Climatological Data for November, 1909.

DISTRICT No. 5, UPPER MISSISSIPPI VALLEY.

GEORGE M. CHAPPEL, District Editor.

TEMPERATURE.

The month of November, 1909, will be noted for its excess of temperature, precipitation, and cloudiness, the monthly mean temperature being considerably above the normal at every station in the district, except at Condo, Donnybrook, Minot, and Wahpeton, N. Dak., where there were slight deficiencies. The first decade of the month was unseasonably warm, and the temperature was generally above the normal during the second and third decades, except on 2 or 3 days in each decade in the southern and 4 or 5 days in the northern sections. A cold wave of considerable severity passed over the district from the northwest to the southeast between the 12th and 18th, which caused temperatures of zero, or below, on one or more days in the Dakotas and at some stations in Minnesota, Wisconsin, and northern Iowa. Another cold spell occurred between the 20th and 23d, but the temperatures were not much below the normal except over the northern sections.

In North Dakota the weather was generally pleasant, although there was less than the usual amount of sunshine. The average temperature was slightly more than 3° above the normal. During the first decade the day temperatures were exceptionally high, and the last 3 days of the month were also warm. The second decade was the coldest, and during that period the minimum temperatures for the month were usually recorded.

In Minnesota the mean temperatures ranged from a little above 38°, in the middle Minnesota Valley, and in Goodhue, Wabasha, Winona, and Houston counties, to somewhat less than 28° in the northwestern counties. The excess in temperature was general, and ranged from 3° to 8°, with the greatest departure in the upper Mississippi Valley and over the Iron Mountain Range. A warm period extended from the 3d to the 11th, with the 10th as generally the warmest day of the month. Unusually cold periods extended from the 15th to the 18th, and from the 22d to the 23d. The 18th was generally the coldest day. The average temperature was the same as in November, 1908. It was 5.8° lower than in the warmest November, that of 1899, when the average was 39.6°, and 15.8° warmer than in the coldest November, that of 1896, when the average was 18.0°.

In Wisconsin the temperature was decidedly above the normal at all stations, the departure being as great as +12° at some stations. The highest occurred at most stations on the 11th, 13th, or 14th, although it was recorded at a few places earlier in the month. The lowest was from the 18th to the 23d. This period was the only time that the temperature was near zero throughout the section. The mean temperatures for the month ranged from 35° in the interior of the northern section to 45° in the extreme southern portion.

In Iowa the average temperature for that part of the State in District No. 5 was 42.8°, which is 7.4° above the normal, and the highest average for November during the past 19 years, except in 1899, when the average for the State was 43.9°. The first decade was the warmest part of the month, and the highest temperature occurred generally between the 4th and 6th, when the maximum temperatures ranged from 66° to 77° over the northern counties, from 68° to 81° over the central, and from 74° to 84° over the southern counties. The only cold periods of the month were on the 17-18th and the 22-23d, the lowest temperature occurring generally on the 18th, when the minimum was near zero over the northern counties.

In Missouri the mean temperatures were continuously above the normal during the entire month, save 3 or 4 days during the second decade and 1 or 2 during the third decade, when they were normal or slightly below. The mean temperatures ranged from 6° to 11° above the normal. The prevailing day temperatures were remarkably high for the season of the year, and during the first 10 or 15 days they were more often above 70° than below that value. On 1 or 2 days during the first week they reached or exceeded 80° at nearly all stations. There was only 1 cold wave during the month, which dominated the conditions from the 15th to the 18th, causing falls in temperature of from 36° to 50°, and resulting in a minimum of 20° or lower. One of the noticeable features of the month was the unusually small number of days with the temperature down to or below 32°, the average number being about 5.

In Illinois the monthly mean temperature was 49.6°, or 9.0° above the normal, and it was the highest monthly mean for November since the inception of the Signal Service. There was a complete inversion or cessation of the seasonal advance, the November mean being nearly as great as that for October. The temperature was below the normal on only 4 days during the month.

In Indiana the mean temperature was from 8° to 10° above the normal and the month was the warmest on record for the State, the temperature being continuously above the normal, except during two brief cool periods prevailing from the 17th to the 19th, and 22d to the 24th, respectively.

