CLIMATOLOGICAL DATA FOR FEBRUARY, 1913.

DISTRICT NO. 5, UPPER MISSISSIPPI VALLEY.

GEO. M. CHAPPEL, District Editor.

GENERAL SUMMARY.

From a climatological viewpoint February, 1913, in the Upper Mississippi Valley was not a month of more than ordinary interest. The mean temperature was close to the normal, the precipitation was somewhat deficient, and there was much fair, sunshiny weather. As a whole the month was less wintry than usual. The most important features were the unseasonably high temperatures on and about the 18th and the storm of the 21st-22d. In the central part of the district the maximum temperatures at the time referred to are among the highest ever recorded in February, being in the sixties as far north as Minnesota. The storm of the 21st-22d was one of the severest of the present winter. In Illinois and contiguous territory it was in the nature of an ice storm, and considerable damage was done. This storm is described in more detail elsewhere. The absence of a snow covering during the first two decades of the month enabled frost to penetrate the ground to an unusual depth, 6 feet being reported from Charles City, Iowa.

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 No. 5.	Temperature.				Precipitation.					
	Mean.	Departure.	Highest.	Lowest.	Average.	Departure.	Greatest total.	Least total.	Average snowfall.	Average number of days with precipitation.
North Dakota	5.3	−0.7	51	−37	0.12	−0.38	0.70	0.00	1.3	2
Minnesota	8.6	−1.3	63	−40	0.43	−0.25	1.21	T.	5.6	3
South Dakota	12.3	−2.1	63	−20	0.41	−0.07	0.68	0.14	2.7	2
Wisconsin	11.8	−2.1	58	−36	0.96	−0.16	2.09	0.25	10.4	4
Iowa	20.0	+0.9	69	−24	0.90	−0.27	2.39	0.19	7.8	4
Missouri	27.1	−1.7	69	− 3	2.78	+0.52	3.91	1.61	7.8	7
Indiana	23.0	−0.5	62	−14	1.16	−1.44	1.65	0.63	7.9	7
Illinois	25.5	−0.5	71	−11	1.71	−0.47	3.27	0.57	7.3	6

TEMPERATURE.

Over most of the district the mean temperature was lower than the normal, but, except over small areas in Minnesota and Wisconsin, the average daily deficiency did not exceed 3° at any point. In portions of the North Dakota area the temperature averaged slightly higher than usual, and there was a small excess in Iowa. The mean temperature for the district was 16°, or 0.5° lower than the normal. Cairo, Ill., as usual, was the warmest point, with a mean temperature of 36.6°, while Roseau, Minn., with a mean of —2.8°, was the coldest point. Generally speaking, the period from the 14th to the 22d was mild, and that covering the rest of the month colder than usual. The warm spell that occurred on and about the 18th was the most important event of the month in temperature conditions. The entire district was affected, but only in the central sections were the maximum temperatures notably high, comparatively speaking. There the records of former years for February were almost equaled, many stations reporting temperatures above 65°. The highest monthly temperature in the district was 71° at three stations in southern Illinois on the 18th. Five cold spells of note occurred, namely, those of the 1st, 3d-6th, 12th-13th, 23d-25th, and 27th-28th, but no unusually low temperatures for any station were reported, the lowest being −40°, at Warroad, Minn., on the 27th.

PRECIPITATION.

The average precipitation for the district was 0.97 inch, or 0.30 inch less than the normal. The amounts were lightest in the north, increasing thence southward. They were heaviest in the Missouri area, where the average was somewhat more than the normal. The greatest amount reported was 3.91 inches, at Palmyra, Mo., and none whatever occurred at McLeod, N. Dak. Eight stations in the latter State area reported only traces. The first two decades were notably dry in northern Illinois and adjoining Iowa and Wisconsin territory, no appreciable precipitation occurring at many stations. The dry spell was broken by the storm of the 21st–22d, which was one of the severest of the winter. Another storm occurred on the 26th, causing heavy precipitation in southern and eastern districts. The average number of rainy days was 4.

Snow.—The average fall for the district was 7.1 inches, which is less than the usual amount for February. Only a few stations outside of Wisconsin reported more than a foot of snow. The heaviest fall was 21 inches, at Valley Junction, Wis.

RIVERS.

Most of the rivers and streams in the district remained ice-bound throughout the month. In the Red River of the North at Moorhead, Minn., the thickness at the close was almost 3 feet. The average thickness in the Mississippi at Dubuque, Iowa, was about 14 inches. Toward the close of the month the ice at that point was becoming rotten, and was unsafe to measure. The dam of the Mississippi River Power Co., at Keokuk, Iowa, held the ice north of the station, and only shore ice was present south. This melted by the 18th, but formed again a few days later. The construction work on the great dam at that point was interrupted on only a few days during the month, and the work is rapidly approaching completion.

MISCELLANEOUS.

The prevailing winds were northwesterly over much of the district. The highest velocity reported was 44 miles an hour from the northwest at Devils Lake, N. Dak., on the 7th. There was more than the usual sunshine, the percentage of the possible amount being slightly more than 60. The average number of clear days was 14; partly cloudy, 6; cloudy, 8.

TABLE 1.—*Climatological data for February, 1913. 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	17	5.0	− 2.8	35	13†	− 29	3	58	T.	− 0.38	T.	T.	0	16	4	8	nw.	C. E. Wood.
Bottineau	Bottineau	1,638	21	−0.2	− 2.3	34	13	− 37	26	56	0.18	− 0.23	0.04	.....	9	9	8	11	nw.	H. F. Steinmeir.
Bowbells	Burke	1,958	1	1.4[d]	.....	44[d]	17	− 32[d]	1	49[d]	0.05	.....	0.05	.....	1	.....	.....	.....	.....	G. H. Phelps.
Cando	Towner	1,488	12	3.2	− 0.3	35[c]	14†	− 32	26†	59[c]	T.	− 0.26	T.	T.	0	.....	.....	.....	w.	E. T. Judd.
Crosby	Divide	.....	6	7.8	.....	42	17	− 28	1†	34	T.	.....	T.	T.	0	13	5	10	sw.	H. C. Kaschau.
Devils Lake	Ramsey	1,482	8	4.1	− 0.4	33	13	− 24	3	44	0.02	− 0.51	0.02	0.5	1	9	8	11	nw.	U. S. Weather Bureau.
Donnybrook	Ward	1,760	14	5.6	− 2.4	40[b]	16	− 32[b]	3	43[b]	0.15	− 0.50	0.05	1.5	3	6	10	12	nw.	C. J. DeVore.
Dunseith	Rolette	.....	17	1.7	− 2.0	32	17	− 35	26	48	0.23	− 0.22	0.09	2.3	5	15	8	5	nw.	C. E. Goodsell.
Eckman	Bottineau	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. Yenny.
Edmore	Ramsey	1,524	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. M. Van Osdell.
Fessenden	Wells	1,610	1	5.6	.....	38	16	− 30	1	50	T.	.....	T.	T.	0	12	9	7	nw.	G. T. Seymour.
Forman	Sargent	1,349	21	11.6	+ 1.9	50	17	− 24	3	44	0.20	− 0.23	0.20	2.0	1	16	6	6	nw.	A. Maltby.
Grafton	Walsh	827	21	2.8	− 3.1	34[a]	13	− 28[a]	8	54[a]	0.14	− 0.40	0.14	1.4	1	.....	.....	.....	nw.	A. R. T. Wylie.
Granville	McHenry	1,504	6	7.5	.....	40	17	− 25	3	49	0.10	.....	0.05	2.0	2	15	7	6	nw.	W. A. Christianson.
Hannah	Cavalier	1,568	8	0.4	.....	30	17	− 33	26	50	0.70	.....	0.30	7.0	3	14	6	8	nw.	J. Moffatt.
Hansboro	Towner	.....	5	0.9	.....	32	17	− 32	26	45	0.19	.....	0.12	2.0	2	16	3	9	nw.	Geo. Dale.
Hillsboro	Traill	901	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. E. Mayall.
Lakota	Nelson	1,579	12	3.6	− 0.4	30	13†	− 29	3†	48	0.11	− 0.54	0.03	2.5	7	9	17	2	nw.	C. R. Pettes.
Langdon	Cavalier	1,615	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. Woolner.
Larimore	Grand Forks	1,134	18	3.3	− 2.4	33	18	− 24	3	49	0.16	− 0.17	0.08	1.6	6	13	9	6	nw.	J. M. Freeman.
Lisbon	Ransom	1,091	9	10.7	+ 1.4	43	18	− 25	1	50	0.05	− 0.54	0.05	0.5	1	17	4	7	nw.	W. S. Adams.
McKinney	Renville	1,640	19	7.0	+ 2.3	40	16†	− 32	1	55	T.	− 0.31	T.	T.	0	0	26	2	nw.	N. P. Swenson.
McLeod	Ransom	.....	1	10.8	.....	38	17	− 26	12	37	0.00	.....	0.00	0	0	11	10	7	nw.	Martin Reinholt.
Manfred	Wells	1,605	10	7.0	− 0.6	36	14†	− 28	1†	44	0.10	− 0.42	0.05	1.0	2	10	10	8	nw.	P. B. Anderson.
Mayville	Traill	975	17	7.7	− 0.7	35	14	− 25	12	41	T.	− 0.40	T.	T.	0	16	5	7	nw.	W. C. Gould.
Milnor	Sargent	1,097	1	.....	.....	.....	.....	.....	.....	.....	0.07	.....	0.05	0.7	2	5	13	10	nw.	Hj. Edman.
Minot	Ward	1,557	17	8.6	+ 0.3	51	16	− 33	1	48	0.02	− 0.48	0.02	0.2	1	19	1	8	w.	Louise Bates.
Minto	Walsh	820	20	4.1	− 1.8	34[a]	18	− 26[c]	12	44	0.20	− 0.36	0.20	2.0	1	9	9	10	nw.	S. S. Marsh.
Oriska	Barnes	1,270	8	8.6	.....	37	18	− 27	1	52	T.	.....	T.	T.	0	.....	.....	.....	sw.	J. J. Taylor.
Park River	Walsh	998	9	4.4	.....	33	14†	− 23	3†	41	0.07	.....	0.05	.....	2	14	9	5	nw.	P. J. Prochaska.
Pembina	Pembina	789	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. W. Shumaker.
Power	Richland	1,020	21	6.6	+ 1.8	37[a]	17	− 28[a]	3†	50[a]	0.03	− 0.54	0.03	0.5	1	12	6	10	nw.	J. A. Power.
Towner	McHenry	.....	11	5.7	+ 0.2	35	13	− 29	1	48	0.02	− 0.46	0.02	0.2	1	12	5	11	nw.	B. Bagley.
University	Grand Forks	830	21	4.8	− 2.5	37	18	− 28	12	45	0.10	− 0.40	0.06	1.0	2	14	7	7	nw.	U. S. Weather Bureau.
Wahpeton	Richland	962	19	13.2	+ 2.8	45	18	− 27	1	50	T.	− 0.55	T.	.....	0	14	2	12	nw.	Fred E. Smith.
Walhalla	Pembina	966	6	2.5	.....	34	13	− 25	26	50	0.20	.....	0.10	2.0	2	18	9	1	n.	Ivanhoe Lee.
Westhope	Bottineau	.....	7	3.0	.....	36	13	− 33	1	53	0.22	.....	0.10	2.2	4	9	16	3	nw.	W. A. Meddaugh.
Willow City	do	1,471	21	0.5	− 2.9	35	17	− 35	1	57	0.30	− 0.10	0.20	3.0	2	1	24	3	nw.	M. A. Ostby.
Minnesota.																				
Albert Lea	Freeborn	1,229	22	15.0	− 0.4	56	18	− 19	24	34	0.80	− 0.02	0.50	6.0	3	13	11	4	nw.	Edward Carey.
Alexandria	Douglas	1,391	19	9.2	− 0.2	39	17	− 25	1†	48	0.16	− 0.40	0.05	2.4	5	10	8	10	nw.	P. O. Unumb.
Angus	Polk	870	11	3.4	− 0.9	36	18	− 32	12	43	0.06	− 0.45	0.06	0.8	1	11	6	11	nw.	John Nadvornik
Bagley	Clearwater	.....	7	2.3	.....	35	18	− 39	12	50	0.35	.....	0.17	5.0	4	13	10	5	w.	Jens Nelson.
Baudette	Beltrami	1,084	3	2.7	.....	29	17†	− 34	27	46	0.44	.....	0.28	4.8	6	17	4	7	w.	J. A. Gjelhaug.
Beardsley	Bigstone	1,090	17	12.2	− 0.4	58	17	− 18	1	46	0.23	− 0.40	0.15	3.0	2	14	11	3	nw.	G. L. Fitzgerald.
Bemidji	Beltrami	1,400	9	.....	.....	.....	.....	.....	.....	.....	0.19	.....	0.14	.....	4	.....	.....	.....	.....	C. W. Warfield.
Bird Island	Renville	1,039	23	12.6	− 0.3	55	17	− 20	24	43	0.48	− 0.08	0.42	4.8	4	10	11	7	nw.	Dr. F. L. Puffer.
Brainerd	Crow Wing	1,215	7	8.9	.....	40	14	− 29	12	42	0.28	.....	0.17	.....	3	17	10	1	n.	Theo. Miller.
Caledonia	Houston	1,179	20	14.6	− 0.8	54	18	− 13	1	42	1.21	+ 0.29	0.90	16.2	3	14	3	11	nw.	W. D. Belden.
Campbell	Wilkin	984	7	7.3	.....	43	17	− 26	1†	54	0.12	.....	0.08	1.5	2	13	4	11	nw.	J. T. Neisess.
Cass Lake	Cass	1,300	6	.....	.....	.....	.....	.....	.....	.....	0.20	.....	0.20	3.5	1	.....	.....	.....	.....	C. W. Burns.
Collegeville	Stearns	1,282	20	12.0	− 2.9	41	18	− 22	1	40	0.40	− 0.14	0.37	7.2	2	11	9	8	nw.	F. Tembreull.
Crookston	Polk	863	24	4.2	− 1.5	36	18	− 26	12	49	0.10	− 0.65	0.08	1.2	2	15	5	8	w.	A. G. Anderson.
Detroit	Becker	1,364	17	1.8	− 2.9	38	16	− 40	11	68	0.23	− 0.41	0.15	2.0	2	18	1	9	nw.	G. W. Peoples.
Ely	St. Louis	.....	1	5.6	.....	28	14†	− 27	1†	52	0.44	.....	0.27	9.3	4	13	9	6	w.	Iver Wisted.
Fairmont (near)	Martin	1,240	26	14.4	− 0.2	57	18	− 18	24	42	0.61	− 0.39	0.60	6.0	3	14	6	8	nw.	W. F. Wherland.
Faribault	Rice	1,003	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. A. B. Moulton.
Farmington	Dakota	902	25	13.0	− 0.7	54	18	− 18	1	47	0.42	− 0.59	0.18	5.0	4	13	2	13	nw.	E. D. Akin.
Fergus Falls	Otter Tail	1,210	21	9.8	− 0.8	40	17	− 25	1†	34	0.33	− 0.23	0.07	3.3	10	13	9	6	nw.	C. E. Kissinger.
Fort Ripley	Crow Wing	1,136	5	6.6	.....	39	14†	− 30	4†	49	0.06	− 0.60	0.04	1.5	2	21	0	7	s.	J. J. Tucker.
Fosston	Polk	1,289	3	1.6	.....	33	18	− 31	1	37	0.16	.....	0.12	2.1	2	11	9	8	nw.	O. N. Hem.
Glencoe	McLeod	1,000	16	14.0	− 1.6	51	18	− 18	24	33	0.38	− 0.23	0.38	5.0	1	20	6	2	nw.	L. V. Koos.
Grand Meadow	Mower	1,338	25	14.6	+ 0.9	55	18	− 16	1	35	0.45	− 0.60	0.37	8.5	3	13	12	3	nw.	C. F. Greening.
Gull Lake Dam	Cass	1,215	2	8.3	.....	38	17†	− 27	12	45	0.11	.....	0.09	1.6	2	13	7	8	nw.	U. S. Engineer Corp
Hallock	Kittson	815	14	1.4	− 1.0	34[a]	18	− 30[a]	12	42[a]	0.24	− 0.27	0.10	2.4	5	19[a]	2[a]	6[a]	n.	D. A. Robertson.
Halstad	Norman	870	7	2.8	.....	33	18	− 32	2	53	T.	.....	T.	T.	0	16	3	9	nw.	A. G. Holstrom.
Hinckley	Pine	1,050	8	9.0	.....	41	18	− 24	1†	41	0.19	.....	0.11	2.5	2	10	11	7	n.	W. R. Newman.
International Falls	Koochiching	1,112	10	4.4	− 1.4	30	17	− 26	12	41	0.75	− 0.28	0.38	10.0	3	13	1	14	n.	C. Ardies.
Itasca State Park	Clearwater	1,500	2	6.4	.....	38	18†	− 37	12	54	0.24	.....	0.08	3.0	3	13	7	8	nw.	J. A. Stillwell.
Lake Crystal	Blue Earth	.....	5	13.8	.....	51[b]	18	− 23[b]	23	42[b]	0.68	.....	0.60	9.0	2	13[b]	13[b]	0[b]	nw.	E. D. Baker.
Leech Lake Dam	Cass	1,301	25	4.2	− 2.6	32	17	− 32	27	43	0.31	− 0.37	0.23	4.4	5	8	12	8	w.	U. S. Engineer Corps.
Littlefork	Koochiching	.....	3	0.2	.....	29	17†	− 39	27	46	0.96	.....	0.58	6.5	3	17	6	5	.....	O. C. Olson.
Long Prairie	Todd	1,299	21	8.6	− 1.3	39	14†	− 30	2	48	0.23	− 0.26	0.15	3.0	2	21	0	7	nw.	A. L. Sheets.
Lynd	Lyon	1,175	20	15.4	− 0.1	63	17	− 19	24	45	0.64	+ 0.19	0.60	6.5	2	20	6	2	nw.	J. W. Rouse.
Mankato	Blue Earth	758	15	.....	.....	.....	.....	.....	.....	.....	0.72	− 0.01	0.70	10.2	3	20	1	7	sw.	C. G. Staley.
Mapleplain	Hennepin	1,023	17	11.6	− 0.7	49	18	− 18	1†	34	0.83	− 0.21	0.60	8.6	6	11	8	9	sw..	G. W. Richards.
Milaca	Millelacs	1,072	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Foss.
Milan	Chippewa	955	19	10.9	− 1.4	56	17	− 23	24	43	0.58	− 0.29	0.50	5.8	2	11	5	12	nw.	O. K. Opjorden.
Minneapolis	Hennepin	918	22	12.7	− 2.5	53	18	− 14	4	31	0.74	+ 0.01	0.53	11.7	4	10	12	6	w.	U. S. Weather Bureau.
Montevideo	Chippewa	900	23	12.4	− 0.8	49	13	− 20	1†	40	0.34	− 0.35	0.31	5.5	4	14	5	9	nw.	L. G. Moyer.
Moorhead	Clay	935	32	7.5	+ 0.5	36	17	− 26	1	43	0.06	− 0.67	0.03	0.6	4	13	3	12	nw.	U. S. Weather Bureau.
Mora	Kanabec	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hans Peterson.
Morris	Stevens	1,170	28	10.4	− 0.1	49	17	− 24	1	35	0.21	− 0.31	0.20	2.0	2	21	4	3	nw.	D. T. Wheaton.
New London	Kandiyohi	1,215	19	11.8	+ 0.7	53	18	− 20	1	34	0.04	− 0.44	0.04	2.0	1	8	20	0	nw.	Harold Swensen.
New Richland	Waseca	1,180	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	N. O. Tyrholm.
New Ulm	Brown	791	33	12.2	− 3.5	54	17	− 18	1†	50	0.95	+ 0.05	0.60	9.5	4	1	8	19	nw.	A. L. Henle.
Osakis	Douglas	1,343	5	9.2	.....	37	19	− 24	1	35	0.21	.....	0.17	2.5	3	9	5	14	nw.	J. B. Johnson.
Park Rapids	Hubbard	1,426	23	3.2	− 2.7	35	18	− 30	12†	55	0.19	− 0.43	0.15	1.9	4	12	4	12	nw.	Dr. P. A. Walling.
Pierz	Morrison	.....	.....	8.4	.....	38[a]	17§	− 25[a]	1	34[a]	0.15	.....	0.15	1.0	1	17[a]	4[a]	6[a]	w.	E. H. Kerkhoff.
Pine River Dam	Crow Wing	1,251	26	5.6	− 1.6	36	18	− 34	27	50	0.17	− 0.50	0.12	5.0	2	17	7	4	w.	U. S. Engineer Corps.
Pokegama Falls	Itasca	1,280	26	3.6	− 2.3	32	17	− 37	27	48	0.44	− 0.27	0.23	5.5	7	16	1	11	w.	Do.
Redlake	Beltrami	1,152	5	2.6	.....	34	19	− 28	4	39	0.54	.....	0.12	5.4	5	13	10	5	w.	A. C. Goddard.
Red Wing	Goodhue	680	17	.....	.....	.....	.....	.....	.....	.....	1.02	− 0.08	0.88	11.8	5	16	3	9	nw.	Louis Back.
Redwood Falls	Redwood	1,050	6	14.5	.....	58	17	− 21	24	43	0.49	− 0.37	0.49	6.5	1	16	8	4	nw.	Hockett Bros.

