buckingham	Tama		12								2.52		1.17	0	8	14	13	3	ne.	J. S. Guynn.
Burlington	Des Moines	544	16	69.0	− 1.5	93	26	45	18	33	1.87	− 3.21	0.55	0	7	22	2	6	s.	Max. E. Poppe, jr.
Carroll	Carroll	1,265	22	63.8	− 4.8	95	28†	39	7	38	5.01	+ 0.34	1.40	0	10	19	3	8	ne.	Mrs. Jos. J. Wolfe.
Cedar Rapids	Linn	733	30	68.4	− 1.9	96	28†	47	7	34	3.32	− 0.55	1.31	0	5	14	6	10	w.	R. S. Toogood.
Charles City	Floyd	1,015	21	64.1	− 4.7	93	29	41	7	34	2.12	− 2.98	0.92	0	7	14	5	11	se.	U. S. Weather Bureau.
Clear Lake	Cerro Gordo	1,241	14	67.1	− 1.1	96	28	45	7	31	1.95	− 2.89	0.65	0	4	21	2	7	s.	Oscar Stevens.
Clinton	Clinton	593	45			94	28													A. E. Reid.
Columbus Junction	Louisa	595	11	68.9	+ 0.2	93	26	41	7	30	1.98	− 2.90	1.33	0	4	22	7	1	ne.	J. B. Johnston.
Davenport	Scott	580	41	69.4	− 1.5	94	30	48	7	28	3.19	− 0.92	1.52	0	7	13	11	6	e.	U. S. Weather Bureau.
Decorah	Winnishiek	875	19	63.2	− 4.2	95	30	38	9	40	3.69	− 0.31	1.80	0	6					F. H. Baker.
Delaware	Delaware	1,083	21	65.2	− 2.6	92	28†	43	7	32	1.68	− 2.50	0.46	0	9	15	15	0	se.	William Ball.
Des Moines	Polk	861	34	67.8	− 2.6	95	26	48	6	33	2.60	− 2.36	0.89	0	9	12	11	7	n.	U. S. Weather Bureau.
Dubuque	Dubuque	639	39	66.8	− 2.8	92	30	48	9	28	1.93	− 2.62	0.57	0	11	13	9	8	nw.	Do.
Earlham	Madison		10	65.6	+ 0.4	95	28	39	7	35	3.82	− 0.71	1.15	0	6	14	6	10	se.	George Phillips.
Elkader	Clayton	727	33	65.4	− 3.7	98	30	38	7	43	1.19	− 2.84	0.60	0	7	10	20	0	se.	Chas. Reinecke.
Elma	Howard		2	63.4		94	29	41	7†	35	2.37		0.64	0	9	11	14	5	se.	H. A. Moore.
Estherville	Emmet	1,298	17	63.2	− 3.6	95	28†	37	7	35	1.40	− 1.95	0.45	0	6	12	15	3	nw.	A. O. Peterson.
Fairfield	Jefferson		28	67.8	+ 2.1	91	26	45	5	33	2.01	− 3.12	1.04	0	9	16	8	6	nw.	R. M. McKenzie.
Fayette	Fayette	1,003	22	63.8	− 3.5	95	30	39	7†	39	1.03	− 4.32	0.49	0	6	17	7	6	se.	R. Z. Latimer.
Forest City	Winnebago	1,226	18	65.2	− 2.0	101	29	40	7	39	1.60	− 3.03	0.47	0	8	16	3	11	w.	J. A. Peters.
Fort Dodge	Webster	1,126	12	66.1	− 0.5	100	29	40	7	39	2.76	− 1.05	0.90	0	8				s.	J. F. Monk.
Fort Madison	Lee	516	63								3.05	− 1.33	1.30	0	7	7	11	12	s.	Miss L. A. McCready.
Gilman	Marshall	1,052	13								2.62	− 2.07	1.35	0	7					J. L. Wylie.
Grand Meadow	Clayton	1,180	21	63.6	− 2.8	88	30	41	7	27	1.23	− 3.57	0.32	0	10	12	11	7	sw.	F. L. Williams.
Grinnell	Poweshiek	1,023	20	67.8	− 0.5	97	26†	44	7	37	2.45	− 2.13	1.28	0	6	16	7	7	nw.	D. W. Brainard.
Grundy Center	Grundy	976	21	66.4	− 1.8	96	28	40	7	36	2.70	− 2.60	1.04	0	8	22	6	2	se.	J. B. Calderwood.
Guthrie Center	Guthrie	1,077	17	66.0	− 3.0	94	28	39	7	35	3.87	− 0.54	1.50	0	8	19	5	6	nw.	D. G. Beardsley.
Hampton	Franklin	1,155	22	65.4	− 2.4	94	28	41	7	33	4.15	− 0.76	1.16	0	8	10	11	9	nw.	E. C. Grenelle.
Humboldt	Humboldt	1,095	24																	
Independence	Buchanan	921	48	65.1	− 3.3	93	30	40	7	33	0.88	− 3.90	0.45	0	8	17	12	1	nw.	R. E. Dudley.
Indianola	Warren	969	21	68.0	− 1.7	95	26	45	7	31	3.52	− 0.66	1.25	0	8	8	10	12	nw.	Prof. J. L. Tilton.
Iowa City	Johnson	683	52	66.4	− 2.9	92	26	44	4†	35	2.60	− 1.98	0.75	0	6	18	3	9	nw.	Prof. A. G. Smith.
Iowa Falls	Hardin	1,170	19	63.8	− 3.7	92	26†	40	7	36	3.16	− 1.36	1.12	0	8	17	1	12	sw.	J. B. Parmelee.
Jefferson	Greene		13	65.8		98	28	42	7	37	3.62	− 0.88	1.50	0	7	15	7	8	se.	Ora M. Hall.
Keokuk	Lee	547	41	69.8	− 2.7	92	26	49	8	29	2.23	− 2.12	1.26	0	8	11	15	4	nw.	U. S. Weather Bureau.
Keosauqua	Van Buren	644	20	68.4	− 3.3	94	26	43	7†	43	2.93	− 1.62	1.34	0	5	5	13	12		J. H. Landes.
Knoxville	Marion	920	17																	Casey & Bellville.
Lacona	Warren		13								2.14	− 2.87	1.40	0	7	10	12	8		J. B. Alter.
Le Claire	Scott	576	12								2.76	− 1.33	1.03	0	8					Miss M. T. Disney.
Marshalltown	Marshall	947	20	67.2	− 1.5	98	26†	42	7	39	3.05	− 1.31	0.73	0	8	17	7	6	ne.	Ralph B. Reasoner.
Mason City	Cerro Gordo	1,132	15	63.2	− 4.0	94	29	38	7	35	1.94	− 3.95	0.70	0	6	14	10	6	se.	J. S. Mills.
Monroe	Jasper			66.8		95	28	42	4	34	2.21		1.11	0	6	15	6	9	nw.	J. A. Dibel.
Mount Pleasant	Henry	729	31	68.2	− 3.2	92	26	45	5	32	3.96	− 0.52	1.93	0	10	15	13	2	sw.	J. W. Edwards.
Muscatine	Muscatine		52								1.41	− 3.45	0.52	0	9					William Molis.
New Hampton	Chickasaw	1,169	15	64.6	− 1.7	95	29	42	8	33	2.32	− 1.93	0.60	0	8	19	10	1	w.	A. F. Kemman.
Northwood	Worth	1,122	16	62.8	− 3.2	92	29	40	7	33	2.31	− 2.57	0.63	0	8	16	4	10	nw.	Chas. H. Dwelle.
Olin	Jones	760	14	67.6	− 0.6	94	26	41	9	38	2.33	− 1.41	0.60	0	6	16	14	0	nw.	Dr. F. W. Port.
Osage	Mitchell	1,184	25	64.2	− 1.9	94	29†	40	7	34	2.32	− 2.21	1.20	0	4	17	8	5	se.	Lester Coonradt.
Oskaloosa	Mahaska	843	36	67.8	− 1.7	94	28	45	4-7	36	2.48	− 1.63	1.19	0	7	16	1	13	se.	Joseph Boyd.
Ottumwa	Wapello	649	17	70.0	− 1.2	96	26	45	7	34	2.69	− 1.39	1.72	0	5	20	6	4	nw.	Chester Potter.
Pella	Marion	877	10	67.2	− 4.1	95	27	41	7	41	2.11	− 1.67	0.91	0	8	21	1	8	nw.	J. H. Ver Steeg.
Perry	Dallas	975	11	65.8	− 4.5	94	28	41	7	36	3.27	− 1.42	1.56	0	8	16	7	7	nw.	S. J. Brumfield.
Plover	Pocahontas	1,426	16																nw.	J. S. Smith.
Pocahontas	do	1,248	8	63.6		94	26†	38	7	34	3.66		1.41	0	9	17	8	5	s.	F. E. Hronek.
Ridgeway	Winneshiek	1,215	14	65.4	− 2.9	97	29	41	7	34	3.61	− 0.54	1.83	0	7	18	7	5	s.	Arthur Betts.
Rockwell City	Calhoun		16	66.2	− 2.3	96	28	40	10	41	4.07	− 0.19	1.40	0	6	22	6	2		C. M. Randall.
Sac City	Sac	1,278	36	64.6	− 3.6	93	29	42	7	32	3.57	− 1.29	1.30	0	10	11	11	8	sw.	E. N. Baily.
St. Charles	Madison	1,070	11	67.4	− 1.2	95	28	45	7	31	3.48	− 0.86	1.14	0	9	13	13	4	nw.	R. D. Minard.