The monthly mean temperature for the district, as shown by the records of 296 stations, was 40.2°, which is 6.9° above the normal. The highest monthly mean was 57.6°, at Cobden, Union County, Ill.; and the lowest monthly mean, 24.2°, at Bottineau and Westhope, Bottineau County, N. Dak. The highest temperature reported was 85°, at DuQuoin, Perry County, Ill., on the 3d and other dates; the lowest temperature reported was 23° below zero, at McKinney, Ward County, N. Dak., on the 21st.

PRECIPITATION.

The precipitation was frequent, general, and heavy in all parts of the district, except over North Dakota and southern Minnesota, where there was a deficiency. The monthly amounts at many stations exceeded all former records for November, and the snowfall was also excessive over northern Iowa, Minnesota, and Wisconsin.

In North Dakota there was practically no precipitation during the first 9 days of the month, and it was scattered between the 10th and the close of the month, the heaviest occuring from the 12th to the 15th. The average amount was, however, considerably below the normal and less than one-half that of November, 1908. The heavy snow caused some delay in traffic.

In Minnesota the precipitation ranged from nearly 8 inches in Mower County to a little more than one-fourth of an inch in Kittson County. In the central counties it was about 1 to 3 inches. It was from 1 to 6 inches above the normal in the southern counties, and over 4 inches above the normal in southern Lake County. About the headwaters of the Mississippi there was a slight deficiency, and in Kittson County it was nearly 0.50 inch below the normal. The bulk of the precipitation fell between the 13th and the 16th. There was an unusually heavy fall of snow in the western counties on the 14th, and over the greater portion of the State on the 16th. The monthly snowfall was unusually heavy, ranging from about 3 inches in the central counties to 30 inches in Martin County in the south, and to 20 inches in northern Beltrami County in the north.

In Wisconsin the precipitation was abundant and well distributed, both throughout the month and over the section. Most of it fell on the 1st, from the 11th to the 14th, and the 16th, and in the southern portion on the 22d. Part of the precipitation between the 11th and 14th was in the form of snow over the northern half of the section, which remained on the ground until about the 27th, when practically all of it had disappeared. In the middle and southern sections there was a moderately heavy snowfall on the 22d, and this remained on the ground, except in the extreme southern portion, until the 26th.

In Iowa the precipitation was above the normal at all stations, and it was well distributed throughout the month, there being only 4 days on which rain or snow did not fall in some part of the section, viz: 4th, 5th, 18th, 19th. The heaviest precipitation occurred between the 11th and 16th, but the amounts were comparatively heavy on the 1st, 7th, 22d, and 23d, and at a few stations on the 28th; and the monthly amounts at many stations exceeded all former records for November. The amounts of snowfall over the northern counties also exceeded all November records. Heavy snow fell on the 15th, 16th, 22d, and 23d, and the monthly amounts ranged from 8 to 29.5 inches in the northern part of the State.

In Missouri over the Mississippi watershed, the monthly rainfall ranged from 2 to over 5 inches, which is from 50 to 70 per cent greater than the normal.

In Illinois the average amount of precipitation for the month was 4.26 inches, which is 1.78 inches above the normal. This high November average has been exceeded only 4 times in the past 32 years, viz: In 1879, 1881, 1883, and 1891. The driest November on record was in 1904 when the average rainfall was less than one-half inch.

Rain fell in Indiana on frequent dates throughout the month, the principal storm occurring on the 21st and 22d, when a heavy rain, accompanied by thunderstorms and high winds, occurred. No damage, however, is known to have been done. Snow flurries occurred on several dates, but a measurable amount was reported from only one station.

The average precipitation for the district, as shown by the records of 312 stations, was 3.73 inches, which is 2.36 inches above the normal. The greatest amount, 11.48 inches, occurred at Humboldt, Humboldt County, Iowa, and the least, a trace, at Amenia, Cass County, N. Dak. The greatest amount in 24 hours, 3.68 inches, occurred at Guthrie Center, Guthrie County, Iowa, on the 13th. The average depth of unmelted snowfall was 5.9 inches, and the greatest depth, 30.0 inches, at Fairmont, Martin County, Minn. Measurable precipitation occurred on an average of 8 days. The average number of clear days was 9; partly cloudy, 8; and cloudy, 13. The duration of sunshine was below the normal. South winds prevailed.

RIVER STAGES.