TABLE 1.—*Climatological data for February, 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—Continued.																				
Reeds Landing	Wabasha	681	17								0.62	+ 0.05	0.60	13.0	4	13	0	15	nw.	John Deschneau.
Rochester	Olmstead	991	8	11.9		58	18	− 24	24†	50	0.53		0.52	8.1	2	17	1	10	nw.	Mary P. Leslie.
Roseau	Roseau	1,040	3	−2.8		31	18	− 40	12†	60	0.45		0.22	6.0	3	18	7	3	nw.	M. J. Hegland.
St. Charles	Winona	850	22	15.2		55	18	− 22	24	37	0.70	− 0.27	0.68	8.5	2	16	4	8	se.	S. W. Gleason.
St. Cloud	Sherburne	1,020	36	12.0	− 0.7	42	18	− 20	1	37	0.37	− 0.21	0.37	4.2	1	10	15	3	nw.	State Reformatory.
St. Paul	Ramsey	940	42	12.7	− 2.1	55	18	− 17	1	30	0.71	− 0.13	0.60	9.1	4	9	14	5	nw.	U. S. Weather Bureau.
St. Peter	Nicollet	825	18	15.2	− 0.6	54	18	− 20	24	37	0.55	+ 0.02	0.40	5.5	3	15	9	4	nw.	State Hospital.
Sandy Lake Dam	Aitkin	1,234	20	5.2	− 3.4	34	18	− 31	27	42	0.29	− 0.39	0.16	3.2	2	11	12	5	w.	U. S. Engineer Corps.
State Sanatorium	Cass		5	5.8				− 26	1	38[d]	0.15		0.10	1.5	2	18	2	8	w.	Dr. G. W. Beach.
Stillwater	Washington	694	7								0.63		0.50	9.0	2	20	3	5	n.	Oscar Ostrom.
Taylors Falls	Chisago	759	6	10.2		42	18	− 29	1	41	0.28		0.28	6.5	1	13	6	9	n.	Minneapolis Gen. Elec. Co.
Thief River Falls	Pennington	1,137	2	2.6		38	18	− 31	12	51	0.49		0.22	6.5	4	19	0	9	n.	E. W. Lown.
Tracy	Lyon		1																	E. D. Davis.
Warren	Marshall	859	1	5.4		35[a]	18	− 32[a]	12	50[a]	0.06		0.06	0.8	1	0	10	18		P. H. Holm.
Warroad	Roseau	1,069	3	1.0		32	18	− 40	27	58	0.60		0.38	8.0	3	19	0	9	w.	G. A. Sawyer.
Winnebago	Faribault	1,100	15	14.4	− 0.7	57	17	− 21	24	53	0.90	+ 0.08	0.90	12.0	1	16	7	5	sw.	H. H. Haight.
Winnibigoshish	Itasca	1,300	25	3.4	− 3.9	32	18	− 30	27	40	0.58	− 0.09	0.36	8.0	8	12	0	16	w.	U. S. Engineer Corps.
Winona	Winona	700	17	16.4	0.0	56	18	− 17	24	42	0.81	− 0.03	0.57	12.0	3	18	3	7	nw.	P. C. Myers.
Worthington	Nobles	1,593	18	12.4	− 2.8	56	17	− 18	1†	45	0.32	− 0.33	0.29	5.0	3	16	6	6	nw.	M. P. Mann.
Zumbrota	Goodhue	917	17	13.8	− 1.7	54	18	− 20	24	35	0.65		0.65	7.0	1	17	8	3	nw.	W. C. Rowell.
South Dakota.																				
Milbank	Grant	1,148	22	10.6	− 2.1	63	17	− 20	1	50	0.68	− 0.07	0.57	4.8	2	14	9	5	nw.	Miss Mary Patridge.
Sisseton	Roberts	1,202	7	14.0		52[a]	17	− 15	2†	42[a]	0.14		0.14	0.6	1	22	0	6	nw.	George Gray.
Wisconsin.																				
Antigo	Langlade	1,489	19	9.7	− 4.1	39	18†	− 25	5	40	1.22		1.00	12.2	4	20	0	8	w.	Elton C. Larzelere.
Barron	Barron	1,115	22	9.6	− 1.8	41	18	− 23	24	39	0.67	− 0.41	0.30	9.0	4	9	16	3	nw.	Wm. A. Kent.
Beloit	Rock	750	47	19.0	− 0.9	58	19	− 8	5†	46	1.65	− 0.06		6.0	3	14	0	14	nw.	Smith Observatory.
Big St. Germain Dam	Vilas	1,590	3	8.2		36	18	− 24	27	48	1.05		0.52	10.7	7	11	8	9	sw.	Fred Hessen.
Brodhead	Green	812	15	19.2	+ 0.5	56	18†	− 10	5†	36	0.80	− 0.78	0.40	8.0	3	18	1	9	sw.	Hector D. Kirkpatrick.
Burnett	Dodge	880	9	14.6		50	19	− 14	5	34	0.91		0.85	11.2	2	12	8	8	nw.	George W. Smith.
Cornell	Chippewa	993	1								0.88		0.75		6					Brunet Falls Mfg. Co.
Cottage Grove	Dane	888	2								0.80		0.37	8.3	4	17	7	4	sw.	John E. Mellish.
Darlington	Lafayette	867	7	17.4		55	18	− 10	5†	38	0.40		0.20	4.0	3	16	3	9	nw.	F. J. O'Neill.
Deerskin Dam	Forest	1,685	3	5.3		34	19†	− 27	27	47	1.54		1.30	17.9	3	13	4	11	w.	Wm. E. O'Neal.
Delavan	Walworth	920	22	18.0	− 2.3	58	19	− 10	5†	30	1.01	− 0.34	0.91	3.8	4	17	4	7	w.	Elwood S. Austin.
Dodgeville	Iowa	1,220	13																	Thomas Gibbon.
Downing	Dunn	983	11	9.4	− 2.9	44	18	− 27	24	45	1.00	− 0.24	1.00	10.0	2	12	7	9	w.	Eugene F. Stoddard.
Eau Claire	Eau Claire	800	22	12.4	− 1.9	49	18	− 25	24	43	1.37	+ 0.09	1.17	16.1	5	9	12	7	w.	Robert D. Whitford.
Glen Flora	Rusk	1,475	1	8.1		44	18	− 28	28	48	1.77		1.73	12.0	2	13	11	4	sw.	G. A. Durgin.
Grand Rapids	Wood	1,021	14	12.0	− 2.5	47	20	− 22	24	47	1.01	+ 0.42		10.8	4	15	6	7	sw.	Willis B. Raymond.
Grantsburg	Burnett	1,095	22	9.8	− 2.0	43	18	− 28	12	51	0.60	− 0.51	0.40	6.0	2	18	7	3	w.	Chester Ahlstrom.
Hancock	Waushara	1,091	21	14.4	− 1.6	47	19	− 15	5†	36	1.00	− 0.14	0.40	10.0	4	16	3	9	nw.	Frederick B. Hamilton.
Hatfield	Jackson	973	19	11.4	− 2.9	51	18	− 35	24	57	1.25	+ 0.54	1.00	12.5	4	8	9	11	nw.	Walter S. Woods.
Hayward	Sawyer	1,107	22	7.2	− 3.5	44	18	− 32	27	51	1.70	+ 0.63	1.20	17.0	4	16[a]	0[a]	11[a]	w.	A. E. Johnson.
Hillsboro	Vernon	1,000	22	12.7	− 2.8	53	18	− 25	24	44	0.80	− 0.53	0.60	8.0	3	13	13	2	sw.	Emil V. Wernick.
Koepenick	Langlade	1,683	22	9.0	− 4.9	42	19	− 22	5	46	1.00	− 0.28	0.40	10.0	5	3	23	2	nw.	Edward S. Koepenick.
La Crosse	La Crosse	714	41	15.8	− 2.6	57	18	− 14	24	38	1.04	− 0.02	0.83	11.6	3	11	5	12	nw.	U. S. Weather Bureau.
Lake Mills	Jefferson	897	22	16.8	− 2.0	54	19	− 13	5	33	0.75	− 0.50	0.35	6.0	3	16	6	6	nw.	S. Newton Dexter Smith
Lancaster	Grant	1,070	22	17.8[d]	+ 0.6	56[d]	18	− 12[e]	1	33[d]	0.63	− 0.50	0.60	7.0	4	6[g]	5[g]	10[g]	w.	Edward Pollock.
Long Lake	Oneida	1,592	5	7.0		34	19	− 36	25	61	0.64		0.37	14.9	9	13	6	9	w.	Louis Frank.
Madison	Dane	974	44	15.6	− 4.0	54	19	− 12	5	32	1.12	− 0.35	0.67	8.9	3	12	9	7	nw.	U. S. Weather Bureau.
Marshfield	Wood	1,276	0	11.4		42	18	− 19	24	41	0.86		0.75	7.6	5	13	9	6	nw.	Agr. Exper. Station.
Mather	Juneau	962	9	9.0		46	18	− 28	24†	52	1.40		0.80	14.0	3	15	3	10	w.	Frank Evans.
Mauston	....do	882	17	14.8	− 0.4	48	18	− 23	24	45	0.70	− 0.37	0.60	10.5	2	17	7	4	nw.	Eugene L. Hitchcock.
Meadow Valley	....do	974	22	12.6	− 1.6	50	18	− 29	24	53	0.88	+ 0.11	0.14	12.5	3	8	15	5	nw.	Charles H. Johnson.
Medford	Taylor	1,420	24	10.2	− 3.4	41	18	− 21	5	43	1.00	− 0.09	0.80	10.0	3	20	5	3	nw.	Wm. Zeit.
Merrill	Lincoln	1,267	7	12.0		50	15	− 27	25	58	0.96		0.72	10.7	4	10	11	7	nw.	O. F. Lueck.
Minocqua	Oneida	1,604	9	7.2		38	18	− 27	27	48	0.65		0.27	11.5	7	8	13	7	w.	Benjamin W. Applebee.
Mondovi	Buffalo	738	5	12.3		51	18	− 32	24	48	0.61		0.49	14.1	5	14	7	7	nw.	Dr. Charles Hebard.
Mount Horeb	Dane	1,226	9	14.7		49	18†	− 16	5	37	0.53		0.22	5.0	3	13[a]	7[a]	7[a]	nw.	W. M. Lewis.
Muscoda	Grant	666	4	14.0		52	18	− 12	2†	43	0.69		0.50	7.5	3	16	7	5	nw.	Wm. Hessler.
Neillsville	Clark	996	23	10.3	− 3.5	44	18	− 26	24	41	0.75	− 0.67	0.75	8.0	2				nw.	Wm. Heaslett.
New Richmond	St. Croix	990	8	11.0		44	18	− 21	12†	40	1.00		0.80	10.0	2	1	17	10	nw.	Franc A. R. Van Meter.
Osceola	Polk	806	22	9.1	− 2.5	45	18	− 23	1	44	0.68	− 0.24	0.33	9.5	4	12	13	3	n.	Charles W. Staples.
Park Falls	Price	1,492	22	7.6		42	18	− 27	28	43	1.39		0.96	18.0	8	13	4	11	n.	Flambeau Paper Co.
Portage	Columbia	809	24	15.6	− 1.8	52	19	− 17	24	36	1.11	+ 0.09	0.87	9.4	3	17	5	6	nw.	James H. Martin.
Port Edwards	Wood	969	3	10.0		47	18	− 25	24	50	1.80		1.40	18.0	2	19	4	5	w.	Nekoosa-Edwards Paper Co.
Prairie du Chien	Crawford	628	22	17.6	− 2.1	57	18	− 14	24	38	0.68	− 0.39	0.48	7.0	4	18	0	10	nw.	James A. Gillis.
Prairie du Sac	Sauk	750	5	14.7		52	19	− 20	5	45	0.42		0.24	7.2	3	12	9	7	sw.	Wis. River Power Co.
Prentice	Price	1,551	15	10.4	− 1.1	41	18†	− 25	28†	48	0.47	− 0.45	0.12	4.0	6	11	1	16	w.	Joseph G. Lash.
Rest Lake	Vilas		0																	A. F. Miller.
Rhinelander	Oneida	1,550	7	8.4		40	18	− 23	5	46	0.64		0.40	8.5	4	17	1	10	sw.	Rhinelander Power Co.
Shullsburg	Lafayette	1,019	7	18.2		54	19	− 10	1	32	0.84		0.74	4.0	3	17	2	9	w.	Harrison B. Chamberlin.
Solon Springs	Douglas	1,083	7	6.0		42	18	− 28	6†	42	2.00		1.60	20.0	3	16	2	10	sw.	John M. Sayles.
Spooner	Washburn	1,104	19	8.1	− 3.4	44	18	− 24	1	34	0.70	− 0.28	0.56	7.5	3	14	6	8		Horace A. Bresee.
Stanley	Chippewa	1,082	9	9.2		39	18†	− 25	28	41	0.65		0.50	8.0	2	17	5	6	nw.	W. Humphrey Scott.
Stevens Point	Portage	1,113	20	12.8	− 1.1	47	19	− 21	24	44	1.00	+ 0.25	1.00	10.0	1	9	9	10	nw.	Postmaster.
Sugar Camp Dam	Oneida	1,582	3								0.25		0.23	10.0	2	15	2	11	nw.	Lyman Haskins.
Tomahawk	....do	1,451	0	7.8		39	18	− 29	27	51	1.00			10.0		12[a]	0[a]	2[a]	w.	Victor Extrom.
Trout Lake	Vilas	1,400	1	6.0		35	18	− 27	27	38	0.55		0.30	5.5	3	13	2	13	sw.	F. B. Moody.
Twin Lakes Dam	....do	1,625	3								0.87		0.55	14.5	2	16	9	3	sw.	Albert D. Hansen.
Valley Junction	Monroe	930	21	12.0	− 3.1	50	18	− 28	24†	53	2.09	+ 1.07	0.80	21.0	7	14	8	6	nw.	Frederick Muermann.
Viroqua	Vernon	1,412	23	15.9	− 0.9	48	18	− 15	1	34	0.42	− 0.88	0.18	6.5	3	14	5	9	nw.	Henry E. Rogers.
Vudesare	Vilas	1,700	5	2.0		32	18†	− 31	27	46	1.70		1.00	20.0	4	13	9	6	w.	Louis L. Thomas.
Watertown	Jefferson	824	22	16.0	− 1.8	53	19	− 12	5	36	0.90	− 0.59	0.30	9.0	4	16	8	4	nw.	Charles J. Salick.
Waukesha	Waukesha	864	22	18.2	− 0.3	56	19	− 12	5	29	1.10	+ 0.05	0.60	11.0	3	11	13	4	nw.	Carroll College.
Wausau	Marathon	1,212	18	12.2	− 2.7	42	18	− 19	24†	41	0.84	− 0.27	0.60	10.5	6	14	9	5	n.	Geo. H. Halder.
Weyerhaeuser	Rusk	1,297	11	8.5		44	18	− 25	24	46	0.49		0.33	8.0	3	14	6	8	nw.	Miss Etta Stiles.
Whitehall	Trempealeau	675	22	12.7	− 1.5	54	18	− 32	24	48	1.40	+ 0.44	1.10	14.0	4				w.	Hans J. Haugh.