Sigourney	Keokuk	877	16	68.9	− 1.9	96	25	42	7	36	1.40	− 2.58	0.85	0	6	2	28	0	nw.	J. T. Parker.
Stockport	Van Buren	745	10	67.6		94	26	41	9	37	3.55	− 2.81	1.03	0	11	11	14	5	se.	C. L. Beswick.
Storm Lake	Buena Vista	1,440	23	65.6[d]	− 1.4	93[d]	26†	40[d]	7	32[d]	3.75	− 1.04	1.65	0	7					Prof. W. Ingold.
Tipton	Cedar	807	13	70.8	+ 0.9	96	26†	49	7	33	3.71	− 0.23	2.13	0	6	17	13	0	s.	F. K. Gregg.
Toledo	Tama	856	18	65.8	− 3.4	93	30	40	7	36	2.93	− 0.60	1.44	0	6	19	3	8	nw.	I. F. Giger.
Wapello	Louisa	588	14	68.8	− 0.8	90	27	46	7	32	1.05	− 2.51	0.72	0	3				n.	G. M. Schofield.
Washington	Washington	769	30	69.0	− 2.7	95	25†	45	7	32	1.17	− 2.34	0.58	0	6	11	16	3	sw.	Wm. A. Cook.
Waterloo	Black Hawk	862	29	65.4	− 2.8	92	26	42	7	31	2.60	− 1.26	1.15	0	8	23	2	5	e.	Ralph B. Slippy.
Waukee	Dallas	1,039	9	66.2		93	26†	41	7	32	3.55		0.94	0	11	17	7	6	sw.	Samuel F. Foft.
Waverly	Bremer	948	16	65.6	− 1.9	95	28†	37	7	38	2.08	− 2.17	0.87	0	6	19	8	3	e.	Earl C. Moore.
Webster City	Hamilton		7	67.6		100	28	40	6	42	3.84		1.44	0	7	14	11	5	se.	C. D. Carpenter.
West Bend	Palo Alto	1,197	19	64.6	− 2.8	95	28†	41	6	36	2.26	− 1.96	1.40	0	9	16	9	5	se.	Phil. Dorweiler.
Whitten	Hardin	1,036	15	65.4	− 2.5	95	29	40	7†	43	3.07	− 1.26	0.55	0	8	15	13	2	sw.	Dr. F. P. Butler.
Winterset	Madison	1,129	21	68.0	− 2.1	98	28†	42	7	34	3.73	− 2.10	0.92	0	8	10	8	12	s.	Dr. R. S. Cooper.
Missouri.																				
Gorin	Scotland	700	27								3.76	+ 0.13	1.53	0	8	6	12	12	ne.	J. W. Pulliam.
Hannibal	Marion	534	22	69.6	− 3.7	91	26	51	8	29	3.54	+ 0.02	1.24	0	13	15	7	8	sw.	U. S. Weather Bureau.
Louisiana	Pike	500	35	69.0	− 2.6	95	12	44	9	40	4.94	+ 0.75	2.10	0	9	17	4	9	se.	J. T. Farrel.
Mexico	Audrain	797	35	69.1	− 4.2	92	12	49	7	31	2.92	− 2.42	0.88	0	9	16	2	12	s.	J. F. Llewellyn.
Palmyra	Marion		1	70.2		92	26	50	7†	32	2.44		1.01	0	7	9	15	6	sw.	W. B. Markell.
Steffenville	Lewis	576	19	71.5	− 0.5	100	26	46	7	40	2.16	− 1.83	0.72	0	10	12	12	6	ne.	Frank Hall.
Sublett	Adair	1,000	32	69.7[g]	− 2.2	93	27	45	7†	38						9[g]	11[g]	3[g]	se.	Lewis Spriggs.
Vandalia	Audrain	776	2	70.0		92	12	49	7†	33	3.76		1.12	0	7	17	2	11	s.	C. B. Ellis.
Warrenton	Warren	865	23	68.8	− 4.5	90	12	50	7†	33	5.26	+ 0.73	2.13	0	10	12	8	10	e.	Prof. J. H. Frick.
Indiana.																				
Collegeville	Jasper		13	67.0	− 1.3	90	26†	38	8	43	3.90	+ 0.25	0.97	0	8	8	19	3	sw.	Otto Miller.
Knox	Starke	716	7	66.7		87	28†	38	8	32	3.53		1.06	0	11	16	12	2	s.	W. R. R. Tatman.
Laporte	Laporte	810	16	66.3[d]	− 2.2	89[d]	29	37[d]	8	41[d]	2.79	− 0.51	1.04	0	8	14[b]	8[b]	6[b]	sw.	Wm. M. Walton, jr.
Plymouth	Marshall	790	9	64.8		86	26	37	8	32	2.14		0.55	0	9	15	12	3	sw.	J. W. Siders.
South Bend	St. Joseph	726	19	67.2	− 1.4	90	27†	40	8	33	1.37	− 1.81	0.44	0	8	16	13	1	sw.	Henry H. Swalm.

TABLE 1.—*Climatological data for June, 1912. 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.		
Illinois.																				
Aledo	Mercer	738	12	68.4	− 0.9	92	26	44	8	30	2.09	− 1.25	0.65	0	6	14	13	3	se.	William B. Frew.
Alexander	Morgan	670	19	68.4	− 3.6	91	26	43	8	33	4.64	+ 1.04	1.61	0	13	5	15	10	sw.	George H. Hall.
Antioch	Lake	861	11	65.0	− 1.2	92	29	42	8	38	2.02	− 1.05	0.70	0	5	11	14	5	ne.	J. C. James.
Astoria	Fulton	650	13	67.0	− 2.0	88	26	43	8	30	2.78	− 1.16	0.62	0	11	16	9	5	s.	Edward V. Bohl.
Aurora	Kane	687	33	65.4	− 3.4	90	30	38	8	36	1.52	− 2.19	0.56	0	7	14	10	6	ne.	W. Holden.
Beardstown	Cass	448									1.57	− 1.71	0.40	0	8					Mrs. L. M. Rice.
Bement	Piatt	700	5	68.8		92	26	39	8	34	2.33		1.63	0	8	16	10	4	s.	Rev. C. S. Adams.
Bloomington	McLean	840	21	69.0	− 2.8	93	26†	37	8	37	3.19	− 0.48	1.29	0	9	15	10	5	n.	Prof. H. N. Pearce.
Cairo	Alexander	359	40	71.5	− 3.7	86	16	54	8	22	4.69	+ 0.38	2.54	0	12	5	10	15	se.	U. S. Weather Bureau.
Carbondale	Jackson	412	7	70.2		93	12	46	8	38	4.69		2.31	0	12	14	12	4	sw.	State Normal University.
Carlinville	Macoupin	663	22	70.0	− 2.9	92[a]	26†	41	8	41[a]	1.65	− 2.50	0.59	0	9	17	10	3	s.	W. T. Eddy.
Carlyle	Clinton	470	27								3.54	− 1.01	1.70	0	7					Hervey O. Jones.
Chester	Randolph	380	20																	F. A. Gollon.
Clinton	Dewitt	727	2	68.0[a]		91[a]	26	40[a]	8	32[b]	1.48		0.41	0	10	20	6	4	e.	J. Frank Ziegler.
Coatsburg	Adams	763	20	70.8	− 1.1	93	27	46	8	32	2.63	− 1.58	0.95	0	8	18	6	6	s.	Dr. J. R. Lambert.
Cobden	Union	656	29																	John Buck.
Dakota	Stephenson	929	7	64.3		88	28†	43	7	37	1.56		0.52	0	8	12	17	1	sw.	Rev. G. W. Kerstetter.
Decatur	Macon	685	21	69.0	− 2.9	91	12†	43	8	33	3.41	− 0.15	1.13	0	12	17	9	4	se.	Prof. J. H. Coonradt.
Dixon	Lee	725	22	67.1	− 2.5	90	25†	41	8	33	1.63	− 1.75	0.54	0	7	19	7	4		H. U. Bardwell.
Du Quoin	Perry	459	24	69.8	− 5.2	89	12	49	8	32	5.89	+ 2.21	1.85	0	10	11	13	6	sw.	G. H. Knetzger.
Dwight	Livingston	600	19	67.6	− 2.2	92	26†	36	8	35	2.84	− 0.94	1.86	0	8	11	10	9	ne.	Edward O. Welch.
East St. Louis	St. Clair	481	1								6.52		3.00	0	9					W. McK. Brown.
Edwardsville	Madison	554	13								4.82	+ 0.14	1.58	0	7					W. H. Morgan.
Elgin	Kane	716	5	66.4		90	27	41	8	36	1.25		0.44	0	7	17	12	1	ne.	Elgin Observatory.
Ewing	Franklin	449	1																	Ewing College.
Fairview	Fulton	733	1								1.09		0.40	0	10					Abram Wilson.
Galva	Henry	842	20	68.8	− 1.4	93	26	41	8	33	2.56	− 1.26	1.39	0	9	14	4	12	nw.	Prof. F. U. White.
Grafton	Jersey	422	19								4.18	+ 0.37	1.32	0	10					R. C. Goodrich.
Greenville	Bond	635	34																	M. S. Oudyn.
Griggsville	Pike	650	27	69.0	− 3.6	90	26	48	8	29	5.26	+ 1.15	2.05	0	11	17	6	7	w.	George F. Kneeland.
Havana	Mason	475	20	70.0		94	26†	41	8	35	2.10		0.52	0	15	14	9	7	nw.	L. L. Eutenener.