The frequent and heavy rains caused high water in all rivers and creeks, and in central Iowa many of the streams were out of their banks and overflowed the bottom lands, which is an unprecedented condition for November. The stage of the Des Moines River at Des Moines, Iowa, increased from 2.3 feet on the 3d to 11.9 feet on the 18th, then receded to 7.5 feet on the 26th, increasing to 10.5 feet on the 30th. There was a rise of 5.3 feet in the Minnesota River at Mankato, Minn., during the month, and at St. Paul the Mississippi River rose 2.2 feet during the month. The upper Illinois River was above the flood stage from the 24th to the 29th, inclusive. Bottom lands were flooded, delaying the harvesting of corn, but the estimated losses were inconsiderable. The average stage of the Mississippi River at St. Louis was 11.8 feet, which has only been exceeded once in November in 20 years. A rise in the Mississippi River cut out several hundred feet of the river bank at Birdpoint, Mo.

MISCELLANEOUS.

Severe thunderstorms occurred at several places in central and southern Wisconsin on the 11th. At Lake Mills, in Jefferson County, Wis., a severe local storm passed just south of the city at 4 p. m., injuring about 30 buildings and destroying 5. At Mount Horeb, in Dane County, at about the same time, many small buildings were blown down and much other damage was done. There was an excessive amount of cloudiness over nearly all of the district, and the warm, moist weather was very injurious to corn and prevented the usual amount of farm work being done. In Iowa about 35 per cent of the corn crop was still in the fields at the close of the month, and a large percentage of it was in very poor condition. The fields were too soft to permit the hauling of heavy loads, and as a result the corn harvest has been delayed materially. The warm and moist weather has caused the corn in cribs to mold, and the general condition of the crop is worse than was ever before known at this season of the year. The excess of moisture and heat have, however, been beneficial to grass, alfalfa, and the winter grains, and reports indicate that they are in excellent condition.

Contrary to the usual conditions for November, the prevailing direction of the wind was generally southerly. A severe local storm occurred in and north of Marshalltown, Marshall County, Iowa, on the 11th, which caused considerable damage. A number of houses and barns were injured and many outbuildings, hay stacks, and telephone and telegraph poles were blown down.

A brilliant meteor was observed in the western part of Dubuque County, Iowa, on the 28th at about 4:30 p. m., which was accompanied by a noise resembling light thunder and by a vibration that caused dishes, windows, and doors to rattle in the vicinity of Dyersville, Iowa. It moved from south to north and probably fell northwest of Dyersville.

DRAINAGE WORK IN IOWA.

The work of draining farm lands in this State has been progressing for the past 25 or 30 years; but, until the last few years, only those lands that had a natural outlet were tiled or ditched. Since the laws of the State provided for the formation of drainage districts and the construction of artificial outlets in the form of ditches, the work has become more extensive and carried on more systematically. Under the laws of the State and when properly petitioned by one or more land owners, the board of supervisors of each county has the power and authority to establish a drainage district and to locate and cause to be constructed any levee, ditch, drain, or water course, or to straighten, widen, deepen, or change any natural water course in their respective counties, whenever the same will be of public utility or conducive to the public health, convenience, or welfare. The law further provides that the drainage of the surface waters from agricultural lands shall be considered to be a public benefit and conducive to the public health, convenience, utility, and welfare. Farmers in those sections of the State where the land is flat and the natural drainage is not good are alive to the value of and the benefits to be derived from proper drainage of their lands, and much work of that character has been done, and much more will be done in the years to come. The following will give an idea of the amount of work being done in the State:

Mr. Charles H. Reynolds, County Surveyor of Webster County, reports that over 100 miles of open ditch and from 40 to 50 miles of the county drain have been constructed. The county ditches are numbered from 1 up to 113, and there are 2 open ditches having an aggregate length of over 65 miles and drain more than 3 townships. The amount of private tile that opens in the county ditches must be considerable. Mr. W. E. McClure, County Surveyor of Calhoun County, reports that drainage work has been going on in that county since 1903,

but, during the last 2 years, has been carried on more extensively. Approximately one-third of the county, or 122,880 acres, which was too low and level to have a natural outlet, has been drained. They have 75 miles of open ditches constructed, 75 miles under construction, and 50 miles more designed to be put in soon. They also have 300 miles of large tile used as main drains. The cost of the main outlets averages from $1.00 to $50.00 per acre, according to location from natural outlet, and the cost of tiling after the outlet is in ranges from $1.00 to about $10.00 per acre. In addition to the work done under the supervision of the county, farm tiling has been carried on very extensively.