TABLE 1.—*Climatological data for February, 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	21.1	+ 0.8	67	18	− 7	1	49	1.20	− 0.12	0.60	10.0	4	14	8	6	nw.	J. I. Chenoweth.
Algona	Kossuth	1,213	39	16.9	− 0.1	58	18	− 15	24	37	0.82	− 0.45	0.65	10.7	5	18	4	6	nw.	Dr. F. T. Seeley.
Alta	Buena Vista	1,513	22	16.6	− 1.0	62	17	− 14	1	52	0.72	− 0.13	0.52	7.3	7	15	7	6	n.	David E. Hadden.
Amana	Iowa	721	37	21.8	+ 1.7	63	18	− 7	1	42	0.96	− 0.30	0.73	7.2	5	12	11	5	nw.	C. Schadt.
Ames	Story	926	37	19.9	− 1.3	62	18	− 17	24	41	0.48	− 0.32	0.40	4.5	6	13	10	5	nw.	Iowa State College.
Baxter	Jasper	998	13	20.2	+ 2.1	62	17	− 10	1†	47	0.48	− 0.33	0.39	6.6	5	18	5	5	nw.	W. R. Vandike.
Belle Plaine	Benton	886	23	21.4	+ 1.5	65	18	− 11	24	37	0.70	− 0.76	0.42	7.4	4	12	7	9	nw.	O. C. Burrows.
Belmond	Wright	1,184	3	16.8	.....	60	18	− 15	24	40	0.47	.....	0.20	4.5	4	8	12	8	nw.	Geo. P. Hardwick.
Bloomfield	Davis	881	6	22.1d	.....	66	18	1	12†	41	.....	.....	.....	.....	.....	.....	.....	.....	.....	Albert Power.
Bonaparte	Van Buren	.....	22	24.0	+ 1.2	67	18	− 4	1	38	1.60	+ 0.37	0.83	9.5	4	.....	.....	.....	.....	B. R. Vale.
Boone	Boone	1,134	8	18.0	.....	61	18	− 12	24	43	0.34	.....	0.23	8.5	3	16	4	8	.....	C. F. Henning.
Britt	Hancock	1,236	16	15.7	− 0.8	58	18	− 19	24	38	0.19	− 0.84	0.16	1.9	2	16	5	7	s.	L. M. Goodman.
Buckingham	Tama	.....	13	.....	.....	.....	.....	.....	.....	.....	0.30	− 0.70	0.25	8.0	2	15	8	5	nw.	J. S. Guynn.
Burlington	Des Moines	544	17	23.2	− 0.5	65	18	− 4	1†	44	1.68	− 0.10	0.58	8.8	5	14	8	6	sw.	Max E. Poppe, jr.
Carroll	Carroll	1,265	23	18.4	− 0.5	62	17	− 12	28	45	0.50	− 0.65	0.40	5.0	2	16	5	7	nw.	Mrs. Jos. J. Wolfe.
Cedar Rapids	Linn	733	31	19.5	− 0.6	63	18	− 7	2	46	0.51	− 0.87	0.21	4.0	3	15	3	10	w.	R. S. Toogood.
Charles City	Floyd	1,015	22	15.6	+ 0.5	59	18	− 20	24	39	0.91	− 0.06	0.79	9.1	4	12	4	12	nw.	U. S. Weather Bureau.
Clear Lake	Cerro Gordo	1,241	15	19.0	+ 4.4	58	18†	− 14	24	48	0.60	− 0.25	0.40	6.0	2	25	0	3	nw.	Oscar Stevens.
Clinton	Clinton	593	46	22.0	+ 0.2	61	18	− 6	1	34	1.92	− 0.17	0.82	12.2	8	11	12	5	nw.	A. E. Reid.
Columbus Junction	Louisa	595	12	24.0	+ 2.6	64	18	− 5	1	38	1.49	+ 0.31	0.85	10.0	4	14	7	7	w.	J. B. Johnston.
Davenport	Scott	580	42	23.0	− 0.8	63	18	− 5	1	32	1.57	+ 0.01	0.86	11.3	5	9	8	11	w.	U. S. Weather Bureau.
Decorah	Winneshiek	875	20	17.1	+ 1.8	57	18	− 19	24	37	0.67	− 0.24	0.39	7.5	3	.....	.....	.....	.....	F. H. Baker.
Delaware	Delaware	1,083	22	19.5	+ 3.2	59	18	− 9	1	39	0.52	− 0.29	0.36	4.5	2	15	10	3	nw.	Nettie E. Ball.
Des Moines	Polk	861	35	22.4	− 1.7	65	18	− 7	1	39	0.65	− 0.43	0.52	6.7	7	10	6	12	nw.	U. S. Weather Bureau.
Dubuque	Dubuque	639	40	20.4	− 1.2	60	18	− 7	1	32	0.82	− 0.56	0.62	4.9	4	10	9	9	nw.	Do.
Earlham	Madison	.....	11	21.2	+ 3.2	65	18	− 18	24	45	1.15	+ 0.03	0.60	11.5	6	15	4	9	nw.	George Phillips.
Elkader	Clayton	727	34	17.2	− 0.8	55	18	− 15	24	39	0.73	− 0.36	0.55	9.0	3	13	8	7	nw.	Chas. Reinecke.
Elma	Howard	1,182	3	15.6	.....	57	18	− 18	24	38	0.88	.....	0.80	5.0	2	17	7	4	nw.	H. A. Moore.
Estherville	Emmet	1,298	18	14.4	− 0.7	58	18	− 19	24	51	0.50	− 0.18	0.45	7.0	2	17	4	7	nw.	A. O. Peterson.
Fairfield	Jefferson	780	29	23.6	+ 1.9	65	18	− 5	1	37	1.62	+ 0.03	0.70	11.3	6	17	2	9	nw.	R. M. McKenzie.
Fayette	Fayette	1,003	23	17.5	+ 0.6	59	18	− 18	24	40	0.61	− 0.53	0.48	5.0	4	17	2	9	nw.	R. Z. Latimer.
Forest City	Winnebago	1,226	19	15.7	+ 1.1	57	18	− 15	1†	50	0.80	− 0.13	0.80	8.0	1	15	0	13	nw.	J. A. Peters.
Fort Dodge	Webster	1,126	13	16.2	+ 0.9	60	18	− 16	24	50	0.50	− 0.21	0.50	5.0	1	.....	.....	.....	nw.	J. F. Monk.
Fort Madison	Lee	516	64	.....	.....	.....	.....	.....	.....	.....	1.23	− 0.66	0.60	10.0	6	11	6	11	nw.	Miss L. A. McCready.
Gilman	Marshall	1,052	14	.....	.....	.....	.....	.....	.....	.....	0.50	− 0.50	0.40	5.0	2	.....	.....	.....	.....	J. L. Wylie.
Grand Meadow	Clayton	1,180	22	16.2	− 0.5	51	18†	− 13	1	43	0.56	− 0.54	0.50	5.8	2	12	6	10	nw.	F. L. Williams.
Grinnell	Poweshiek	1,023	21	22.2	+ 0.9	65	18	− 9	1	43	0.73	− 0.19	0.53	7.2	4	14	8	6	w.	D. W. Brainard.
Grundy Center	Grundy	976	22	20.0	+ 2.3	63	18	− 15	24	40	0.75	− 0.10	0.50	7.5	3	17	5	6	nw.	J. B. Calderwood.
Guthrie Center	Guthrie	1,077	18	20.9	+ 0.7	62	18	− 11	24†	40	0.82	+ 0.02	0.69	7.8	4	19	3	6	nw.	D. G. Beardsley.
Hampton	Franklin	1,155	23	18.8	+ 1.9	60	18	− 11	1†	42	0.87	− 0.30	0.75	8.1	3	13	9	6	nw.	E. C. Grenelle.
Humboldt	Humboldt	1,095	25	19.2	+ 1.5	60	18	− 23	24	43	1.01	+ 0.35	0.61	6.5	2	22	3	3	nw.	J. P. Peterson.
Independence	Buchanan	921	49	19.6	0.0	60	18	− 10	1	41	0.41	− 0.60	0.20	4.1	4	16	5	7	nw.	R. E. Dudley.
Indianola	Warren	969	22	21.8	− 0.5	66	18	− 12	1	40	0.88	− 0.06	0.49	8.4	6	.....	.....	.....	nw.	Prof. J. L. Tilton.
Iowa City	Johnson	683	53	20.1	− 2.4	65	18	− 8	1	44	1.42	− 0.05	0.63	8.1	6	14	2	12	nw.	Prof. A. G. Smith.
Iowa Falls	Hardin	1,170	20	16.3	+ 0.8	59	18	− 18	24	42	1.00	− 0.04	0.95	10.0	3	17	3	8	nw.	J. B. Parmelee.
Jefferson	Greene	1,052	14	19.4	.....	61	18	− 15	24	44	0.72	− 0.13	0.60	7.2	4	13	7	8	nw.	Ora M. Hall.
Keokuk	Lee	614	42	25.2	− 1.4	68	18	− 4	1	31	2.39	+ 0.77	0.99	11.7	7	11	7	10	nw.	U. S. Weather Bureau.
Keosauqua	Van Buren	644	21	22.2	− 0.9	67	18	− 5	28	47	1.62	+ 0.17	0.59	11.6	6	9	9	10	.....	J. H. Landes.
Knoxville	Marion	920	18	23.7	+ 1.8	66	18	− 6	1	40	0.95	+ 0.07	0.40	9.5	4	12	4	12	sw.	Casey & Belville.
Lacona	Warren	.....	14	.....	.....	.....	.....	.....	.....	.....	0.63	− 0.85	0.20	6.3	8	7	16	5	.....	J. B. Alter.
Lansing	Allamakee	632	8	17.2	.....	58	19	− 17	24	41d	0.70	.....	0.45	7.7	4	.....	.....	.....	n.	Chas. R. Serene.
Le Claire	Scott	576	13	.....	.....	.....	.....	.....	.....	.....	1.58	+ 0.33	0.60	9.3	6	.....	.....	.....	.....	Miss M. T. Disney.
Marshalltown	Marshall	947	21	18.6	− 0.8	65	18	− 13	24†	50	0.96	+ 0.15	0.60	9.6	6	14	8	6	nw.	Jacob Eige.
Mason City	Cerro Gordo	1,132	16	16.0	− 0.2	57	18	− 20	24	37	0.48	− 0.36	0.40	4.8	2	15	5	8	nw.	J. S. Mills.
Monroe	Jasper	922	1	22.6	.....	65	18	− 9	1	43	0.24	.....	0.16	6.2	2	15	5	8	nw.	J. A. Dibel.
Mount Pleasant	Henry	729	32	24.6	+ 1.4	66	19	− 3	1	37	1.66	+ 0.60	0.70	8.8	6	14	5	9	nw.	J. W. Edwards.
Muscatine	Muscatine	554	53	.....	.....	.....	.....	.....	.....	.....	1.86	− 0.27	0.65	11.0	4	.....	.....	.....	.....	William Molis.
New Hampton	Chickasaw	1,169	16	17.0	+ 2.4	56	18	− 13	1	37	0.72	− 0.18	0.50	7.2	4	18	4	6	w.	A. F. Kemman.
Nora Springs	Floyd	1,064	.....	18.4	.....	62	18	− 24	24	45	0.78	.....	0.76	5.1	4	16	5	7	s.	Arthur Betts.
Northwood	Worth	1,122	17	14.4	− 1.1	55	18	− 15	1	39	1.60	+ 0.51	0.90	15.7	5	21	4	3	nw.	Chas. H. Dwelle.
Olin	Jones	760	15	21.8	+ 4.7	63	18	− 7	1	41	0.40	− 1.01	0.20	4.0	3	15	7	6	nw.	Dr. F. W. Port.
Osage	Mitchell	1,184	26	17.0	+ 2.1	58	18	− 16	24	49	0.60	− 0.54	0.30	6.0	2	19	2	7	nw.	Lester Coonradt.
Oskaloosa	Mahaska	843	37	22.5	+ 1.3	66	18	− 5	28	43	0.81	+ 0.20	.....	7.0	.....	12	3	13	nw.	Joseph Boyd.
Ottumwa	Wapello	649	18	23.6	+ 0.6	67	18	− 4	1†	40	1.62	+ 0.26	0.85	10.0	6	4	13	11	nw.	Chester Potter.
Pella	Marion	877	11	21.9	+ 1.6	66	18	− 11	24	47	0.66	− 0.10	0.45	9.1	.....	17	2	9	nw.	J. H. Ver Steeg.
Perry	Dallas	975	12	21.6	+ 3.0	62	18	− 18	24	44	0.92	− 0.06	0.60	9.2	5	12	11	5	nw.	S. J. Brumfield.
Pocahontas	Pocahontas	1,248	9	17.5	.....	60	18	− 12	1†	41	0.66	.....	0.62	6.6	3	20	4	4	nw.	F. E. Hronek.
Rockwell City	Calhoun	.....	17	19.4	+ 1.8	51	17	− 11	1	35	0.60	− 0.25	0.60	6.0	1	19	5	4	.....	C. M. Randall.
Sac City	Sac	1,278	37	19.9	+ 2.1	60	17	− 12	1	38	1.30	+ 0.28	0.70	13.0	4	.....	.....	.....	nw.	E. N. Baily.
Saint Charles	Madison	1,070	12	23.4	+ 2.5	69	18	− 8	1	42	0.81	− 0.19	0.54	7.8	6	15	6	7	nw.	R. D. Minard.
Sigourney	Keokuk	877	17	23.2	+ 1.5	64	18	− 7	1	40	0.90	− 0.41	0.60	5.5	5	10	10	8	w.	J. T. Parker.
Stockport	Van Buren	745	11	22.8	.....	66	18	− 8	28	43	1.80	.....	0.80	12.0	8	11	5	12	nw.	C. L. Beswick.
Storm Lake	Buena Vista	1,440	24	19.0	+ 3.8	60	17	− 14	1	35	0.72	+ 0.03	0.62	8.3	5	13	10	5	nw.	Chauncy Case.
Tipton	Cedar	807	14	23.0	+ 1.2	62	18	− 5	1	37	1.12	− 0.15	0.84	.....	5	15	9	4	nw.	F. K. Gregg.
Toledo	Tama	856	19	20.4	+ 1.0	64	18	− 12	24	42	.....	.....	.....	.....	.....	16	3	9	nw.	I. F. Giger.
Wapello	Louisa	588	15	24.7	+ 4.4	63	18	− 2	1	35	0.63	− 0.76	0.30	10.0	3	16	3	9	nw.	G. W. Schofield.
Washington	Washington	769	31	23.2	+ 1.0	66	18	− 6	1	41	1.50	+ 0.28	0.85	9.8	3	13	9	6	nw.	Wm. A. Cook.
Waterloo	Black Hawk	862	30	19.3	+ 1.2	62	18	− 10	1†	38	0.63	− 0.48	0.48	7.0	5	18	3	7	nw.	Ralph B. Slippy.
Waukee	Dallas	1,039	10	20.2	− 2.3	65	18	− 10	1†	42	0.41	− 0.89	0.26	4.9	6	16	6	6	nw.	Samuel F. Foft.
Waverly	Bremer	948	17	18.3	+ 0.8	60	18	− 18	24	46	0.50	− 0.64	.....	4.0	3	18	1	9	nw.	Earl C. Moore.
Webster City	Hamilton	.....	8	19.2	.....	60	18	− 17	24	44	0.55	.....	0.30	5.5	3	14	5	9	nw.	C. D. Carpenter.
West Bend	Palo Alto	1,197	20	16.8	+ 0.4	58	18	− 18	24	41	0.81	− 0.14	0.80	8.1	2	15	6	7	nw.	Phil. Dorweiler.
Whitten	Hardin	1,036	16	20.0	+ 3.7	60	18	− 11	1†	40	0.70	− 0.06	0.40	7.0	2	12	7	9	nw.	Dr. F. P. Butler.
Winterset	Madison	1,129	22	22.7	+ 1.0	65	18	− 8	1†	39	0.90	+ 0.03	0.80	9.2	3	10	7	11	nw.	Dr. R. S. Cooper.
Missouri.																				
Gorin	Scotland	700	27	.....	.....	.....	.....	.....	.....	.....	1.77	+ 0.11	0.92	8.5	6	9	4	15	nw.	J. W. Pulliam.
Hannibal	Marion	534	21	26.8	− 2.3	68	18	− 1	1	31	2.98	+ 1.38	1.59	6.2	10	10	8	10	sw.	U. S. Weather Bureau.
Louisiana	Pike	500	36	27.0	− 1.2	67	18	− 3	4	42	3.70	+ 1.21	1.52	10.6	9	14	6	8	nw.	J. T. Farrel.
Macon	Macon	881	1	27.6	.....	69	18	− 2	1	33	2.03	.....	1.04	3.5	5	12	5	11	ne.	Jno. A. Cook.
Mexico	Audrain	797	36	25.8	− 2.8	69	18	− 2	4	46	2.92	+ 0.42	0.80	7.6	8	13	3	12	w.	J. F. Llewellyn.
Palmyra	Marion	817	1	26.8	.....	67	19	− 3	1	34	3.91	.....	1.80	3.8	3	16	6	6	nw.	W. B. Markell.
Steffenville	Lewis	576	21	26.8	0	69	18	− 2	1†	35	2.97	+ 0.93	1.80	7.2	6	8	8	12	ne.	Frank Hall.
Sublett	Adair	1,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Lewis Spriggs.
Vandalia	Audrain	776	2	28.8	.....	69	19	0	6	30	3.10	.....	1.50	16.0	5	11	4	13	s.	C. B. Ellis.
Warrenton	Warren	865	23	27.4	− 2.0	68	18	1	1†	49	1.61	− 0.93	0.44	7.0	8	6	7	15	nw.	Prof. J. H. Frick.