Henry	Marshall	500	24	68.5	− 1.8	93	26	40	8	33	1.78	− 2.31	0.62	0	8	20	5	5	ne.	Dr. F. A. Powell.
Hillsboro	Montgomery	675	18	69.8	− 3.0	90	12†	42	8	34	3.03	− 0.86	0.58	0	10	20	2	8	s.	Ira L. Woodward.
Joliet	Will	542	21	66.6	− 2.2	93	28	34	8	40	2.46	− 0.84	0.76	0	4	21	7	2	sw.	F. M. Muhlig.
Kishwaukee	Winnebago	730	24	65.6	− 2.9	91	29	42	9	36	3.85	− 0.25	2.08	0	9	19	7	4	sw.	George Stevens.
La Grange	Cook	657	20	65.0	− 3.1	89	28†	39	8	35	2.01	− 1.85	1.08	0	5	15	14	1	n.	Prof. F. E. Sanford.
La Harpe	Hancock	698	33	68.2	− 3.2	93	26	42	8	36	2.17	− 2.05	0.79	0	8	23	6	1	ne.	George E. Campbell.
Lanark	Carroll	883	23	65.8	− 2.0	93	29	36	8	40	2.47	− 1.55	1.11	0	9	22	6	2	ne.	M. N. Wertz.
La Salle	La Salle	536	7	68.1	− 2.0	92	26	41	8	33	2.77	− 1.22	1.18	0	10	16	9	5	ne.	U. S. Weather Bureau.
Lincoln	Logan	482	24	68.0	− 3.5	93	26	38[a]	8	39[a]	2.45	− 1.12	0.41	0	12	17	9	4	s.	Prof. C. S. Oglevee.
Loami	Sangamon	624	12								3.12	− 0.17	1.02	0	11	6	7	17	sw.	H. C. Foster.
Macomb	McDonough	700	8								1.48		0.49	0	10					State Normal University.
Manteno	Kankakee	711	1								2.34		1.12	0	8	21	6	3	sw.	J. F. Schmeltzer.
Martinton	Iroquois	633	25	68.4	− 1.5	94	28	38	8	40	4.98	+ 1.33	1.00	0	7	18	6	6	sw.	Joseph H. Peltier.
Mascoutah	St. Clair	425	22	70.2	− 3.9	93	27	44	8	36	6.48	+ 1.95	3.70	0	9	15	8	7	se.	George Henrich.
Minonk	Woodford	745	19	69.6	− 0.8	95	26	39	8	38	4.03	+ 0.79	2.00	0	10	14	11	5	nw.	M. H. Pfaffle.
Monmouth	Warren	784	20	68.6	− 2.2	95	26	41	8	36	1.80	− 1.73	0.88	0	5	12	6	12	n.	Dr. J. C. Hutchison.
Morris	Grundy	518	1	67.4		94	30	38	8	40	1.65		0.68	0	8	16	9	5	ne.	E. G. Cryder.
Morrison	Whiteside	685	18	66.2	− 2.4	91	28†	43	9	32	2.62	− 0.97	0.95	0	11	18	8	4	nw.	S. A. Maxwell.
Morrisonville	Christian	638	13	68.0	− 2.7	89	26	40[a]	8	32[a]	1.78	− 1.92	0.42	0	10	15	10	5	s.	J. D. Lowis.
Mount Vernon	Jefferson	511	18	69.4	− 4.6	89	12	48	8	34	5.64	+ 1.45	3.11	0	8	15	9	6	n.	Theodore P. Stelle.
Nashville	Washington	503	12								4.08	+ 0.13	1.32	0	9					H. M. Potter.
Oregon	Ogle	702	3	66.0		90[a]	28†	40	8	34[a]	3.36		1.38	0	8	14	5	11	s.	Samuel Ray.
Ottawa	La Salle	500	26	69.0	− 1.9	93[a]	27	40	8	35[a]	2.09	− 1.41	1.09	0	6	18	3	9	ne.	Miss Maude M. Harris.
Pana	Christian	692	26	69.6	− 2.1	89	26	42	8	31	3.14	− 0.94	0.86	0	12	22	4	4	sw.	C. W. Sibley.
Peoria	Peoria	609	56	68.4	− 2.5	91	26	44	8	33	1.86	− 2.44	0.55	0	12	7	19	4	s.	U. S. Weather Bureau.
Pontiac	Livingston	546	10	69.4	− 1.1	95	27	39	8	35	2.34	+ 0.11	0.75	0	11	5	22	3	se.	George Butterworth.
Quincy	Adams	481	6	72.5		96	26†	51[a]	7	30[a]	2.53		1.33	0	8					Fred J. Brinkoetter.
Riley	McHenry	956	53	65.1[a]	− 2.1	90[a]	28†	44[a]	7	32[a]	5.91	+ 1.92	3.20	0	8	9	13	8	ne.	John West James.
Roberts	Ford	774	1								2.72		1.37	0	10	18	8	4	s.	R. E. Bradbury.
Rockford	Winnebago	763	20	65.4	− 3.8	90	29	44	8	32	3.78	− 0.32	1.32	0	9	22	3	5		Hosmer C. Porter.
Rushville	Schuyler	670	21	69.2	− 2.9	89	26	48	8	26	1.79	− 1.68	0.60	0	9	20	4	6	ne.	H. F. Dyson.
St. Charles	Kane	700	17	66.5	− 2.4	91	25	39	8	35	3.24	− 0.03	1.11	0	8	14	16	0	nw.	Dr. William H. Bishop.
St. Peter	Fayette	500	10	69.2	− 3.2	90	12†	43	8	31	4.70	+ 0.73	1.73	0	9	11	15	4	ne.	M. L. Lansford.
Sparta	Randolph	538	26	69.8	− 4.0	91	12	47	8	32	3.95	+ 0.44	1.39	0	12	17	8	5	se.	James A. Caldwell.
Springfield	Sangamon	644	32	69.8	− 2.5	90	26	45	8	28	3.13	− 1.18	1.60	0	11	11	12	7	s.	U. S. Weather Bureau.
Streator	La Salle	696	19	68.8	− 1.9	93	26†	39	8	39	1.15	− 2.15	0.43	0	8	21	2	7	sw.	Miss Lora Sweetser.
Sullivan	Moultrie	530	12	69.8	− 1.4	92	26†	41	8	33	3.20	− 0.62	1.51	0	8	12	14	4	sw.	C. A. Corbin.
Sycamore	De Kalb	855	32	66.8	− 1.2	93	28†	37	8	43	2.34	− 1.74	0.94	0	7	18	4	8	nw.	Miss Edna J. Davis.
Tiskilwa	Bureau	798	28								1.81	− 1.74	0.66	0	10					F. I. Smucker.
Walnut	do	717	21	68.3	− 2.8	91	26†	41	8	33	3.75	+ 0.05	1.51	0	12	17	10	3	sw.	O. C. Nussle.
Warsaw	Hancock	501	14								3.20	− 1.08	1.58	0	7					W. R. Kirkbride.
Waterloo	Monroe	719	1								4.37		1.33	0	10					Prof. James E. Raibourn.
White Hall	Greene	573	4	68.1		90	26	44	8	35	4.35		1.65	0	13	20	5	5	sw.	R. V. Smith.
Windsor	Shelby	681	13	68.8[a]	− 2.4	93[a]	26	40	8	35[b]	3.62	− 0.13	0.95	0	14	7	17	6	s.	Herbert Rose.
Winnebago	Winnebago	900	25	66.2	− 2.1	94	29	42	8	39	3.36	− 0.60	1.55	0	7	19	7	4	nw.	Frank Osborn.
Yorkville	Kendall	584	25	65.8	− 2.7	91	28†	35	8	42	2.52	− 1.40	1.65	0	8	19	10	1	w.	Herman A. Grimwood.
Zion	Carroll	938	18			93[a]	30				2.71	− 0.82	1.89	0	4	21	6	3	e.	Robert F. Gillogly.