THE DES MOINES RIVER TO BE SURVEYED.

The question of improving the rivers in Iowa with the view of making them navigable and increasing the methods of transportation has been agitated for several years; and, in order that it may be determined as to whether or not the scheme is practicable, Representative Nathan E. Kendall, of the 6th Congressional District of Iowa, has introduced in the House a bill directing the Secretary of War to cause a survey to be made of the Des Moines River from its mouth to the city of Des Moines, and appropriating $100,000 for that purpose.

TABLE 1.—*Climatological data for November, 1909. District No. 5, Upper Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .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	11	32.1	+ 6.7	76	4	− 1	29	61	T.	− 0.68	T.	.....	0	12	4	14	se.	C. E. Wood.
Bottineau	Bottineau	1,638	13	24.2	+ 1.8	60	4	−15	21	41	0.47	− 0.14	0.36	.....	2	6	10	14	se.	J. A. Kamp.
Cando	Towner	1,488	7	24.6[b]	− 2.9	67[b]	5	−14[b]	21	46[b]	0.34	− 0.21	0.34	2.5	1	.....	.....	.....	.....	E. T. Judd.
Crosby	Williams	.....	2	26.1	.....	62	3	−10	21	35	0.58	.....	0.16	5.0	6	11	10	9	nw.	B. Lancaster.
Devils Lake	Ramsey	1,482	3	27.0	+ 4.4	62	6	−11	21	30	0.26	− 0.45	0.10	3.4	7	11	7	12	nw.	U. S. Weather Bureau.
Donnybrook	Ward	1,760	9	26.6	− 2.8	62	3	−13	21	36	0.20	− 0.54	0.20	2.0	1	7	8	15	nw.	F. S. Gieselman.
Dunseith	Rolette	.....	11	25.4	+ 0.7	60	3†	−10	15	41	0.40	+ 0.14	0.30	4.0	2	19	8	3	w.	L. H. Trowbridge.
Edmore	Ramsey	1,524	3	29.0	.....	72	4	−15	21	40	T.	.....	T.	T.	0	15	13	2	s.	H. R. Aslakson.
Forman	Sargent	1,249	14	34.7	+ 8.5	82	7	− 8	15	52	0.50	− 0.02	0.40	5.0	2	10	10	10	nw.	A. Maltby.
Grafton	Walsh	827	11	27.6	+ 6.0	62	3	− 8	21†	40	0.45	− 0.34	0.20	4.5	3	4	18	8	n.	H. Lamoure.
Granville	McHenry	1,504	2	26.2	.....	62	2†	−14	15	42	0.06	.....	0.04	1.0	2	18	5	7	nw.	W. A. Christiansen.
Hamilton	Pembina	824	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. Wallace.
Hannah	Cavalier	1,568	3	.....	.....	.....	.....	.....	.....	.....	0.72	.....	0.60	6.0	3	.....	.....	.....	.....	J. Moffatt.
Hansboro	Towner	.....	1	24.6	.....	62	3†	−17	21	44	0.32	.....	0.20	4.2	4	15	7	8	nw.	Geo. Dale.
Hillsboro	Traill	901	3	27.7	.....	68	10	− 8	21	34	0.95	.....	0.80	9.5	6	10	13	7	ne.	M. H. Norman.
Lakota	Nelson	1,519	2	26.9[b]	.....	61[b]	3†	−10[b]	21	32[b]	0.50	.....	0.20	4.2	4	.....	.....	.....	nw.	C. R. Pettes.
Langdon	Cavalier	1,615	13	24.4	.....	61	2	−11	21	44	0.43	.....	0.21	4.3	3	5	6	19	w.	J. Woolner.
Larimore	Grand Forks	1,134	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Naylor.
Lisbon	Ransom	1,091	4	28.6	.....	70	11	− 7	15	39	0.60	.....	0.30	6.0	3	11	3	16	nw.	H. K. Adams.
McKinney	Ward	1,640	14	25.3	+ 2.4	68	6	−23	21	47	0.50	− 0.14	0.40	5.0	2	8	13	9	nw.	M. P. Swenson.