TABLE 1.—*Climatological data for February, 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.
Indiana.																				
Collegeville	Jasper	.....	14	22.8	− 1.5	62	19	− 14	5	31	0.63	− 1.86	0.30	5.5	3	13	7	8	w.	Otto Miller.
Knox	Starke	716	8	24.0	.....	62	19	− 5	5	26	1.37	.....	0.61	6.9	6	12	11	5	w.	W. R. R. Tatman.
Laporte	Laporte	810	17	22.4	− 0.2	61	19	− 7	13	31	1.65	− 1.23	0.60	11.0	8	17	1	10	nw.	Wm. M. Walton, jr.
Plymouth	Marshall	790	10	23.4	.....	61	19	− 6	5	27	1.03	.....	0.47	5.7	9	11	11	6	sw.	J. W. Siders.
South Bend	St. Joseph	726	20	22.4	+ 0.1	61	19	− 6	5	23	1.10	− 1.23	0.38	10.5	7	11	8	9	sw.	Henry H. Swaim.
Illinois.																				
Aledo	Mercer	738	13	24.2	+ 1.0	63	18	− 5	1	31	1.77	+ 0.20	0.84	7.6	7	13	7	8	nw.	William B. Frew.
Alexander	Morgan	670	20	26.0	− 1.8	65	18†	− 10	6	31	1.56	− 0.32	0.54	8.3	7	11	5	12	nw.	George H. Hall.
Antioch	Lake	861	12	20.4	− 0.3	58	19	− 7	5	42	1.28	− 0.22	1.00	8.0	2	12	7	9	w.	J. C. James.
Astoria	Fulton	650	14	25.7	+ 0.4	66	19	− 3	1	34	3.19	+ 0.65	2.00	7.5	6	12	5	11	nw.	Edward V. Bohl.
Aurora	Kane	678	34	22.6	− 0.1	60	19	− 3	1†	35	2.80	+ 0.56	.....	10.0	4	.....	.....	.....	.....	W. Holden.
Beardstown	Cass	448	.....	.....	.....	.....	.....	.....	.....	.....	2.53	+ 0.61	0.73	5.0	4	.....	.....	.....	.....	Mrs. L. M. Rice.
Bement	Piatt	700	6	26.2	.....	68	19	− 6	5†	30	0.57	.....	0.33	4.9	4	13	2	13	s.	N. N. Stevenson.
Bloomington	McLean	840	22	25.8	− 0.1	63	19	− 4	5	30	1.40	− 0.76	0.58	5.3	6	16	5	7	nw.	Prof. H. N. Pearce.
Cairo	Alexander	359	41	36.6	− 1.0	68	18	11	1	24	2.08	− 1.25	0.71	2.1	8	10	8	10	s.	U. S. Weather Bureau.
Carbondale	Jackson	412	8	33.8	.....	70	18	1	4	34	0.79	− 1.60	0.23	4.9	7	14	3	11	nw.	State Normal University.
Carlinville	Macoupin	663	23	28.9	− 0.5	68	19	− 5	6	38	1.09	− 1.51	0.40	4.7	4	13	7	8	s.	Blackburn College.
Carlyle	Clinton	470	28	.....	.....	.....	.....	.....	.....	.....	1.09	− 1.49	0.80	.....	4	.....	.....	.....	.....	Hervey O. Jones.
Chester	Randolph	380	21	.....	.....	.....	.....	.....	.....	.....	1.54	− 1.22	0.76	7.0	10	.....	.....	.....	.....	Chas. S. Gollon.
Clinton	De Witt	727	3	25.4	.....	63	18†	− 8	6	29	1.12	.....	0.39	7.0	6	12	8	8	nw.	J. Frank Ziegler.
Coatsburg	Adams	763	21	25.6	− 1.2	65[a]	18	− 4	1†	31[a]	2.59	+ 0.62	1.53	5.9	8	15	1	12	n.	Dr. J. R. Lambert.
Cobden	Union	656	30	34.8	− 1.0	71	18	6	6	34	0.85	− 2.65	0.50	1.5	2	19	0	9	n.	John Buck.
Dakota	Stephenson	929	8	19.4	.....	58	19	− 8[a]	1†	33[a]	1.26	.....	0.71	8.5	4	12	8	8	nw.	Elmer G. Smith.
Decatur	Macon	685	22	26.8	+ 0.3	65	18†	− 6	6	30	1.28	− 0.82	0.42	7.9	10	14	5	9	nw.	Prof. J. H. Coonradt.
Dixon	Lee	725	23	21.0	− 0.1	60	18†	− 5	1	44	1.71	+ 0.04	0.88	6.0	5	17	6	5	.....	H. U. Bardwell.
Duquoin	Perry	459	25	32.9	− 0.4	70	18†	− 3	4	40	1.31	− 1.53	0.60	9.2	6	14	8	6	nw.	G. H. Knetzger.
Dwight	Livingston	600	20	23.8	− 1.7	63	19	− 8	5	29	1.89	− 0.17	0.75	9.5	5	11	4	13	nw.	Edward O. Welch.
East St. Louis	St. Clair	481	2	.....	.....	.....	.....	.....	.....	.....	0.93	.....	0.27	4.9	9	.....	.....	.....	.....	W. McK. Brown.
Edwardsville	Madison	554	14	.....	.....	.....	.....	.....	.....	.....	1.09	− 2.08	0.32	6.0	8	.....	.....	.....	.....	W. H. Morgan.
Elgin	Kane	716	6	22.4	.....	60	19	− 4	1†	34	1.51	.....	0.66	11.5	3	10	8	10	nw.	Elgin Observatory.
Ewing	Franklin	449	1	.....	.....	.....	.....	.....	.....	.....	1.20	.....	0.69	2.3	7	.....	.....	.....	.....	Ewing College.
Fairview	Fulton	733	2	.....	.....	.....	.....	.....	.....	.....	3.03	.....	1.99	10.9	6	.....	.....	.....	.....	Abram Wilson.
Galva	Henry	842	21	23.2	+ 1.4	61	18	− 6	1	27	2.03	+ 0.38	1.22	13.1	9	16	0	12	nw.	Prof. F. U. White
Grafton	Jersey	422	20	.....	.....	.....	.....	.....	.....	.....	1.01	− 1.29	0.40	4.0	6	.....	.....	.....	.....	R. C. Goodrich.
Greenville	Bond	635	35	29.8	− 0.7	68	19†	0	6	33	0.97	− 2.16	0.35	5.2	5	16	2	10	sw.	H. W. Reidemann.
Griggsville	Pike	650	28	27.7	− 0.8	66	18	0	1†	32	2.19	− 0.05	1.17	.....	3	12	5	11	nw.	Geo. F. Kneeland.
Havana	Mason	475	21	26.0	− 1.9	65	18	− 2	1	33	1.74	− 0.27	1.04	4.2	5	10	7	11	nw.	L. L. Eutenener.
Henry	Marshall	500	25	24.5	+ 0.1	63	18	− 3	1	31	3.25	+ 1.39	2.16	11.5	8	14	9	5	nw.	Dr. F. A. Powell.
Hillsboro	Montgomery	675	19	29.5	+ 0.1	69	19	0	6	32	1.40	− 0.98	0.67	2.0	4	14	1	13	s.	Ira L. Woodward.
Joliet	Will	609	22	23.0	− 0.2	62	19	− 3	5†	32	1.46	− 0.32	0.65	5.8	6	16	4	8	nw.	F. M. Muhlig.
Kishwaukee	Winnebago	730	25	20.6	− 0.5	59	19	− 5	1†	33	1.28	− 0.70	0.62	12.8	8	14	8	6	sw.	George Stevens.
La Grange	Cook	657	21	23.0	+ 0.4	61	19	− 3	1†	34	1.93	− 0.02	0.94	7.2	3	11	9	8	nw.	Prof. F. E. Sanford.
La Harpe	Hancock	698	24	24.0	− 2.7	67	18	− 4	1	32	2.26	+ 0.35	1.45	11.5	6	16	5	7	nw.	Geo. E. Campbell.
Lanark	Carroll	883	24	20.4	− 0.4	58	18	− 6	1	39	0.68	− 0.62	0.58	6.5	3	18	2	8	nw.	M. N. Wertz.
Lasalle	Lasalle	536	8	23.6	− 1.4	61	18	− 4	1	26	2.50	+ 0.06	1.70	7.6	8	10	8	10	w.	U. S. Weather Bureau.
Lincoln	Logan	575	25	25.6[a]	− 1.7	65[a]	19	− 10[a]	4	36[a]	1.21	− 0.81	0.50	5.1	6	12	8	8	nw.	Prof. C. S. Oglevee.
Macomb	McDonough	700	9	.....	.....	.....	.....	.....	.....	.....	3.27	.....	2.12	9.5	4	.....	.....	.....	.....	State Normal University.
Manteno	Kankakee	711	2	.....	.....	.....	.....	.....	.....	.....	1.07	.....	0.78	8.9	6	13	6	9	sw.	J. F. Schmeltzer.
Martinton	Iroquois	633	26	23.4	− 1.0	63	19	− 11	5	28	0.96	− 1.50	0.70	7.0	3	15	4	9	w.	Joseph H. Peltier.
Mascoutah	St. Clair	425	23	33.4	+ 2.0	71	19	− 5	4	41	.....	.....	.....	.....	.....	15	4	9	nw.	Dr. Robt. F. Lischer.
Minonk	*Woodford*	745	20	24.4	0.0	64	19	− 7	6	32	2.67	+ 0.69	1.54	9.5	6	11	6	11	nw.	John C. Danforth.
Monmouth	Warren	784	21	24.1	+ 0.9	64[a]	18	− 5	1	32[a]	2.00	+ 0.29	1.00	10.5	6	13	3	12	nw.	Dr. J. C. Hutchison.
Morris	Grundy	518	2	24.6	.....	68	19	− 4	5	33	1.91	.....	1.00	6.2	5	12	8	8	nw.	E. G. Cryder.
Morrison	Whiteside	685	19	22.2	+ 1.0	61	18	− 6	1	40	1.18	− 0.58	0.44	8.9	7	16	4	8	sw.	S. A. Maxwell.
Morrisonville	Christian	658	14	27.4	− 0.4	66	19	− 7	6	29	1.34	− 0.45	0.60	4.5	7	11	7	10	se.	J. D. Lowis.
Mount Vernon	Jefferson	511	19	29.4	− 2.0	71	19	− 4	4	50	1.05	− 1.92	0.50	6.2	5	12	2	14	n.	Theodore P. Stelle.
Nashville	Washington	503	13	.....	.....	.....	.....	.....	.....	.....	0.88	− 1.24	0.58	7.2	7	.....	.....	.....	.....	H. M. Potter.
Oregon	Ogle	702	4	21.4	.....	59	19	− 6	1	35	1.97	.....	1.36	10.0	4	12	4	12	w.	Samuel Ray.
Ottawa	Lasalle	500	27	24.6	− 0.2	62	19	− 3	1	30	3.00	+ 0.92	1.86	8.9	4	7	2	19	nw.	Miss Maude M. Harris.
Pana	Christian	692	27	28.6	− 1.0	68	18†	0	6	34	1.46	− 1.42	0.78	5.1	4	10	10	8	.....	Dr. G. N. Gilbert.
Paw Paw	Lee	930	1	.....	.....	.....	.....	.....	.....	.....	2.20	.....	1.23	6.8	5	.....	.....	.....	.....	A. C. McBride.
Peoria	Peoria	609	57	24.4	− 1.5	63	18	− 4	1	28	3.00	+ 0.31	2.00	9.5	9	12	5	11	s.	U. S. Weather Bureau.
Pontiac	Livingston	546	11	24.8	− 0.8	63	19	− 5	5	30	1.85	− 0.36	0.78	9.0	5	11	5	12	sw.	George Butterworth.
Quincy	Adams	481	7	25.4	.....	67	18	− 1	1†	44	2.73	.....	1.68	3.3	5	.....	.....	.....	.....	Fred J. Brinkoetter.
Riley	McHenry	956	54	19.9[a]	− 1.2	58[a]	19	− 6[a]	1†	34[a]	1.65	− 0.05	0.83	6.9	5	15	3	10	nw.	John West James.
Roberts	Ford	774	2	.....	.....	.....	.....	.....	.....	.....	0.93	.....	0.63	3.7	4	15	7	6	sw.	R. E. Bradbury.
Rockford	Winnebago	763	21	21.4	− 1.6	60	19	− 5	1†	33	1.74	− 0.47	1.25	9.7	6	17	4	7	.....	Dr. John R. Porter.
Rushville	Schuyler	670	22	26.8	+ 0.4	65	18	− 2	1	27	1.40	− 0.43	0.54	3.8	5	4	7	17	w.	H. F. Dyson.
St. Charles	Kane	700	18	22.4	+ 0.4	61	19	− 4	1	36	2.41	+ 0.12	0.85	9.5	5	12	9	7	nw.	Dr. Wm. H. Bishop.
St. Peter	Fayette	500	11	29.2	− 0.1	68	19	− 8	6	36	1.43	− 0.44	0.55	8.5	6	12	3	13	sw.	M. L. Lansford.