[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, 1912. District No. 5, North Dakota.*

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			.15		T.	T.					.48		T.	.83	.71	.65	.04	T.													2.86
Bottineau	Mouse		.03	T.	.03		.03				.02	.02			.19	.40					.15	T.										0.87
Bowbells	do			.04	.02	.03									.08	.97																1.14
Cando	Sheyenne					.10					.14			.47	1.11	.30																2.12
Crosby	Mouse		.19	T.	.04	T.				T.					.18	1.22													T.			1.63
Devils Lake	Sheyenne		.02	.04	.04	.09					.45			.68	.43	.44		T.		.76												2.95
Donnybrook	Mouse		.07	T.	.16	T.									*	1.41																1.64
Dunseith	do			.09		.04				.03	.01			.21	.52	.23	T.												.01			1.14
Edmore	Sheyenne																															
Fessenden	James																															
Forman	Sheyenne	T.			.05					T.			1.00	.10		1.35	.10		.18								T.				2.78
Grafton	Red					.03						.57			.40	.04					.02					.05						1.11
Granville	Mouse		.03		.10	.02				.02					.70	.64																1.51
Hannah	Pembina			T.		T.								.04	.10					.05					.02				T.			0.21
Hansboro	Red			.07		.08					.22				.54	.11																1.02
Hillsboro	do		.03			.10						.34		.73	.16	1.08	T.	.08		.01												2.53
Lakota	Sheyenne		.25	.10	T.	.05					.23	.04		.88	.10	.21				.68									T.			2.54
Langdon	Pembina											.25			.26	.06																0.51
Larimore	Red			.50	.02	.02	.01					.12			.83	.38																1.88
Lisbon	Sheyenne			.02		.05						.34		.51	1.16	.42	1.22	.02	.01													3.75
McKinney	Mouse		T.	.12	T.	T.								T.	.92																	1.04
McLeod	Sheyenne					T.						.05		.55	1.95	1.05	.07															3.67
Manfred	do		T.	T.		.17					.28			.42	1.10	1.26				.04	.04											3.31
Mayville	Red		T.	T.	.05							.35		.80	.20	1.28	T.	.03														2.71
Minot	Mouse				.14	.07	T.				T.	.05			.07	1.04	.25															1.62
Minto	Red		.14	.06		.03					.22			.50				T.		.15						T.						1.10
Oriska	Sheyenne		.25			.01						.23		1.22	.05	.68																2.44
Park River	Red		.12	T.							.01	.31		.10	.18	.08	T.	T.														0.80
Pembina	do			T.		.02	.04	T.				.04			.04																	0.14
Power	Sheyenne		.12		T.						.75			.62		1.32	T.			T.	T.											2.81
Pratt	Mouse																															
Towner	do			T.						T.	.25			.10	.57	.74																1.66
University	Red		.39	T.	.07	.07					T.	.01		.44	.04	.11	.02	.02		.02												1.19
Wahpeton	do																															
Walhalla	Pembina		.08	.04	.14	.01									.24																	0.51
Westhope	Mouse			.05		.02								.07	.42	.30																0.86
Willow City	do		T.		T.	T.					T.			.20	.36	.53																1.09
Minnesota.																																
Albert Lea	Mississippi	.50				T.					T.	.35		.55		.65			T.		.02											2.07
Alexandria ‖	do			.18							T.			.05	.22	.53	.22	T.														1.20
Angus	Red		.64	.02		.10						.06		.10			T.			.13						.08						1.13
Bagley	do		.08			.18	.03				.28			.04		.33	.05			T.										.35		1.34
Baudette	Rainy		T.	.06	.17	.19						.02						.10													.80	1.34
Beardsley	Minnesota		.08			.07					T.	.24		.92	.27	.06																1.64
Beaulieu ‖	Red																															
Bemidji ‖	Mississippi	.02		.04	.01	.05		.01	.01			.08	.10		.12																	0.44
Bird Island	Minnesota		T.								.03			1.06	.42	.11						.03									T.	1.65
Brainerd	Mississippi		.01			.03								.05	.07	.93	.25			.08												1.42
Caledonia ‖	do	.15	.80	.04	T.	.08		T.				T.		T.	.18	.22				T.												1.47
Campbell ‖	Red		.05	.06							T.	.06	.02	.37	.30	.25	.35															1.46
Cass Lake ‖	Mississippi			.05	T.		.05									.35		.05									T.					0.50
Collegeville	do											.07		.28	.07	.56				.01										T.		0.99
Crookston ‖	Red			.17	.06	T.	.06		T.			T.			.53	.88	.63	T.	.04	.04												2.41
Detroit ‖	do		T.	.12	.02	.05	T.					.05			.10	.65	.55	T.	T.													1.54
Ely	Rainy				.12	.18						.62			.21	.38	.02													.38	.08	1.99
Fairmont (near)	Minnesota	.44		.06	T.								*	.68	.10				.08		.16										.35	1.87
Faribault	Mississippi		T.	.02						T.				.28						.18											.05	0.53
Farmington	do	.26	T.	.10			T.				T.	T.		.85	.53	.21															.17	2.12
Fergus Falls	Red		.02			.02						.02		.15	.40	1.09	.06			.02												1.78
Fort Ripley ‖	Mississippi														.56	.90	.88															2.34
Fosston	Red		.10	.01		.25					.69			.08		.33	.07															1.53
Glencoe	Mississippi														2.00																.15	2.15
Grand Meadow	do	1.24	T.	T.	T.	.11					T.	.11		.51		.30				.27											.47	3.01
Gull Lake Dam ‖	do		.47		T.	T.					T.			.22	.62	.50			T.													1.81
Hallock	Red		.03	.08		T.								.13	.02		.02															0.28
Halstad ‖	do			.15	.02	.14	.02					1.03			.81	.20	.38	.01	.04													2.80
Hinckley	St. Croix			1.25											.40	1.25	.25															3.15
International Falls	Rainy		.06	.10	.08	.26						.36						.07										.04			.74	1.71
Itasca State Park	Mississippi		.09			.15						.18		.04		1.00	.51		.02	.05												2.04
Lake Crystal	Minnesota	.32												.75		.52																1.59
Leech Lake Dam	Mississippi		.06		.01	.04									.03	1.26	.08															1.48
Littlefork	Rainy			.08	.08	.35	.02					.38																			1.23	2.14
Long Prairie	Mississippi		.30											.30	.05	.70	.10															1.45
Lynd	Minnesota		.08			.10					T.			.40	.39																	0.97
Mankato ‖	do		.36	.14		.10									.84	.36						.07										1.87
Milaca	Mississippi																															
Milan	Minnesota					.14					.43			.64	1.15	.05					.03											2.44
Minneapolis	Mississippi		.08			.01					T.	T.		.65	.02	.14															.04	0.96
Montevideo ‖	Minnesota			.05		.06			T.			.06		.30	.15	.28					.02									.04		0.94
Moorhead	Red		.04			.06					.50	.04		.30	.10	.99	T.	T.														2.03
Mora	St. Croix			.35	.07	.03	.04							.11	.66	.15	.22															1.63
Morris	Minnesota						.03				T.	.15		.63	2.10	.57	.02															3.50
New London	Mississippi		.38			.02						.15		.35	.24	.54					.10											1.78
New Richland	Minnesota	.47		.08		T.					T.	.06		.89	T.	.37					.06										.52	2.45
New Ulm ‖	do	.10	T.	.22	.10	.04						T.		.18	.47	1.28																2.39
Osakis	Mississippi		.09								.02	.05		.38	.05	.34	.14															1.07
Park Rapids ‖	do	.01		.14	.07		.09						.01		.09	.25	.60	.02			T.										.03	1.31
Pine River Dam	do		.10	.16											.12	.93	.15			T.										T.		1.46
Pokegama Falls	do		.02			.11						.14			.08	1.30	.13	T.														1.78
Redlake	Red		.31			.40						.40				.80	T.															1.91
Red Wing ‖	Mississippi	02	.26	T.	.02	.02		T.				.02		T.	1.16	.12																1.62
Redwood Falls	Minnesota		.30											.60	.20	.33															.35	1.78
Reeds Landing ‖	Mississippi		.50		.09										.55																	1.14
Rochester ‖	do	.07	.54	.02	.25									.22	.50	.11																1.71
Roseau	Red		.03	.10		.04						.03																		.02		0.22
St. Charles	Mississippi	.80		.18		.05						.17		.37	.06	.12															.12	1.87
St. Cloud	do													.22	.26	.52	.06				.22									1.01		2.29
St. Paul	do		.12			.01	T.				T.	.01		.49	.13	.07	T.														.27	1.10

TABLE 2.—*Daily precipitation for June, 1912. 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. Peter	Minnesota	.30		.25										.50		.33																1.38
Sandstone ‖	St. Croix																															
Sandy Lake Dam	Mississippi		.34		T.	.12		T.			T.				.60	1.26	.18														2.50
State Sanatorium	do		T.	.05		.20			.04							1.05	.02														1.36
Stillwater ‖	St. Croix			.20								.02	T.		.80	.09	.36														1.47
Taylors Falls	do				T.								.20	.25	.30																	0.75
Thief River Falls ‖	Red				.15							.14				.08																0.37
Tracy	Minnesota			.15		.10									.90	.93																2.08
Warren	Red		.28	.32								.01		.01	T.		T.															0.62
Warroad	Rainy		.05	.10	.08	.17	.03	T.																						.27		0.70
Winnebago ‖	Minnesota	.10	.50	T.	.04						T.	T.		.40	.39	1.07				T.	T.	.12										2.62
Winnibigoshish	Mississippi		.08		.20							.10				.88	.08															1.34
Winona	do	.88	T.	.15		.01	T.					.02	.18	.20	T.	.07															T.	1.51
Worthington ‖	Des Moines		.25											.27	.21					.01	.09											0.83
Zumbrota	Mississippi	.32		.04		T.	T.				T.			.80	.11	.16															2.20	3.63
South Dakota.																																
Milbank ‖	Minnesota					.06						.53		.17	.21	.89					.08											1.94
Sisseton ‖	do			T.							.20		.95	.02	.02	.02				.12												1.33
Wisconsin.																																