Sparta	Randolph	538	27	32.2[b]	− 0.7	68[b]	18†	0[b]	4	33[b]	1.38	− 1.25	0.64	8.1	9	16	1	11	nw.	James A. Caldwell.
Springfield	Sangamon	644	33	26.8	− 2.3	64	19	0	6	27	1.35	− 1.42	0.43	8.0	10	9	5	14	w.	U. S. Weather Bureau.
Streator	Lasalle	626	20	23.1	− 0.4	64	19	− 4	1†	44	2.58	+ 0.85	1.12	9.9	6	18	3	7	sw.	Miss Lora Sweetser.
Sullivan	Moultrie	530	13	26.7	− 0.6	65	19	− 5	6	30	1.51	− 0.65	0.79	4.7	8	9	10	9	nw.	C. A. Corbin.
Sycamore	Dekalb	855	33	22.4	+ 1.1	61	19	− 6	1	35	.....	.....	.....	10.0	.....	16	2	10	w.	Geo. E. Valentine.
Tiskilwa	Bureau	798	29	.....	.....	.....	.....	.....	.....	.....	2.51	+ 0.52	1.36	10.0	8	.....	.....	.....	.....	F. I. Smucker.
Walnut	do	717	22	23.0	0.0	61	19	− 5	1	32	2.15	+ 0.27	1.05	8.1	6	12	9	7	s.	O. C. Nussle.
Warsaw	Hancock	501	15	.....	.....	.....	.....	.....	.....	.....	1.42	− 0.57	0.69	10.0	5	.....	.....	.....	.....	W. R. Kirkbride.
Waterloo	Monroe	719	2	.....	.....	.....	.....	.....	.....	.....	1.00	.....	0.44	8.2	8	.....	.....	.....	.....	Prof. Jas. E. Raibourn.
White Hall	Greene	573	5	27.4	.....	67	18†	− 8	6	34	1.81	− 0.93	0.73	5.1	6	14	5	9	se.	Frank Dillman.
Windsor	Shelby	681	14	27.4	− 0.9	67	19	− 5	6	32	1.86	− 0.39	0.75	6.7	10	12	5	11	nw.	Herbert Rose.
Winnebago	Winnebago	900	26	20.3	− 0.1	59	19	− 6	1†	35	1.44	− 0.34	0.75	10.5	7	18	5	5	w.	Frank Osborn.
Yorkville	Kendall	584	26	22.2	+ 0.2	60	19	− 4	13	32	2.01	+ 0.06	1.00	7.5	5	15	8	5	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 February, 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	
North Dakota.																														
Amenia	Red																T.									T.				T.
Bottineau	Mouse						.03		.01		.02	.02				.01	.01		.03						.04	.01				0.18
Bowbells	do																						T.		.05		T.			0.05
Cando	Sheyenne																	T.	T.											T.
Crosby	Mouse		T.				T.			T.		T.			T.	T.			T.	T.	T.	T.			T.				T.	T.
Devils Lake	Sheyenne		T.				T.	T.		T.	T.			T.	T.	.02				T.	T.				T.					0.02
Donnybrook	Mouse														.05			.05		.05	T.	T.			T.					0.15
Dunseith	do										.09			T.	.03	.05			.05	T.					.01					0.23
Eckman	do																													
Edmore	Sheyenne																													
Fessenden	James						T.									T.	T.			T.										T.
Forman	Sheyenne															.20														0.20
Grafton	Red						T.								T.	.14						T.								0.14
Granville	Mouse																					.05							.05	0.10
Hannah	Pembina							.30			.20			T.	.20	T.														0.70
Hansboro	Red										T.				.12			.07												0.19
Hillsboro	do																													
Lakota	Sheyenne							.03		.01	.02	.02			.01	.01	.01		T.											0.11
Langdon	Pembina																													
Larimore	Red		T.	.04		.01	T.		T.	.01		.01						.08		.01										0.16
Lisbon	Sheyenne																		T.	.05	T.						T.			0.05
McKinney	Mouse															T.									T.					T.
McLeod	Sheyenne																													0.00
Manfred	do		T.				T.	.05			T.				T.	.05						T.								0.10
Mayville	Red															T.														T.
Milnor	do						T.	T.			T.					.05					T.	T.					.02			0.07
Minot	Mouse															.02														0.02
Minto	Red														T.	T.	.20													0.20
Oriska	Sheyenne		T.	T.	T.	T.				T.	T.			T.				T.	T.	T.	T.	T.				T.				T.
Park River	Red		.05												.02				T.	T.										0.07
Pembina	do																													
Power	Sheyenne		.03									T.								T.	T.						T.			0.03
Towner	Mouse					T.									T.	.02														0.02
University	Red		T.				T.	T.			T.				.06	.04	T.			T.	T.				T.	T.				0.10
Wahpeton	do															T.														T.
Walhalla	Pembina	T.													.10			T.	T.							.10				0.20
Westhope	Mouse		T.			T.	.02									.05			.10			T.			T.	.05				0.22
Willow City	do		T.			T.		T.	T.		.20		T.		T.	.10			T.	T.		T.			T.	T.				0.30
Minnesota.																														
Albert Lea	Mississippi																.20					.50	.10							0.80
Alexandria ‖	do			.02			T.	T.	.03			.02				.05						T.	.04							0.16
Angus	Red		T.				T.								.06					T.	T.				T.	T.				0.06
Bagley	do							.17			.05				.05				T.						.08					0.35
Baudette	Rainy		.03			T.		.01			.01					.01	.10	T.	.28	T.										0.44
Beardsley	Minnesota						T.				T.					.08					T.		.15							0.23
Beaulieu	Red																													
Bemidji ‖	Mississippi														.14			.02									.02		.01	0.19
Bird Island	Minnesota						T.									T.	T.			.03	.02		.42			.01				0.48
Brainerd	Mississippi								.02		T.					.09							.17						T.	0.28
Caledonia ‖	do												T.			T.					T.	T.	.90	.22			.09			1.21
Campbell ‖	Red															.08	T.						.04							0.12
Cass Lake ‖	Mississippi							T.			T.					.20	T.		T.	T.						T.				0.20
Collegeville	do															.03				T.			.37							0.40
Crookston ‖	Red			.02					T.					T.		.08	T.									T.				0.10
Detroit ‖	do			T.			T.	T.			T.					.15			T.							.08				0.23
Ely	Rainy		T.				T.	T.	T.		.03		T.	T.		.04	.10	T.	.27							T.			T.	0.44
Fairmont (near)	Minnesota															T.	.01			T.		*	.60			T.		T.		0.61
Faribault ‖	Mississippi																													
Farmington	do						T.				T.					T.				T.	.08	.08	.18			.08				0.42
Fergus Falls	Red		.05	.03		.01	.01	.07			.05	.01				.07							.02						.01	0.33
Fort Ripley ‖	Mississippi									T.	T.					.02							T.	.04						0.06
Fosston	Red		.04					T.							T.	.12	T.		T.											0.16
Glencoe	Mississippi																						.38							0.38
Grand Meadow	do																T.				T.	.06	.37				.02			0.45
Gull Lake Dam	do		T.					T.			T.					.09						.02			T.					0.11
Hallock	Red										.05				.05		.02	.10	T.						T.	.02				0.24
Halstad ‖	do															T.														T.
Hinckley	St. Croix																					.11			.08					0.19
International Falls	Rainy										.15						.22		.38											0.75
Itasca State Park	Mississippi		.08					.08							.08															0.24
Lake Crystal	Minnesota															T.						.60	.08							0.68
Leech Lake Dam	Mississippi		.04					T.	T.		.01					.23	.02	T.								.01				0.31
Littlefork	Rainy									.08							.30		.58											0.96
Long Prairie	Mississippi										.15												.08							0.23
Lynd	Minnesota																T.			.04			.60							0.64
Mankato ‖	do																				.01		.70				.01			0.72
Mapleplain	Mississippi		T.			T.	T.	T.			T.	T.				T.				.08	.05	.15	.45			.09	.01		T.	0.83
Milaca	do																													
Milan	Minnesota															T.				.08		T.	.50							0.58
Minneapolis	Mississippi						T.				T.					T.				.12	T.	.18	.35			.09				0.74
Montevideo ‖	Minnesota											T.			T.		T.				.01		.31			.01			.01	0.34
Moorhead	Red		.02			T.		T.			T.				.02	.01				T.	T.				T.	.01			T.	0.06
Mora	St. Croix																													
Morris	Minnesota										T.					.01							.20							0.21
New London	Mississippi														T.				T.	.04								T.	T.	0.04
New Richland	Minnesota																													
New Ulm ‖	do							T.				T.				T.		T.		T.	.15		.60	.10			.10			0.95
Osakis	Mississippi		T.			T.	T.		T.		.01	T.				.03							.17							0.21
Park Rapids ‖	do			.01					.02			.01				.15														0.19
Pierz	do																						.15							0.15
Pine River Dam	do							T.			.05					.12														0.17
Pokegama Falls	do		.03					.04			.01					.23	.05	.01	.07							T.				0.44
Red Lake	Red		.12					.10			.10				.12		T.				T.					.10				0.54
Red Wing ‖	Mississippi							T.								.02					.04		.72	.16			.08			1.02
Redwood Falls	Minnesota																			T.		T.	.49			T.				0.49
Reeds Landing ‖	Mississippi															T.					.01		.50	.10			.01			0.62
Rochester ‖	do																						.52	.01						0.53
Roseau ‖	Red	T.		T.							T.				T.	.15	T.	.22							.08	T.				0.45
St. Charles	Mississippi						T.									T.					T.		.68				.02			0.70