Antigo	Wisconsin	.11	.13		T.	T.	T.		T.			T.	.20	T.		T.											T.					0.44
Barron	Chippewa		T.			T.						.16		T.	.88	.24																1.28
Beloit	Rock	*	.45		.14									.24	*	.95																1.78
Big St. Germain Dam	Wisconsin	.13	T.	.45	.14	.04	T.					.27	T.		.05	.19	.21													1.34		2.82
Brodhead	Rock	.23	.41	T.		T.								T.	.54					.12	.10											1.40
Burnett	do	.49		.05		T.	T.					.12	.08	.03	.22	.03				.02											T.	1.04
Cottage Grove	do	.22	.34	T.			T.					T.	.07	.15	.08	.07				.17	T.						T.				T.	1.10
Darlington	do	.10	.50												.40					.20		.01										1.21
Deerskin Dam	Wisconsin	.10		.42	.08	.24						.19				.61	.10				.09										.36	2.19
Delevan	Rock	.92		.06		T.						.02		.05	.47	.02				T.	T.										.06	1.60
Dodgeville	do	.30												.10	.20																T.	0.70
Downing	Chippewa	.12	T.	.11	T.	T.	T.							.20	.20	.15															.90	1.68
Eau Claire	do	.31		.13	T.	T.						.02	.05	.32	.31																	1.14
Grand Rapids ‖	Wisconsin		.05		.08	.10	.05					T.	.04		T.	T.																0.32
Grantsburg	St. Croix		.40		T.							.17		.22	T.	.83			.54													2.16
Hancock	Wisconsin	T.	.33	.05		T.									.12	.05			T.												.13	0.68
Hatfield	Black	.73	.25		.03							.05																				1.06
Hayward	St. Croix			.52	.20			.03				.20		.08		1.25																2.28
Hillsboro	Wisconsin	.20	.50	T.		T.	T.					.25		T.	.13	.38				T.												1.46
Koepenick	do				.50	.21						.10																				0.81
Lac du Flambeau	Chippewa																															
La Crosse	Mississippi	.98	.02	.07		T.	.01				T.	T.		.10	T.	.16			.01												.21	1.56
Lake Mills	Rock	.23	.41	.02								.02	.13	.04	.25	T.				.14							.14					1.38
Lancaster	Mississippi	1.24													.11																T.	1.42
Long Lake	Wisconsin	.19	.05	.49	.07	.37						.29			.03	.47	.14				.18											2.28
Madison	Rock	.58	.08	T.		T.						.02		.06	.16	T.			T.	.01	.22						T.					1.13
Mather ‖	Wisconsin	T.	.30		.08		T.					T.	.03		.03	.02				T.												0.46
Mauston	do		.60		.02							.05			.25	.20																1.12
Meadow Valley	do	.12	.14	.09	T.	T.	T.					T.		.05	T.																	0.40
Medford	Black	.12												T.																		0.12
Merrill	Wisconsin																															
Minocqua	do	.13	.05	.45	.06	.15						.28	.02	T.	.10	.03	.48									T.	.26			.51	.02	2.54
Mondovi	Mississippi	.30	.02	.09			.01					T.		.26	T.																2.63	3.31
Mount Horeb	Rock	.06		T.									.08	.12	.04	T.				.35	.10						T.			T.		0.75
Muscoda ‖	Wisconsin		.51			T.										.10	.10			.10								T.		.62	.04	1.47
Neillsville	Black	.12	.50																													0.62
New Richmond	St. Croix			.57			.10				T.			.47	.25	.18	T.														.14	1.71
Osceola	do		.10				T.				T.	T.		.40		.32				.20												1.02
Park Falls	Chippewa	T.		.80	.10	.13	T.					.29	.09	T.	.61	.70	.13									.90	.18					3.93
Portage	Wisconsin	.10		.01	T.	T.						.21	.30	.03	.03					.04	T.						T.					0.72
Port Edwards	do			.17		.05																										0.22
Prairie du Chien ‖	Mississippi		.38			.04						T.			T.	.04				.06								T.				0.52
Prairie du Sac	Wisconsin	.24	.14	.02		.03						T.	.10	.07	.03	.01				.02										.75	.05	1.46
Prentice	Chippewa	.21	.06	.19	.03	.07	T.		T.			.22			.31	.08	.06														.21	1.44
Rhinelander	Wisconsin			.13	.11	.17						.22	.02		.02	.25	.20										.16					1.28
Shullsburg	Mississippi	.14	.23			.10							.16	.11	.35	.25				.34	.22										.48	2.38
Solon Springs	St. Croix			.50	T.	T.		T.							.60	.30										.90						2.30
Spooner	do			.39	.05	T.					.02	.27		.08	.03	.47	.15									T.						1.46
Stanley	Chippewa	.76			T.		T.					.17		.10	.14																	1.17
Stevens Point	Wisconsin																															
Sugar Camp Dam	do	.35		.40	.12	.15						.20			.07	.40	.06								T.				T.			1.75
Trout Lake	do			.31	.07	.16	T.					.25	T.		.25	1.05										T.				T.		2.09
Twin Lakes Dam	do	.15		.60		.23						.12				.63															.10	1.83
Valley Junction	do	.17	.36	.17		.04	.03					.05		.07	.04					T.												0.93
Viroqua	Mississippi	.21	.33	.03		.04	T.					.04	.27		.08	.09				.03											1.70	2.82
Vudesare	Wisconsin																															
Watertown ‖	Rock		.15		.06		T.					.06	.18		.12	.09				.20	T.							.15			.38	1.39
Waukesha	Fox		.50	.01									.20	T.	.10					.11												0.92
Wausau	Wisconsin	.08	.16	.08	.04							.15		T.		.05																0.56
Weyerhaeuser	Chippewa	T.	.01	.09	.02	.02	.02				T.	T.	.01	.15	.63	.30	.02									T.						1.27
Whitehall	Mississippi	.30		.30										.20																	T.	0.80
Iowa.																																
Albia ‖	Des Moines		T.				1.20					.01		.21	.04			.01		.03												1.50
Algona	do	.35				.15					.15	.15		1.25		.25			T.		T.											2.30
Alta ‖	Raccoon	.12	.34			T.	.69					.28	.07	1.15	.05	.54				.11	T.	.06										3.41
Amana	Iowa	.07	.01			.54						T.	T.	.63	.20				T.	.01	.18											1.64
Ames	Skunk	.45	.01			.70					T.	T.	.09	1.47	.15	.05			T.		.05	.01										2.98
Baxter	do	.49	.02			.91						.14	.13	1.02	.35	.28	.02		.13	.03	.08											3.60
Belle Plaine	Iowa	T.	T.			.76							T.	.55	.05	.02	.02				.84								T.			2.24
Belmond	do	.38				.08				T.		T.		.61	.19	.93			T.		.12											2.31
Bloomfield	Mississippi				.04	.75							.14	.45	.45			.14	.04	.11												2.12
Bonaparte	Des Moines				.12	1.34							T.	.41	.26			.04	.04													2.21
Boone ‖	do	.62	.08				.68						.04	.60	.79	.20				T.		.12										3.13
Britt	Iowa	.46	T.			.06					T.		T.	.79	.60	.60	T.		.08		.07										.10	2.78
Buckingham	Cedar	.30	.02			.40								.32	.62	.55			.03												.28	2.52
Burlington ‖	Mississippi				.24		.50								.55	.05	.10	.20			.23											1.87
Carroll ‖	Raccoon	.98	.25				.79				.02	.02		1.40	.10	.75				.32		.38										5.01

TABLE 2.—*Daily precipitation for June, 1912. 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.																																