TABLE 2.—*Daily precipitation for February, 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	
***Minnesota*—Continued.**																														
St. Cloud	Mississippi								T.	T.	T.					T.				T.	T.		.37				T.			0.37
St. Paul	do						T.									T.				.06		.24	.36			.05				0.71
St. Peter	Minnesota																					.40	.10			.05				0.55
Sandy Lake Dam	Mississippi		T.					T.								.16	T.					T.	.13						T.	0.29
State Sanatorium	do		T.					.05								.10								T.						0.15
Stillwater ‖	St. Croix																				T.		.50	.13			T.			0.63
Taylors Falls	do																				T.		.28			T.				0.28
Thief River Falls ‖	Red							.08							.22	.08												.11		0.49
Tracy	Minnesota																													
Warren	Red		T.								T.		T.	T.		.06	T.	T.								T.				0.06
Warroad	Rainy		T.					T.			T.					.11			.38						.11					0.60
Winnebago ‖	Minnesota			T.														T.		T.	T.	T.	.90	T.						0.90
Winnibigoshish	Mississippi		.01					.03			.02				.02	.36	.03	.08	.03											0.58
Winona	do						T.									T.					T.	.18	.57	T.		T.	.06			0.81
Worthington ‖	Des Moines			T.													.01				.02		.29			T.			T.	0.32
Zumbrota	Mississippi						T.														T.		.65							0.65
South Dakota.																														
Milbank ‖	Minnesota															T.	.11					T.	.57				T.			0.68
Sisseton ‖	do																T.					.14								0.14
Wisconsin.																														
Antigo	Wisconsin							T.	.02		T.					.10	.10			T.		T.	1.00							1.22
Barron	Chippewa															*	.20				.07		.30	.10	T.	T.	T.			0.67
Beloit	Rock																					*	1.50			.15				1.65
Big St. Germain Dam	Wisconsin			.02				.02	T.		T.			T.	T.	.22	.14		.10		T.		.52				.03			1.05
Brodhead	Rock										T.						T.				T.	.40	.20			T.	.20			0.80
Burnett	do															T.	T.				T.	T.	.85				.06			0.91
Cornell	Chippewa								.02			T.				.04	.01				.02		.75				.04			0.88
Cottage Grove	Rock								T.		T.					T.						.30	.37	.02		T.	.11			0.80
Darlington	do																					.10	.20				.10			0.40
Deerskin Dam	Wisconsin							T.			T.					T.	.15	T.	.09				1.30	T.			T.			1.54
Delavan	Rock										T.					T.	T.				T.	.91	.04			.05	.01			1.01
Dodgeville	do																													
Downing	Chippewa																T.					*	1.00			T.			T.	1.00
Eau Claire	do			T.			T.	T.	T.			T.				.05					.05	T.	1.17			.03	.07			1.37
Glen Flora	Chippewa																T.						1.73	.04			T.			1.77
Grand Rapids ‖	Wisconsin																.08						*	.91			.02			1.01
Grantsburg	St. Croix							T.								T.					.20		.40							0.60
Hancock	Wisconsin															.10					T.	.40	.40				.10			1.00
Hatfield	Black																				.10	*	1.00				.15			1.25
Hayward	St. Croix										.10					.20							1.20				.20			1.70
Hillsboro	Wisconsin															T.						*	.60			.20				0.80
Koepenick	do						.20									.10	.20				.10	T.	.40							1.00
La Crosse	Mississippi						T.									T.	T.			T.		.66	.30			.08	T.	T.		1.04
Lake Mills	Rock																					.35	.20			T.	.20			0.75
Lancaster	Mississippi																T.					*	.60			.02			.01	0.63
Long Lake	Wisconsin			.01				.01	.01		T.					.07	.04		.06		.04	T.	.37	T.			.03			0.64
Madison	Rock								T.		T.					T.				T.		.69	.32			.11	T.	T.		1.12
Marshfield	Wisconsin						T.	T.			T.					.01	T.			T.	.01	*	.75			T.	.09			0.86
Mather ‖	do																T.				T.		.80	.40			.20			1.40
Mauston	do																						.60				.10			0.70
Meadow Valley	do															T.	T.				T.	.06	.64	T.		T.	.18			0.88
Medford	Black								.10							.10					T.		.80							1.00
Merrill ‖	Wisconsin															*	.11						.72	.12			.01			0.96
Minocqua	do	T.		T.				.04	T.		T.	T.				.11	.07	T.	.08	T.	.05		.27	.03			T.			0.65
Mondovi	Mississippi															.04					.04	T.	.49			.01	.03			0.61
Mount Horeb	Rock										T.											.22	.20			.11		T.		0.53
Muscoda ‖	Wisconsin																					.07	.50				.12			0.69
Neillsville	Black																				*	.75								0.75
New Richmond	St. Croix		T.													T.					.2		.80				T.			1.00
Osceola	St. Croix						T.				T.					T.				.05		.20	.33			.10				0.68
Park Falls	Chippewa			.05				T.	.02			.02				.21	.05				.05		.96	T.			.03			1.39
Portage	Wisconsin										T.					T.	T.					.87	.09			T.	.15			1.11
Port Edwards	do							T.								T.				T.		.40	1.40							1.80
Prairie du Chien ‖	Mississippi																					.06	.48	.02			.12			0.68
Prairie du Sac	Wisconsin																					.07	.24				.11			0.42
Prentice	Chippewa								.03							.11	.04				.11		.12	.06						0.47
Rest Lake	do																													
Rhinelander	Wisconsin								T.							.16	.03		.05				.40				T.			0.64
Shullsburg	Mississippi																	.01					.74				.09			0.84
Solon Springs	St. Croix		T.						T.		T.					.30	.10					T.	1.60							2.00
Spooner	do							T.			T.	T.				.05					.09		.56				T.			0.70
Stanley	Chippewa						T.	T.								T.	T.					T.	.50	T.			.15			0.65
Stevens Point	Wisconsin																					*	1.00							1.00
Sugar Camp Dam	do							T.								.02	T.		T.		T.		.23							0.25
Tomahawk ‡	do																													a 1.00
Trout Lake	do							T.			T.				T.	.15	.10				T.		.30	T.						0.55
Twin Lakes Dam	do							T.									.32							.55						0.87
Valley Junction	do															.07				T.		.70	.80	.20		.04	.25	.03		2.09
Viroqua	Mississippi																					.14	.18	T.		T.	.10			0.42
Vudesare	Wisconsin							T.			T.					.20	.30	T.		T.	T.	1.00	.20							1.70
Watertown ‖	Rock						T.									T.	T.					.15	.20	.25	T.		.30			0.90
Waukesha	Fox															T.						.60	.20				.30			1.10
Wausau	Wisconsin								T.							.06				.01	.04	.60	.06				.07			0.84
Weyerhaeuser	Chippewa		T.					T.			T.					.11					.05		.33			T.				0.49
Whitehall	Mississippi															.10					.10		1.10			.10				1.40
Iowa.																														
Albia ‖	Des Moines					T.											T.					.30	.20				.10	.60		1.20
Algona	do				T.												T.			T.	.04	.38	.37				.02	.01		0.82
Alta ‖	Raccoon				.04												.03				.02	.03	.52	.03			T.		.05	0.72
Amana	Iowa				T.												.01			T.		.61	.12			.05	.17	T.	T.	0.96
Ames	Skunk				.03												T.					.35	.05			.03	.01	T.	.01	0.48
Baxter	do				.01												T.					.39	.02			.02	.04	T.	T.	0.48
Belle Plaine	Iowa																T.					.42	.14			.12	.02			0.70
Belmond	do																.02			T.	T.	.20	.20			T.	.05	T.		0.47
Bloomfield	Mississippi																													
Bonaparte	Des Moines			.10													T.					.83				.11	.56			1.60
Boone ‖	do	T.			T.																	.09	.23				.02		T.	0.34