Cedar Rapids ‖	Cedar		T.				.44							T	1.16	1.31	.04			T.		.37										3.32
Charles City	do	.92				.02	T.				T.	T.	T.	.72	.34				.05	T.	.06										.01	2.12
Clear Lake	do	.60												.65					0		.20										.50	1.95
Clinton	Mississippi															.21			T.	.03	.06	.18									.01	
Columbus Junction	Iowa				.05	.60								.05	.68				T.		T.											1.98
Davenport	Mississippi	.08	T.	.04		.28						.02	T.	.81	1.52	T.		T.	T.	T.	.44										T.	3.19
Decorah	do	.80				.13					T.			.59		.15				.10											1.80	3.09
Delaware	do	.35	.12			.08						T.		.14	.21	.22				.09	.01											.40	1.68
Des Moines	Des Moines	.26				.89					T.	.03	.49	.37	.32		.01	T.	.15	T.	.08										T.	2.60
Dubuque	Mississippi	.02	.30		T.	.07						.01		.12	.41	.04			.07	.03	.57										.29	1.93
Earlham	Raccoon	1.06				1.15					T.	.09	.16	1.15							.21											3.82
Elkader	Mississippi	.22	.05											.10	.05	.55				.16											.06	1.19
Elma	Wapsipinicon	.55		T.		.06						.01		.63	.64	.28			T.	.06	.07						.08				T.	2.37
Estherville ‖	Des Moines	.05	.40	T.	T.	T.	T.					T.	T.	.45	.30	.15				.05		T.										1.40
Fairfield	Skunk	T.			.10	1.04							T.	.12	.22		.02	.02	.01		.03										.45	2.01
Fayette	Mississippi	.23									T.			.20	.08	.41			.02		.69						T.					1.03
Forest City ‖	Cedar	.45				.05	T.						.01	.30	.35	.20				.02	.20											1.60
Fort Dodge ‖	Des Moines	.35	.43				.65					T.	.05	.90	.10	.20	T.				T.	.08										2.76
Fort Madison	Mississippi			.10		1.30						T.	T.	.80	.10	.10						.93						.68			.05	3.05
Gilman	Iowa	.08			1.35					T.	.14		.60	.24	.14			.07		T.												2.62
Grand Meadow	Mississippi	.10	.10			.01						.03		.22	.02	.30				.32	T.									.02	.10	1.23
Grinnell	Iowa					1.28							.19	.73	.16	.06			.03		T.								T.			2.45
Grundy Center	Cedar	.60	.64			.33								.27	T.	1.04			.10	.20											.12	2.70
Guthrie Center	Raccoon	1.50			T.	.90					T.	.11	.09	.21	.76				.04		.32										T.	3.87
Hampton	Cedar	.54				.03						.16		1.16	.90				.06		.26										1.02	4.15
Humboldt	Des Moines																															
Independence	Wapsipinicon	.04	.06			.11								.02	.02	.45				.06	.12											.88
Indianola	Des Moines	.11				1.19						.09	.66	1.25	.20		T.	T.	.01		.01											3.52
Iowa City ‖	Iowa		.43				.75					.04			.55	.57				T.		.26										2.60
Iowa Falls ‖	do	.37	.38		T.	T.	.21					T.	T.	1.12	.15	.53				.38		.02										3.16
Jefferson	Raccoon	1.50				.92					T.	T.	T.	.77	.12	.19	T.	.03			.09											3.62
Keokuk	Mississippi	T.	T.	.10		1.26						T.	.05	.50	.16	.01		T.	.04			T.						.07			.04	2.23
Keosauqua ‖	Des Moines				.10		1.34						.21		1.20	T.	T.	.08	T.	T.												2.93
Knoxville	do																															
Lacona	do					1.40						.68	.20	.70	.01			.01	.04													2.14
Le Claire ‖	Mississippi		.38		.10		.20					T.	T.	.29	.56	1.03	.04			T.		.16										2.76
Marshalltown ‖	Iowa		.68				.52					T.		.45	.36	.73			.01	.27		.03										3.05
Mason City	Cedar	.60									T.			.70		.42			.07		.07										.08	1.94
Monroe	Skunk	.11				1.11						.02	.32	.62	.03			T.	T.		T.								T.			2.21
Mount Pleasant	do	T.	T.	T.		.47	.02						T.	.70	.40			.06	.03	T.	.19	.02							.14		1.93	3.96
Muscatine ‖	Mississippi		.02		.04		.52					.02			.24		.03			.02	.22	.30										1.41
New Hampton	Wapsipinicon	.30	.28			.05						.60	T.	.53	.02	.34					T.						.20				T.	2.32
Northwood	Cedar	.58									T.	.12		.58	.25					.12	.03										.63	2.31
Olin	Wapsipinicon	.23				.40								.23	.60	.55					.32										T.	2.33
Osage	Cedar	1.20				T.								.80		.27				.05	T.											2.32
Oskaloosa	Des Moines					.68					.03		.55	.61	.58	T.	.02	T.	T.		.01											2.48
Ottumwa	do					1.72							.06	.25	.06																.60	2.69
Pella	do	.06		T.		.91					T.	.07	.32	.71	.03	T.	T.	T.	.03	T.	.02											2.11
Perry	Raccoon	.72				.70					T.	.03		1.56			.12		.04		.08										.02	3.27
Plover	Des Moines											1.85	2.15																			
Pocahontas	do	.65				.41							T.	1.41	.18	.12	.60		.15	T.	.13										.01	3.66
Ridgeway	Mississippi	.85				.07	.01					T.		.54	.25				.06		T.									T.	1.83	3.61
Rockwell City	Raccoon	1.40				.95					T.			.02		1.05				.30	.35										T.	4.07
Sac City	do	.47				.82				T.	T.	.03	.01	1.30	.08	.52	.03		.03		.28											3.57
St. Charles	Des Moines	.35				1.14						.94	.40	.38			T.	.01	T.	.07	.01										.18	3.48
Sigourney	Skunk	.22				.85							.03	.08		T.			T.	.18	.04											1.40
Stockport	do	T.	.04	T.	.08	1.03					T.	T.	.64	.50	.94	T.	.01	.01	.01		.03										.26	3.55
Storm Lake	Raccoon	.55				.73					T.	.07	T.	1.65	.38				.14		.23											3.75
Tipton	Cedar	.48				.45								.07	2.13	.40			T.	T.	.18										T.	3.71
Toledo	Iowa	.27		T.		.60						.12		1.44		.43			T.		.07											2.93
Wapello	do			T.	T.									T.	.72				T.	.20										.13		1.05
Washington	Skunk			.01		.58	.02							.50							.03										.03	1.17
Waterloo ‖	Cedar	.07	.60				.05							.30	.30	1.15				.06		.07										2.60
Waukee	Raccoon	.67				.94					T.	.03	.11	.76	.08		.02	T.	T.	.34	.22	.01							T.		.37	3.55
Waverly	Cedar	.87	.08											.55	.13	.24					.21										T.	2.08
Webster City	Des Moines	.70				.14					T.	T.		1.44	.54	.44		T.		.14											.04	3.84
West Bend	do	.33			T.	.10					.02	.02		1.40	.08	.20			.07	T.	.04											2.26
Whitten	Iowa	.42		T.		.32						T.		.50	.30	.55			.50	.10	T.										.38	3.07
Winterset	Des Moines	.80				.92					T.	.09	.64	.63	.58	.01		T.	T.		.06											3.73
Missouri.																																
Gorin	Mississippi			.06	.21	1.53							1.38	.10	.42		.02		.04													3.76
Hannibal	do			.25	.19	1.24				T.				.11	.33	.58	.10	.13	.14		.35	.01			.06			.05		T.	T.	3.54
Louisiana	do				.27		.68							.08	.30		2.10	.72	.05	T.		.70							T.	.04		4.94
Mexico ‖	do				.33	.13	.88				T.				.28	.22	.29	.52	.20	.07												2.92
Palmyra	do				.32	1.01								.02	.21		.69	.08	.11													2.44
Steffenville	do				.10	.72	.43					T.		.05	.03		.40	.15	.10		.15							.03				2.16
Sublett	do																															
Vandalia	do				.31		.82								.26		1.12	.83	.07			.35										3.76
Warrenton	do				.18	.18	2.13				T.				.19	.18	.17	1.97	.18	.03											.05	5.26
Indiana.																																
Collegeville	Iroquois		.97		.26								T.		.69	.17	.51	.49				.28									.53	3.90
Knox	Kankakee		.25		.23										1.06	.82	.13	.11	T.	.45	.03	.32						.11			.02	3.53
Laporte	do		.06		.22										.52	.15	.15			T.	1.04							.65	T.			2.79
Plymouth	do		.38		.26										.55	.22	.14	.09	T.	.05		.26						T.	T.		.19	2.14
South Bend	do		.11		.27										.44	.15	.09			.01		.20						.10	T.			1.37
Illinois.																																
Aledo	Mississippi	.15		T.	.20	.39							T.		.65					T.	.58										.12	2.09
Alexander	Illinois	T.			.09	.38	.16				T.	T.			.01	.14	1.61	.21	.08		.61	.39			.03			.90	.03			4.64
Antioch	do				.37							T.		.25	.25	.70														.45		2.02
Astoria	do	T.	.07		.20	.62	.20						.52	.12	.21		.56	.15	.06	T.	.07										T.	2.78
Aurora	do	.41	.04	T.	.13										.35		.03		T.	.35	.21											1.52
Beardstown ‖	do				.30		.40									.20	.35	.05	.12	.10								T.	.05			1.57
Bement	Mississippi			.26			T.						.02		.09	.04	1.59	T.	.03		.29	.01										2.33
Bloomington	Illinois	1.29			.35	.12	T.										.13	.06	.05	T.	.80							.35			.04	3.19
Cairo	Mississippi	T.					.39							.92	.05	.26	.08	1.99	.69							.11	.04	T.	.12	.01	.03	4.69

TABLE 2.—*Daily precipitation for June, 1912. 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	
Illinois—Continued.																																