a Estimated from records of surrounding stations.

TABLE 2. *Daily precipitation for February, 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	Total.
***Iowa*—Continued.**																														
Britt	Iowa				T.												T.			T.		.16	.03			T.	T.			0.19
Buckingham	Cedar				T.																	.25				.05		T.		0.30
Burlington ‖	Mississippi			.18			T.					T.					T.	.20				.50					.22	.58		1.68
Carroll ‖	Raccoon				T.																	T.	.40				T.		.10	0.50
Cedar Rapids ‖	Cedar					T.												T.				.20	.21	T.			.10		T.	0.51
Charles City	do																T.					.61	.18			.08	.04			0.91
Clear Lake	do																T.					.20	.40							0.60
Clinton	Mississippi										T.		T.				.02				.02	.82	.19			.17	.58	.05	.07	1.92
Columbus Junction	Iowa										T.						T.					.85	T.			.14	.45	.05	T.	1.49
Davenport	Mississippi				T.						T.						T.			T.	.04	.82	T.			.23	.46	T.	.02	1.57
Decorah	do																					.14	.39			.14				0.67
Delaware	do																T.					.36				.16				0.52
Des Moines	Des Moines				.01						T.					.03	T.			T.	.14	.39	.01			.05	T.	.02		0.65
Dubuque	Mississippi										T.						T.			T.		.59	.09			.08	.06			0.82
Earlham	Raccoon				T.												.10					.60	.20			.05	.10	.10	T.	1.15
Elkader	Mississippi																.03					.55				.15				0.73
Elma	Wapsipinicon																T.					.80					.08			0.88
Estherville ‖	Des Moines	T.	T.																				.45	.05						0.50
Fairfield	Skunk		T.	.02	T.						T.						.01				T.	.70	T.			.25	.45	.19		1.62
Fayette	Mississippi															T.	.04					(*)	.57							0.61
Forest City ‖	Cedar																			T.		.80								0.80
Fort Dodge ‖	Des Moines				T.	T.																.50					T.			0.50
Fort Madison	Mississippi		.20			T.					T.						.05					.13				.10	.60		.15	1.23
Gilman	Iowa					T.											T.				.10	.40						T.		0.50
Grand Meadow	Mississippi																T.						.50			.06				0.56
Grinnell	Iowa				T.												T.					.40	.13			.10	.10			0.73
Grundy Center	Cedar				T.												T.					.50	.15			T.	.10			0.75
Guthrie Center	Raccoon				T.												.03					.69	.02			T.	T.	.08		0.82
Hampton	Cedar																T.				.04	.75				.08				0.87
Humboldt	Des Moines																					.61						.40		1.01
Independence	Wapsipinicon															T.	T.					.20	.10			.01	.10			0.41
Indianola	Des Moines				T.												.03					.49	.08			.13	.10	.05	T.	0.88
Iowa City ‖	Iowa					T.						T.						T.				.28	.63	.03			.25	.20	.03	1.42
Iowa Falls ‖	do					T.		T.										T.			T.	.25	.70	.05						1.00
Jefferson	Raccoon				.01												.01					.60	.10			T.	T.			0.72
Keokuk	Mississippi		.18		T.	T.											.01			T.	.30	.99	T.			.06	.84	T.	.01	2.39
Keosauqua ‖	Des Moines			.06		T.											.05				T.	.30	.50	T.			.10	.52	T.	1.62
Knoxville	do				T.						T.						T.				T.	.40	.10		T.	.05	.40	T.		0.95
Lacona	do				.01						.01						.10					.20				.20	.05	.02	.04	0.63
Lansing ‖	Mississippi																T.					.02	.45	.08			.15			0.70
Le Claire ‖	do	T.				T.						T.						T.			.01	.20	.60	.02			.40	.35	T.	1.58
Marshalltown ‖	Iowa				T.	.03												T.			T.	.20	.60	.01			.10		.02	0.96
Mason City	Cedar																					.40				.08				0.48
Monroe	Skunk				T.						T.						T.					T.	.16			.08	T.	T.		0.24
Mount Pleasant	do			.06	T.						T.						T				T.	.70	.10			.26	.52	T.	.02	1.66
Muscatine ‖	Mississippi	T.				T.						T.						T.				.36	.60				.25	.65	T.	1.86
New Hampton	Wapsipinicon																					.50	.10			.02	.10			0.72
Nora Springs	Cedar						T.										.01				T.	.58	.18			.01				0.78
Northwood	do																.02			.03		.90	.60				.05			1.60
Olin	Wapsipinicon																					.15	.05				.20			0.40
Osage	Cedar																					.30	.30				T.			0.60
Oskaloosa	Des Moines				T.											T.	T.													0.81
Ottumwa	do			.10	T.						.01						.02			T.		.85				.19	.45	T.	T.	1.62
Pella	do				T.						T.					T.	.01				T.	T.		.45				.20		0.66
Perry	Raccoon				.05												.02					.15	.60				T.	.10		0.92
Pocahontas	Des Moines																T.					.40	.22			T.		.04		0.66
Rockwell City	Raccoon				T.																	.60								0.60
Sac City	do																				T.	.70	.40				.10	.10		1.30
Saint Charles	Des Moines				T.	T.					T.						.04					.54	.10			.10	.02	.01		0.81
Sigourney	Skunk				T.						T.						T.					.60	.10			.04	.12	.04	T.	0.90
Stockport	do		T.	.05		T.											.02			.02	.01	.80				.20	.60	.10	T.	1.80
Storm Lake	Raccoon				.04												.02					.37	.25					.04		0.72
Tipton	Cedar																.04					.78	.06			.09	.15		T.	1.12
Toledo	Iowa																T.					*	.90				.08			0.98
Wapello	do																				.12	.21				.30				0.63
Washington	Skunk																					.85				.28	.37			1.50
Waterloo ‖	Cedar																	T.	.03	.48	.02						.09		.01	0.63
Waukee	Raccoon				.01												.03	T.			T.	.26	.02			.04	T.	.05	T.	0.41
Waverly	Cedar																.10						.40							0.50
Webster City	Des Moines																					.20	.30			T.	.05			0.55
West Bend	do				T.												T.				T.	.80			T.		.01			0.81
Whitten	Iowa				T.												T.					.40	.30			T.				0.70
Winterset	Des Moines				T.	T.											T.					.80	.05			T.	.05	T.	T.	0.90
Missouri.																														
Corin	Mississippi		.18			T.										.06						.92				.22	.36		.03	1.77
Hannibal	do	T.	.22	.16	T.	.02					T.						.07				.45	1.14	T.	.01		T.	.78	.02	.11	2.98
Louisiana	do		.01	.70		.01					T.					T.						1.52		.10	.05		1.22	.02	.07	3.70
Macon	do		.04	.25		T.											T.					1.04	T.	T.		T.	.65	T.	.05	2.03
Mexico ‖	do			.60							T.	.01										0.68	.61	T.	.13		.05	.80	.04	2.92
Palmyra	do			.38																		1.80	T.				1.73	T.	T.	3.91
Steffenville	do		.15	.20													.60					1.80		T.	T.	T.	.12		.10	2.97
Sublett	do																													
Vandalia	do									.30	.30													1.50			.25		.75	3.10
Warrenton ‖	do			.34													.01					.44	.38		.24		.01	.16	.03	1.61
Indiana.																														
Collegeville	Iroquois		.25								.08						T.							T.	T.	T.	.30			0.63
Knox	Kankakee	T.		.33													T.	.10			.01	.02	.30	T.	T.		.61			1.37
Laporte	do		T.	.10	T.	.15							T.				.15				.05		.20	.35			.60	.05		1.65
Plymouth	do	.02		.16								T.	T.				T.	.08		.09	T.	.03	.08	.02	T.		.47	.08		1.03
South Bend	do	.03		.17		T.							T.			T.	T.	.08					.20	.20	T.		.38	.04		1.10
Illinois.																														
Aledo	Mississippi			.02							T.						T.				.01	.84				.17	.66	.06	.01	1.77
Alexander	Illinois		T.	.44		.09					T.						T.					.54	T.	.02	.02		.44	T.	.01	1.56
Antioch	do										T.											1.00	T.	T.			.28			1.28
Astoria	do		T.	.30	T.	T.					T.						T.	.10			T.	2.00	T.	T.		.04	.65		.10	3.19
Aurora	do																					*	1.80				*	1.00		2.80
Beardstown ‖	do			.50								T.						T.				.65	.73	T.	T.		T.	.65		2.53

TABLE 2.—*Daily precipitation for February, 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	
Illinois—Continued.																														
Bement	Mississippi			.33		.04					T.							T.				T.		T.	.04		.16	T.	T.	0.57
Bloomington	Illinois		T.	.24		T.					T.						T.				.04	.45	T.			.05	.58	T.	.04	1.40
Cairo	Mississippi		.10	.38						T.	.20	.08										.26		T.	T.		.70	.14	.22	2.08
Carbondale	do			.23		T.					T.	.07					T.					.14		.09			.08	.05	.13	0.79
Carlinville	Illinois		T.	.34		T.					T.											.25		T.		T.	.40	.10	T.	1.09
Carlyle	Mississippi			.80							.05											.10		T.			.14	T.	T.	1.09
Chester ‖ ‖	do		T.	.54	.22	T.	.02					.14					.04	T.					.14		.18		.12	.04	.10	1.54
Clinton	Illinois		T.	.37		T.					T.							T.				.24	.08	T.		T.	.39	.01	.03	1.12
Coatsburg	Mississippi		.02	.30		.06					.02						.01					1.53					.58		.07	2.59
Cobden	do			.35							T.	T.													T.		.50			0.85
Dakota	do										T.					T.		.01				.71	.32			T.	.22	T.		1.26
Decatur	Illinois		.05	.33		.05					.01							.05				.18		.04			.42	.05	.10	1.28
Dixon ‖ ‖	Mississippi																	T.		.02		.26	.88				.20	.35	T.	1.71
Duquoin	do			.60							.10	T.					T.					.07		T.	.22		.12		.20	1.31
Dwight	Illinois			.18							T.							T.			T.	.72	.20	T.		T.	.75	.04	T.	1.89
East St. Louis ‖ ‖	Mississippi			.27	.08		T.					.03					.05						.23		.07		.07	.10	.03	0.93
Edwardsville	do			.32								.03					.05					.23		.06		.03	.24		.13	1.09
Elgin	Illinois										T.					T.	T.					.66	T.				.55	.30		1.51
Ewing	Mississippi			.69								.07										.18		T.	.03		.09	.13	.01	1.20
Fairview	Illinois			.16	T.	T.					T.						T.	.01				1.99	.16			T.	.68	.03	T.	3.03
Galva	do			.07							.03						.01	.03				1.22	.01			.17	.46	T.	.03	2.03
Grafton ‖ ‖	Mississippi			.40	T.												T.	T.		.10		.09	.14				.12	.16		1.01
Greenville	do		T.	.35							T.						T.					.16		.04	T.		.29	T.	.13	0.97
Griggsville	Illinois		T.	.32		T.					T.						T.	T.				1.17	T.	T.	T.		.70	T.	T.	2.19
Havana	do		T.	.20		T.					T.						.03					1.04	T.			T.	.42		.05	1.74
Henry	do			.14	T.						T.							.03				1.96	.20			.06	.77	.07	.02	3.25
Hillsboro	Mississippi		T.	.38							T.											.23	T.	T.			.67	.12	T.	1.40
Joliet	Illinois		T.	.10							T.					T.	.07				T.	.65	.20				.39	T.	.05	1.46
Kishwaukee	Mississippi										.01										.02	.62	.35	.01		.02	.22	.03		1.28
La Grange	Illinois										T.					T.						.62	.94	T.			.57		T.	1.93
La Harpe	do			.16	T.						T.						T.	T.				1.43	.02			.09	.46	.10	T.	2.26
Lanark	Mississippi										T.					T.	T.					.40	.18			T.	.10			0.68
La Salle	Illinois		.04	.02	T.						T.					T.	.04				.20	1.70	T.	T.	T.	.16	.29	T.	.05	2.50
Lincoln	Illinois		T.	.37		T.					T.							T.			.02	.24	.08	T.		.04	.46	T.	T.	1.21
Macomb	do		T.	.15		T.					T.						T.					2.12	T.			T.	.93		.07	3.27
Manteno	do			.15														.04			.04		.02				.78	.04		1.07
Martinton	do			.24								T.						T.				T.	.02				.70	T.		0.96
Mascoutah	Mississippi																													
Minonk	Illinois			.24							T.							.01				1.33	.21			.06	.82	T.		2.67
Monmouth	Mississippi		T.	.10	T.	T.					T.							.03				1.00	.25			.06	.56		T.	2.00
Morris	Illinois			.08														.04				1.00	.25				.54	T.		1.91
Morrison	Mississippi										T.							.03			.05	.31	.19			.02	.44	.14	T.	1.18
Morrisonville	Illinois		*	.25		.03					T.						T.	T.				.24	T.	T.	.04		.60	.14	.04	1.34
Mount Vernon ‖ ‖	Mississippi			.50	.15																		.20		.15		.05			1.05
Nashville	do		T.	.58							T.	.08										.07		T.	.04		.03	.04	.04	0.88
Oregon	do										T.					T.	T.					1.36	.19			T.	.27	.15		1.97
Ottawa	Illinois											T.						.15		T.		1.86				.29	.70		T.	3.00
Pana	Mississippi		T.	.35		T.					T.											.22		T.			.78	T.	.11	1.46
Paw Paw	Illinois				T.						T.					T.	T.	.05				1.23	.35	T.		T.	.52	.05	T.	2.20
Peoria	do		.12	.08	T.	T.					.01						.02				.27	1.73	T.	T.		.09	.60		.08	3.00
Pontiac	do			.30		T.					T.	T.						T.			.05	.50	.22	T.		T.	.78	T.	T.	1.85
Quincy ‖ ‖	Mississippi			.32			.03										T.					1.22	.46		T.		T.	.70		2.73
Riley	do										T.					T.	T.				.01	.83	.41			T.	.38		.02	1.65
Roberts	Illinois	T.		.18		T.					T.											.11	T.	T.	T.	.01	.63	T.	T.	0.93
Rockford	Mississippi										T.					T.	T.				.05	1.25	.12			.01	.29	.02		1.74
Rushville	Illinois		T.	.30		.03					T.											.54	T.	T.		T.	.48		.05	1.40
St. Charles	do										T.					T.	T.	.06			T.	.85	.70	T.			.60	.20	T.	2.41
St. Peter	Mississippi			.55								.25										.10		.10			.23	T.	.20	1.43
Sparta	do			.64		T.					T.	.09					.05					.11		.08	.09	T.	.03	.15	.14	1.38
Springfield	Illinois	T.	.29	.14		.07					.01						.04				T.	.28	T.	.02		T.	.42	.01	.07	1.35
Streator ‖ ‖	do			.18								T.						.04				1.12	.47	T.			.20	.57		2.58
Sullivan	Mississippi			.27		.05												.08				T.	.11	T.	.05		.79	.06	.10	1.51
Sycamore	do																													
Tiskilwa	Illinois			.07	T.						.02						.02					1.36	.11			.04	.86		.03	2.51
Walnut	Mississippi										T.							.02				1.05	.22			.02	.77	.07		2.15
Warsaw ‖ ‖	do		.10		T.																	.22	.41			.09	.60		T.	1.42
Waterloo	do	T.	T.	.44						T.	T.	.08					T.					.14		.08	.03	T.	.07	.12	.04	1.00
White Hall	Illinois		T.	.35		.02					.01						T.					.73		.05			.65	T.	T.	1.81
Windsor	Mississippi		T.	.40		.10					.10		T.				T.	.02				.22		.02	.05		.75	.10	.10	1.86
Winnebago	do										.02						T.	T.			.07	.75	.25			.07	.25	.03		1.44
Yorkville	Illinois			T.							T.							T.				1.00	.55	.10			.41	.04	.01	2.01