Carbondale	Mississippi		.06			T.	.21							.27	.03	.57	.10	2.31	.55	.01		.15				.02	T.	T.	T.		.41	4.69
Carlinville	do	T.				.09	.50			T.				.01	.10	.22	.37	.09	.06		.21							T.	T.	T.		1.65
Carlyle	do	.05				T.	.75							T.	T.	.65	1.05	.58	.35									.11				3.54
Chester ‖	do																															
Clinton	Illinois	.12			.11		.13						.02	T.		.03	.35	.02	.10	.41	.19							T.				1.48
Coatsburg	Mississippi			.30		.61	.40							.15	.95			.10	.05	.01												2.63
Cobden	do																															
Dakota	do	.37	.06	.06		.03									.52	.22				.12	.18										T.	1.56
Decatur ‖	Illinois		.45		.18	T.	.06							.05	.07	.05	1.13	.83	.05	.06	.32	.16							T.			3.41
Dixon ‖	Mississippi			.15	.12		.04							T.	.47	.54	.04			T.	T.	.27									T.	1.63
Duquoin	do	.50				.15								.15		.61	1.50	1.85	.58	T.		.01				T.	.50			.04		5.89
Dwight	Illinois	.03	T.		.27										1.86	T.	.20	.08		T.	.34				.05						.01	2.84
East St. Louis ‖	Mississippi							1.17							1.19	.72	.12	3.00	.15	.08	.07	T.								.02		6.52
Edwardsville	do						1.00							.07	.62	.73	1.58	.46	.36											T.		4.82
Elgin	Illinois		.13		.31									.05	.07	.44					.22	.03										1.25
Ewing	Mississippi																															
Fairview	Illinois	T.	.08		.12	.23	.03					T.		.02	.03	.02	.04	T.	T.	.12	.40										T.	1.09
Galva ‖	do		.01		.12		.24					T.	T.	T.	.93	.46			T.	.02	.42	.27			.09						T.	2.56
Grafton ‖	Mississippi				.07		1.32								.30	1.32	.08	.82	.18	.04	.02	T.									.03	4.18
Greenville	do																															
Griggsville	Illinois				.36	.56	.45					T.		.12	.16	.11	2.05	T.	.25	T.	T.	.43							.27	.50	T.	5.26
Havana	do	.15			.24	.52	.11						.20	.01		.06	.25	.05	.05	.11	.02				.08					.10	.15	2.10
Henry	do	.04			.06	T.									.62	T.	.12	.05	T.	T.	.58								.02		.29	1.78
Hillsboro ‖	Mississippi		.58				.44								.10	.20	.38	.52	.18	.45		.12							.06			3.03
Joliet	Illinois	T.		.67										T.	.76	T.				.35	.68									T.		2.46
Kishwaukee	Mississippi	.25	.23	.09		.02								.16	2.08	.27			T.	T.	.38										.37	3.85
La Grange	Illinois	T.	.08	T.	.22									.45	1.08	.18																2.01
La Harpe	do	.07		T.	.08	.79	.20						T.	.39	.20	T.	.02	T.	T.		T.							.42				2.17
Lanark	Mississippi	.43	.18	.04		.08						T.		.11	1.11	.23					.18	.11									T.	2.47
La Salle	Illinois	.01	T.	.35	.01	T.								.50	1.16	T.	.40		T.	.01	.20	.02								.11	T.	2.77
Lincoln	do	.25			.41	.30	.33						.19		.03	.09	.35	.02	.13		.16	T.			.19			T.				2.45
Loami	do	.12			.06	.24	.15				T.	T.		T.	.01	.44	1.02	.11	T.	T.	.40	.50			T.			T.	.07	T.	T.	3.12
Macomb	do		.01		.28	.49	.22								.31	.04	T.	.02	.03	T.	.06								.02			1.48
Manteno	do		.40		.22										1.12	.22	.13	.05		.06											.14	2.34
Martinton ‖	do		.62		.85										.91	.40	1.00	.35	T.		T.	.85										4.98
Mascoutah	Mississippi					.21	.85							.07	.03	.65	3.70	.55	.32									.10				6.48
Minonk	Illinois	T.	.02		.13	.08									1.30		.15	.12	T.	.05	.15	.03			T.						2.00	4.03
Monmouth	Mississippi				.20	.68											.04		T.	.15	.73											1.80
Morris	Illinois	T.	.03		.08									.05	.54	.68				.12	.01										.14	1.65
Morrison	Mississippi	.46	.03	T.	.20	.19								.07	.95	.39			T.	.05	.03	.16									.09	2.62
Morrisonville	Illinois	T.			.05	T.	.28							.06	.03	.02	.41	.38	.09	.04	T.	.42						T.				1.78
Mount Vernon ‖	Mississippi		.18				.15								.50	.75		3.11	.47	.18							T.	.30				5.64
Nashville	do		.70			.20	.25							.04		.36	1.32	.73	.47	.01	T.											4.08
Oregon	do	.22	.35			T.								.38	1.38	.63				.08	.30										.02	3.36
Ottawa	Illinois				.30										1.09	.35					.06	.04									.25	2.09
Pana	Mississippi	.37	.03		.07		.18							.06	.04	.18	.60	.30	.86	T.		.40						.05	T.			3.14
Peoria	Illinois	T.	T.	.38	.02	.27						T.	T.	.14	.03	.53	.03	.06	T.	.05	.21				.04						.10	1.86
Pontiac	do		.13		.30		T.								.75	T.	.12	.15	.01	.04	.12	.20			.07			T.	T.		.45	2.34
Quincy ‖	Mississippi				T.		1.33								.38	.23	.06	.07	.02	.06		.38										2.53
Riley	do	.47	.02	.06	.11	T.						T.		.35	3.20	1.54					.16									T.		5.91
Roberts	Illinois	.14	T.		.16										1.37	.04	.52	.18	.04	.14	.11	.02						T.			T.	2.72
Rockford ‖	Mississippi		.51		.02		T.						T.		.42	1.32	.61			.01	.24	.62								T.	.03	3.78
Rushville	Illinois				.55	.60								.10	.03	T.	.19	.15	.05		.10							.02				1.79
St. Charles	do		.22	T.	.33							T.	T.	.01	.41	1.11	T.		T.	T.	.10	.02								1.04		3.24
S. Peter	Mississippi	.10	T.				.48							.15	.32	.75	1.73	.61	.30	T.	T.							.26				4.70
Sparta	do	.03	.05		.09		.15							.16		.42	.73	1.39	.50	.08		.28					.07					3.95
Springfield	Illinois	.17			.38	.32								T.	.09	1.20	.35	.03	.05	.10	.28				T.			.10				3.13
Streator ‖	do		.31	.01	.11										.43	.05	.07	.04		T.	T.	.11									.02	1.15
Sullivan	Mississippi		.11		.12									.18			1.51	.21	.21		.31								.55			3.20
Sycamore ‖	do		.15	T.	.35										.35	.94	.10				T.	.20								.25		2.34
Tiskilwa	Illinois	.05	.08		.18	.12								.10	.66	.20					.28	.09									.05	1.81
Walnut	Mississippi	.44	.07		.19	.12							T.	.10	1.51	.56	.03		.02	.15	.54										.02	3.75
Warsaw ‖	do			.40		1.58							.02	.96	.18	.03	.03														T.	3.20
Waterloo	do	.18			.02	T.	1.04							.10	.23	.35	1.33	.76	.35									.01			T.	4.37
White Hall	Illinois	.16			.10	.47	.49				T.	T.		T.	.18	.02	1.65	.55	.10	T.		.35			.06			T.	.08	.14	T.	4.35
Windsor	Mississippi	.28	.02		.02		.06							.45	.05	.05	.80	.15	.55	.01	.13	.10						.95				3.62
Winnebago	do	.40	.03	.16		T.								.03	1.55	T.					.30										.89	3.36
Yorkville	Illinois	.25	.01	.05	.25									T.	.70	.95			T.		.16									.15		2.52
Zion	Mississippi			T.		.04							T.	T.	1.89	.57		T.	T.	T.	.21											2.71

* 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, 1912. District No. 5, Upper Mississippi Valley.*

Date.	North Dakota.										Minnesota.																	
	Bottineau.§§		Devils Lake.		Lisbon.§§		Minot.§§		Pembina.§§		Collegeville.		Crookston.§§		Grand Meadow.		Montevideo.§§		Moorhead.		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....	72	40	74	48	80	42	75	44	68	48	69	51	80	45	59	53	73	50	78	46	78	55	73	47	61	55	76	48
2....	74	45	74	48	78	40	64	50	62	48	79	53	67	45	75	47	82	51	68	44	83	57	71	52	77	51	72	52
3....	58	39	59	42	68	46	63	44	52	40	71	53	66	47	67	52	73	55	68	45	68	56	73	48	67	55	65	48
4....	66	34	66	38	70	37	66	37	62	39	67	44	70	44	62	44	71	45	72	43	66	45	66	41	65	49	60	44
5....	63	36	64	43	70	42	63	40	48	41	68	49	68	50	69	45	69	46	68	46	68	44	63	48	66	49	62	45
6....	66	33	64	35	70	30	65	35	67	34	64	44	63	39	66	42	68	43	66	40	68	43	62	40	65	46	64	44
7....	70	35	67	40	69	33	67	43	71	38	70	44	71	37	68	37	69	36	70	38	71	38	71	36	68	44	72	36
8....	72	39	70	40	72	32	72	37	72	44	70	48	75	42	71	47	73	48	74	38	75	46	73	34	70	50	75	37
9....	72	48	74	53	76	52	69	50	74	46	72	49	77	50	75	40	77	43	76	48	77	45	74	36	73	51	74	42
10....	65	54	66	54	73	56	64	57	67	52	71	51	70	58	78	46	76	55	70	58	76	51	70	48	72	52	76	48
11....	77	46	72	47	75	56	75	40	76	44	69	61	74	56	74	58	72	58	74	55	71	58	69	59	72	61	74	42
12....	74	46	72	46	73	40	75	47	75	48	72	51	78	48	73	56	74	50	74	46	76	56	72	36	72	56	76	41