* 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 selected stations for February, 1913. 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....	9	−28	3	−24	25	−25	15	−33	.....	.....	9	−22	7	−21	6	−16	12	−20	6	−26	10	−18	3	−26	4	−17	−13	−23
2....	6	−27	10	−20	24	−22	14	−15	.....	.....	20	− 1	14	−25	25	− 4	26	1	19	−14	21	−16	12	−10	28	1	− 6	−16
3....	−17	−29	−14	−24	19	−23	−10	−23	.....	.....	21	−19	− 7	−23	21	− 2	9	−15	− 4	−25	8	− 5	10	−25	11	− 8	− 4	−24
4....	−12	−29	−11	−22	15	−24	− 9	−21	.....	.....	6	−20	− 8	−22	1	− 8	− 4	−16	− 7	−20	2	−11	− 7	−29	− 6	−14	−10	−26
5....	1	−25	1	−14	12	−24	10	−22	.....	.....	1	−16	0	−20	5	−11	8	−10	1	−17	7	−11	− 5	−21	1	−13	− 5	−18
6....	10	−25	7	− 4	15	−20	15	−10	.....	.....	10	− 2	12	−10	15	− 5	10	− 4	10	− 5	12	− 9	7	−26	11	− 3	5	−20
7....	15	− 6	17	2	25	− 3	22	4	.....	.....	22	− 1	22	− 8	26	1	25	0	24	− 3	22	1	21	− 9	26	0	18	− 6
8....	10	−12	13	− 5	21	0	19	− 2	.....	.....	20	6	15	0	25	10	24	− 2	18	1	30	1	19	− 2	22	11	18	− 8
9....	16	− 3	12	− 8	25	− 4	24	− 4	.....	.....	22	8	22	0	34	2	33	0	22	4	35	3	17	2	23	11	15	− 4
10....	5	− 4	22	− 3	32	− 2	9	1	.....	.....	32	9	23	3	35	14	35	15	25	0	35	5	28	0	37	7	22	1
11....	− 4	−21	− 3	−16	29	−10	5	−11	.....	.....	10	− 6	− 4	−10	21	1	21	− 3	2	−14	13	0	7	−10	7	− 6	10	−11
12....	22	−31	25	− 9	21	−25	30	−17	.....	.....	12	−20	23	−26	10	−11	24	−16	18	−25	21	−12	4	−29	9	−13	4	−25
13....	34	−22	33	13	32	−14	38	− 8	.....	.....	31	5	26	−20	35	2	49	15	29	14	39	−11	30	− 5	34	6	25	− 1
14....	19	15	30	0	23	21	34	15	.....	.....	40	20	25	11	49	14	30	12	32	12	49	18	34	14	44	20	30	12
15....	29	− 3	20	− 1	21	5	40	5	.....	.....	38	16	23	6	34	23	28	18	24	6	34	20	31	9	32	19	22	5
16....	31	− 1	27	15	34	5	51	24	.....	.....	36	19	18	6	38	22	40	16	27	17	45	20	29	11	37	19	22	2
17....	32	15	33	21	40	21	48	22	.....	.....	40	15	34	10	48	16	48	15	36	11	54	17	35	− 4	42	20	31	8
18....	30	25	31	13	43	23	40	29	.....	.....	41	30	36	15	55	33	47	32	35	20	53	19	36	27	55	33	32	25
19....	14	5	14	7	37	15	17	10	.....	.....	38	24	17	11	44	30	23	20	20	10	30	29	33	20	36	26	30	20
20....	17	5	18	− 2	25	7	14	11	.....	.....	28	11	15	5	32	21	25	5	18	6	29	8	22	3	30	16	22	2
21....	15	−13	15	− 5	20	− 5	14	8	.....	.....	21	10	20	− 5	25	18	25	15	21	0	22	8	22	1	24	14	21	− 6
22....	17	−14	10	− 1	30	− 7	15	0	.....	.....	16	7	12	1	19	9	19	15	16	3	16	3	19	4	16	8	20	4
23....	9	−10	14	− 3	32	− 2	20	− 4	.....	.....	12	− 7	8	− 5	17	− 9	15	−11	11	2	10	− 9	11	−14	12	− 3	12	−15
24....	17	− 6	21	1	28	4	25	8	.....	.....	21	−16	25	− 6	15	−14	20	−20	28	− 5	17	−18	18	−32	13	−10	20	−20
25....	10	−14	22	−12	36	− 5	18	− 3	.....	.....	29	6	21	− 5	23	− 5	19	− 2	28	3	24	−17	29	20	24	− 2	28	8
26....	− 2	−37	− 2	−22	25	−13	9	−20	.....	.....	23	1	− 2	−17	24	10	11	0	3	−13	20	− 1	22	− 7	20	0	15	−18
27....	5	−36	8	−16	30	− 5	16	−16	.....	.....	14	−15	10	−20	11	−10	10	−17	14	−13	10	− 9	8	−34	8	−10	4	−30
28....	9	−25	11	− 8	23	−10	20	− 7	.....	.....	20	− 2	15	−15	10	− 4	23	− 5	20	0	20	−11	18	−29	17	− 6	6	−20
Mns..	12.4	−12.7	13.8	−5.6	26.5	−5.1	20.1	−2.8	.....	.....	22.6	1.4	15.1	−6.8	25.1	4.2	23.4	1.4	17.7	−2.7	24.6	−0.2	18.3	−7.2	22.0	3.8	14.1	−7.3

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....	2	−18	3	−27	3	−15	6	−11	2	−12	2	−22	9	−14	10	−13	9	− 6	8	−12	10	− 5	12	− 7	8	− 7	13	− 4
2....	23	− 7	20	− 6	19	− 6	25	0	19	− 6	19	−10	17	− 7	29	− 1	24	− 7	29	− 1	24	5	25	4	24	2	28	10
3....	25	− 4	21	4	18	2	25	0	18	2	19	− 6	18	0	23	3	18	4	20	2	25	11	23	14	21	6	28	12
4....	− 3	−14	10	−22	5	−10	3	− 7	5	− 9	11	−24	6	−15	9	− 4	10	7	5	− 6	17	4	14	5	11	− 1	21	6
5....	2	−16	7	−20	1	−15	6	− 9	3	−12	6	−25	− 4	−18	9	− 8	7	− 2	7	− 8	13	0	16	2	9	− 5	15	1
6....	11	−10	10	−19	10	− 9	14	− 3	14	− 5	4	−20	6	−13	18	− 1	21	− 2	18	0	24	5	23	4	20	5	24	1
7....	25	− 4	22	− 7	19	− 2	27	3	22	− 1	12	−10	18	− 5	28	2	28	4	27	2	28	8	31	10	27	6	24	7
8....	25	8	23	4	23	12	25	9	23	16	15	5	20	10	28	10	28	8	27	8	31	19	34	18	28	18	33	15
9....	24	0	22	− 4	24	4	28	3	25	8	20	− 4	18	2	38	8	35	14	34	5	38	18	41	20	35	12	38	20
10....	32	5	32	3	28	8	33	13	32	9	25	− 2	26	4	42	16	35	14	37	10	36	18	43	22	34	18	42	25
11....	24	0	22	− 8	30	1	14	0	25	− 1	25	− 4	29	0	26	2	19	11	14	− 1	27	10	22	9	21	7	28	14
12....	5	−15	23	−28	6	−12	9	− 8	5	− 9	2	−21	5	−15	15	−10	12	0	10	− 8	14	0	17	− 1	11	− 3	16	4
13....	32	− 6	30	1	29	− 4	34		28	− 4	23	− 1	26	− 7	41	6	36	− 2	36	3	31	5	40	9	33	4	36	7
14....	41	13	40	18	42	18	47	19	40	16	34	12	37	13	52	17	52	6	53	14	51	19	59	20	51	19	52	21
15....	36	22	32	12	39	17	30	24	37	12	34	11	37	15	41	21	40	13	34	26	45	27	44	31	40	23	48	29
16....	36	10	30	6	31	10	41	23	36	11	24	0	24	6	44	22	46	27	41	24	45	21	52	25	40	20	51	28
17....	40	12	40	4	33	13	43	19	34	18	32	10	31	14	55	18	49	25	49	19	49	28	58	27	45	25	55	30
18....	49	32	43	28	45	27	57	37	50	30	41	25	42	22	58	33	63	27	59	35	63	37	65	41	60	35	68	39
19....	46	31	33	30	47	38	42	33	54	36	41	28	41	37	47	24	44	37	40	28	55	36	54	29	52	35	62	35
20....	35	22	32	10	39	29	33	28	36	30	32	18	39	24	28	15	35	30	30	24	36	32	32	23	38	32	35	31
21....	27	15	22	7	33	15	29	18	30	23	24	8	31	15	26	19	32	30	28	18	38	28	32	22	33	27	46	31
22....	24	11	18	− 3	20	14	23	10	29	10	22	11	22	14	20	12	22	20	19	0	36	13	22	13	31	9	31	18
23....	16	− 8	15	− 4	18	2	17	− 3	15	2	18	6	17	3	13	− 7	18	14	18	−12	20	8	19	3	19	5	21	12
24....	15	−25	17	−25	18	−12	16	−14	15	− 2	19	−17	15	−19	20	−15	18	− 3	18	−20	20	6	21	− 4	17	− 1	26	9
25....	25	−18	27	0	25	−11	27	−11	25	1	22	−21	22	−19	27	− 3	30	− 3	26	− 1	30	13	29	10	28	9	32	18
26....	28	13	25	− 6	29	19	27	9	26	19	24	− 4	26	15	24	5	30	8	26	4	30	23	28	14	29	20	34	25
27....	14	−16	10	−22	25	5	13	1	19	8	24	−24	26	14	8	− 7	23	10	12	− 4	25	13	16	5	22	11	25	16
28....	19	−16	18	−23	21	− 9	19	− 9	18	0	16	−25	20	−15	15	−14	21	1	16	−14	19	5	16	− 1	20	4	20	3
Mns..	24.2	0.6	23.1	−3.5	24.3	4.6	25.5	6.2	24.5	6.6	21.1	−0.2	22.3	2.2	28.4	5.4	28.8	10.2	26.5	4.8	31.4	14.5	31.7	13.1	28.8	12.0	34.0	16.5

TABLE 3.—*Maximum and minimum temperatures for February, 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	15	− 1	12	− 1	23	11	17	4	9	− 4	11	− 5	18	6	12	− 4	13	0	7	− 6
2	27	10	24	1	34	21	27	10	26	6	26	3	28	7	27	6	27	9	23	0
3	29	4	30	18	34	27	31	20	29	11	30	15	32	18	29	7	29	14	23	10
4	23	4	18	2	34	21	31	7	19	4	21	4	30	− 4	20	2	21	10	15	2
5	16	3	12	− 6	31	18	19	4	12	0	13	0	18	9	11	− 2	12	1	12	− 6
6	24	2	12	1	26	14	25	0	23	3	25	− 1	26	− 1	21	− 1	20	0	20	0
7	25	7	20	7	30	19	28	7	25	7	24	4	27	0	22	5	23	5	24	2
8	33	13	27	14	37	24	34	12	31	19	35	13	36	9	31	14	30	12	27	16
9	36	18	29	9	39	29	37	17	34	17	37	16	38	13	35	16	34	18	34	10
10	37	32	33	25	42	35	35	26	35	14	35	17	36	30	34	20	36	22	33	15
11	36	17	30	11	42	27	35	23	34	11	35	13	34	33	34	14	34	17	33	9
12	17	7	18	6	27	18	24	11	13	1	18	1	22	9	15	4	17	8	12	− 5
13	33	6	23	− 7	29	13	29	4	27	4	30	2	29	4	27	4	27	5	29	− 3
14	51	23	38	12	47	23	48	19	45	19	49	17	54	4	44	16	44	20	47	12
15	48	31	43	25	55	35	54	21	48	22	50	35	55	19	50	27	50	32	45	21
16	54	29	36	20	60	36	51	28	39	20	46	25	52	32	43	23	46	30	37	15
17	57	32	37	23	64	46	60	33	44	28	51	27	59	32	49	29	51	35	43	20
18	68	37	50	28	68	47	68	35	61	35	64	32	70	37	63	37	64	37	57	30
19	63	39	61	30	67	48	68	40	60	39	60	41	71	39	62	41	64	43	59	42
20	39	33	51	34	61	48	60	39	39	33	47	31	53	41	41	34	49	35	42	32
21	51	34	48	25	64	49	55	38	41	31	35	31	60	31	52	32	54	36	32	25
22	34	23	38	22	52	36	57	30	38	16	.....	21	42	35	39	17	40	23	34	20
23	23	16	22	16	37	26	32	20	21	12	22	10	31	22	23	12	23	16	20	3
24	29	11	23	15	34	21	31	10	24	12	24	9	30	13	26	13	28	14	23	0
25	38	19	30	10	47	25	36	11	32	15	30	13	43	20	32	16	34	19	27	3
26	40	27	30	14	54	44	48	33	32	27	31	22	51	20	35	28	39	32	29	24
27	28	21	38	20	54	33	48	30	29	16	27	17	35	35	31	16	32	22	24	12
28	22	10	28	14	33	28	30	21	22	10	24	3	30	25	24	8	27	17	20	3
Means	35.6	18.1	30.8	13.9	43.8	29.4	39.9	19.8	31.9	15.3	33.3[a]	14.9	39.6	19.2	33.3	15.5	34.6	19.0	29.7	10.9

[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.