13....	66	57	57	50	60	52	67	51	69	50	71	46	66	57	65	46	62	55	60	51	61	51	59	48	61	45	69	42
14....	57	48	56	49	70	50	.....	50	66	48	70	47	64	50	66	52	71	50	66	51	79	51	63	47	67	53	65	48
15....	61	49	59	41	62	52	61	.....	62	49	69	57	63	53	74	54	75	55	61	47	71	57	60	48	72	59	59	49
16....	63	33	57	38	63	36	63	35	58	39	69	44	60	38	74	53	63	45	60	38	62	51	59	40	60	48	58	40
17....	69	37	63	40	63	38	66	38	62	44	59	42	63	45	61	43	59	41	60	42	60	44	60	52	60	46	58	44
18....	78	39	73	39	75	42	75	38	74	46	67	46	71	40	66	43	71	45	71	42	60	52	64	54	69	49	74	40
19....	78	50	75	53	80	50	79	53	73	52	78	50	79	50	72	49	79	48	78	48	75	55	77	54	74	52	77	40
20....	73	50	71	47	74	51	72	58	80	48	74	56	75	46	75	54	78	53	75	51	75	60	74	50	75	56	78	48
21....	79	44	77	49	81	41	78	44	83	52	82	52	82	52	75	43	79	48	80	49	75	52	79	58	81	53	84	49
22....	89	51	82	58	83	43	85	57	85	52	80	58	83	53	75	50	82	50	82	51	84	60	80	44	81	57	82	50
23....	91	57	87	60	89	52	90	60	90	53	83	58	89	55	81	54	86	54	88	50	80	57	85	46	83	60	86	50
24....	99	59	91	63	92	56	98	62	94	57	87	58	91	60	82	54	89	56	90	56	88	55	89	48	87	61	90	57
25....	85	62	82	56	90	56	83	64	83	60	96	58	88	63	90	59	98	59	90	58	95	61	91	53	92	64	92	60
26....	84	54	80	52	85	52	85	53	82	48	91	61	86	53	84	50	86	63	84	52	91	68	85	52	81	65	84	58
27....	97	59	90	62	89	56	96	60	92	48	81	54	89	60	81	50	87	59	86	58	85	66	91	45	82	60	82	52
28....	96	65	94	70	96	63	93	63	95	55	93	63	98	65	93	55	96	64	97	66	98	62	93	53	91	61	95	60
29....	99	67	92	65	95	64	95	63	99	62	100	69	100	72	95	62	98	68	98	70	100	67	97	57	94	70	92	62
30....	100	69	93	69	95	64	98	68	96	63	94	62	97	70	94	65	96	66	95	70	97	67	83	61	95	66	81	58
Mns..	76.4	48.2	73.4	49.8	77.2	47.5	75.9a	49.7a	74.6	48.3	76.2	52.6	76.8	51.4	74.7	50.1	77.7	52.0	76.0	49.9	77.1	54.3	74.2	47.8	74.4	54.8	75.1	47.8

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....	67	55	71	50	75	60	64	56	75	58	78	42	75	57	65	54	82	61	60	54	82	58	63	54	79	57	82	60
2....	79	58	80	48	80	53	79	51	75	56	68	41	76	50	77	47	83	54	76	46	79	55	78	49	77	55	79	54
3....	72	58	69	52	77	54	71	54	75	52	68	42	70	59	72	57	80	55	70	51	86	58	77	59	78	56	86	59
4....	66	50	68	46	67	48	64	52	62	49	62	41	63	47	66	45	69	50	63	47	72	52	67	54	67	52	73	54
5....	67	51	67	49	67	50	69	50	66	48	62	38	65	45	72	45	71	51	70	48	77	53	67	50	69	51	75	55
6....	67	43	67	41	66	43	67	49	64	51	60	37	63	43	67	44	69	51	67	47	73	54	68	48	68	53	71	57
7....	70	36	73	32	71	36	68	41	64	47	64	28	68	35	69	37	68	47	67	41	66	48	66	48	65	49	68	51
8....	73	42	75	33	76	44	71	49	70	51	68	34	72	43	70	50	73	49	70	51	71	49	68	53	69	49	69	49
9....	75	42	76	36	78	44	76	44	73	54	70	35	74	42	72	45	77	48	74	44	75	52	70	49	75	48	71	63
10....	77	47	77	50	79	52	78	52	76	52	74	38	78	49	72	52	83	55	76	50	81	54	77	59	79	54	80	62
11....	78	61	73	60	82	59	81	64	80	60	74	56	80	57	78	60	89	55	81	62	85	66	85	65	83	66	84	65
12....	75	54	75	45	78	55	74	61	68	54	69	44	73	50	74	54	80	63	74	56	82	62	80	62	70	59	84	67
13....	70	51	67	48	73	52	65	52	60	49	68	42	70	42	69	48	79	52	71	48	80	52	77	59	69	52	82	57
14....	70	52	71	50	63	53	68	54	62	52	66	59	65	52	77	61	78	53	72	58	81	63	82	64	70	59	79	64
15....	79	56	75	53	83	58	83	58	82	59	71	58	76	52	77	56	84	62	78	58	84	63	83	64	82	62	84	62
16....	73	51	62	44	82	57	68	50	71	54	71	45	76	50	72	54	73	63	66	50	76	62	72	58	71	55	80	66
17....	61	46	63	43	73	44	64	48	68	48	64	42	60	43	66	45	69	50	62	44	71	53	67	53	68	51	67	57
18....	67	44	78	40	75	54	69	48	69	52	68	38	71	42	64	47	64	52	64	50	64	54	61	53	65	53	65	56
19....	74	51	75	45	76	50	73	55	67	54	71	42	73	51	77	45	76	54	73	52	73	55	77	54	72	55	73	58
20....	78	52	82	42	81	46	75	52	74	55	71	44	74	49	73	55	78	56	72	54	81	58	74	58	76	54	82	58
21....	81	43	83	47	80	45	79	48	76	53	75	35	78	42	77	47	78	52	77	48	76	55	77	54	76	55	77	58
22....	83	52	86	49	85	46	83	52	80	57	78	42	85	48	80	52	82	53	81	49	82	56	79	59	78	53	81	54
23....	85	51	91	60	87	50	86	55	80	61	80	43	84	53	82	50	84	58	82	51	84	59	83	55	83	58	83	58
24....	88	52	96	62	88	55	88	55	83	62	82	44	86	54	85	53	86	59	86	53	87	63	85	59	85	59	86	62
25....	93	57	87	54	94	62	93	60	88	63	83	51	90	52	89	57	91	61	90	56	90	65	89	64	90	62	89	63
26....	85	64	85	43	92	64	85	64	76	60	83	58	88	61	92	62	93	64	86	60	92	66	95	62	84	65	92	63
27....	84	50	94	49	81	57	85	55	79	54	83	41	81	53	85	76	88	62	85	56	87	60	90	66	84	57	91	65
28....	90	55	98	60	93	54	90	58	86	59	86	49	88	54	94	76	96	64	93	60	91	67	94	67	90	64	89	68
29....	94	61	96	62	94	65	95	67	91	71	96	52	94	57	94	64	96	69	93	65	91	71	91	70	91	69	88	68
30....	90	66	92	63	90	63	91	66	84	66	96	56	90	60	92	70	93	69	92	67	94	70	90	68	92	71	87	69
Mns..	77.0	51.7	78.4	48.5	79.5	52.4	76.7	54.0	74.1	55.4	73.6	43.9	76.2	49.7	76.6	53.6	80.4	56.4	75.7	52.5	80.4	58.4	77.7	57.9	76.8	56.8	79.9	59.6

TABLE 3.—*Maximum and minimum temperatures for June, 1912, 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	81	60	82	55	86	68	.....	.....	82	61	84	59	88	58	83	60	86	60	86	58
2	77	56	84	53	77	64	.....	.....	77	57	80	56	75	58	77	56	78	58	74	56
3	85	60	87	46	83	65	.....	.....	84	55	82	57	83	55	84	56	85	58	82	54
4	74	55	77	52	81	67	.....	.....	73	54	75	50	80	62	73	52	75	57	76	48
5	78	58	79	45	81	63	.....	.....	78	52	80	45	80	55	79	48	80	57	72	46
6	72	59	70	54	77	65	.....	.....	72	55	74	54	75	60	73	56	73	58	71	48
7	68	53	60	45	72	60	.....	.....	64	48	70	44	73	53	68	47	70	60	66	43
8	69	51	71	37	71	54	.....	.....	71	41	72	41	82	48	72	44	72	45	75	42
9	72	58	.....	.....	77	57	.....	.....	77	47	77	61	78	53	75	55	75	52	79	45
10	80	62	.....	.....	81	65	.....	.....	82	49	84	52	81	60	82	55	81	61	82	48
11	84	64	85	50	82	64	.....	.....	84	63	85	60	85	54	85	59	86	60	85	56
12	88	65	71	52	86	64	.....	.....	78	55	85	60	89	57	84	58	88	63	73	60
13	82	61	76	50	83	68	.....	.....	79	55	88	54	84	60	85	54	84	56	65	55
14	81	65	75	49	80	68	.....	.....	79	59	83	65	84	65	81	63	83	65	76	55
15	83	64	83	62	85	63	.....	.....	85	63	87	60	85	62	84	62	84	65	82	60
16	80	67	88	60	86	67	.....	.....	80	63	80	64	80	71	83	64	79	66	82	58
17	67	54	68	63	76	66	.....	.....	70	56	72	54	72	60	70	56	69	59	70	47
18	62	57	68	57	68	60	.....	.....	64	56	67	52	61	56	68	56	63	56	66	52
19	71	52	68	51	72	59	.....	.....	70	56	70	52	71	57	69	55	68	57	69	54
20	81	57	78	47	78	59	.....	.....	80	55	80	55	81	55	81	51	81	55	79	50
21	77	58	79	49	81	62	.....	.....	74	55	75	50	80	57	75	54	75	60	78	47
22	78	52	84	52	78	62	.....	.....	80	52	80	48	78	55	81	48	80	55	82	50
23	82	55	.....	.....	78	64	.....	.....	81	52	83	53	81	54	82	50	81	56	84	51
24	86	58	.....	.....	79	64	.....	.....	86	60	87	58	81	57	85	57	82	60	88	56
25	87	62	85	66	70	64	.....	.....	89	60	89	60	80	60	88	57	87	65	91	59
26	91	62	78	62	80	63	.....	.....	92	62	95	59	85	59	91	59	90	64	85	61
27	89	68	87	61	83	65	.....	.....	87	58	87	60	85	64	89	61	89	65	87	50
28	87	66	84	60	81	67	.....	.....	90	62	91	63	84	63	89	62	88	65	93	54
29	86	65	89	63	82	68	.....	.....	90	70	90	64	84	66	90	66	86	67	94	64
30	84	66	85	65	82	68	.....	.....	91	68	90	65	84	65	90	65	86	67	89	62
Mns	79.4	59.7	78.5[d]	54.1[d]	79.2	63.8	.....	.....	79.6	56.6	81.4	55.8	80.3	58.6	80.5	56.2	80.1	59.4	79.3	53.0

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.