Manfred	Wells	1,605	7	28.9	.....	63	3	−10	15	43	0.20	.....	0.10	2.0	2	9	12	9	sw.	P. B. Anderson.
Mayville	Traill	975	13	36.7	+10.0	64	3	9	21	24	0.50	− 0.23	0.40	5.0	2	18	0	12	n.	M. N. Pope.
Milnor	Sargent	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	O. B. Jorgenson.
Minot	Ward	1,557	10	28.0	− 3.4	65	3	−10	15	39	0.22	− 0.51	0.06	2.2	6	14	6	10	w.	J. J. Bates.
Minto	Walsh	820	15	28.2[c]	+ 3.9	66[c]	5	− 9[c]	28	33[c]	0.80	+ 0.19	0.40	.....	4	17	5	8	s.	S. S. Marsh.
Oriska	Barnes	1,370	3	30.1	.....	68	10	1	28	42	0.60	.....	0.60	6.0	2	2	24	4	nw.	W. E. Williams.
Park River	Walsh	998	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Heyward.
Pembina	Pembina	789	10	26.7	+ 0.9	55	9	0	15†	42	0.02	− 0.67	0.01	0.2	2	11	8	11	w.	F. C. Warner.
Portal	Ward	1,954	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. S. Davis.
Power	Richland	1,020	16	27.8	+ 1.9	70	10	−10	16	40	1.85	+ 1.27	1.60	18.5	4	9	6	15	nw.	J. A. Power.
Pratt	McHenry	.....	4	24.6	.....	68	4	−15	17†	44	0.24	.....	0.20	2.4	3	16	4	10	nw.	C. H. Butts.
Towner	do	1,475	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. Bagley.
University	Grand Forks	830	17	26.4	+ 0.8	63	3	− 8	15	37	0.75	− 0.01	0.60	7.5	4	12	3	15	se.	G. W. Stewart.
Wahpeton	Richland	962	17	27.2	− 1.0	64	3†	− 9	14†	35	.....	.....	.....	.....	.....	12	6	12	nw.	E. G. Burch.
Walhalla	Pembina	966	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. H. Lee.
Westhope	Bottineau	.....	2	24.2	.....	62	1†	−14	21	42	0.46	.....	0.25	4.6	3	13	8	9	nw.	J. D. Currie.
Willow City	do	1,471	15	25.2	+ 4.5	62	4†	− 6	15†	46	0.30	− 0.16	0.10	3.0	4	3	13	14	nw.	M. A. Ostby.
Minnesota.																				
Albert Lea	Freeborn	1,229	19	36.6	+ 5.1	68	4	3	23	33	6.40	+ 5.26	2.00	19.0	5	5	14	11	nw.	Edward Carey.
Alexandria§§	Douglas	1,391	15	33.4	+ 5.4	73	10	5	15†	38	1.23	+ 0.51	0.80	3.2	5	5	8	17	nw.	P. O. Unumb.
Angus	Polk	870	7	27.0	.....	67	10	−12	15	39	1.20	.....	0.50	6.0	8	12	5	13	s.	F. A. Wilson.
Bagley	Clearwater	.....	3	30.0	.....	70	9	−10	22	38	1.39	.....	0.60	15.0	6	7	13	10	nw.	Edward T. Teitsworth.
Baudette	Beltrami	.....	.....	28.7	.....	60	10	− 4	22	31	1.65	.....	0.92	19.5	5	13	0	17	ne.	Franz W. Schmidt.
Beardsley	Bigstone	1,090	16	33.1	+ 4.6	72	10	0	21	37	1.27	+ 0.56	0.92	12.0	3	7	8	15	nw.	Roy A. Smith.
Beaulieu	Mahnomen	1,200	7	30.8[b]	.....	69[b]	10	− 1[b]	28	33[b]	0.82[b]	.....	0.60	8.0[b]	3[b]	9[b]	3[b]	16[b]	s.	Dr. L. A. Parkinson.
Bird Island	Renville	1,039	19	35.8	+ 5.6	71	4†	3	18	38	1.82	+ 0.98	0.90	5.1	5	9	4	17	nw.	Dr. F. L. Puffer.
Caledonia§§	Houston	1,179	16	38.4	+ 5.5	69	4	9	18†	34	4.78	+ 3.19	1.90	11.6	7	9	10	11	ne.	W. D. Belden.
Campbell§§	Wilkin	984	.....	30.4	.....	68	4	− 2	23	41	0.50	.....	0.30	5.0	3	9	3	18	nw.	J. T. Neisess.
Cass Lake§§	Cass	1,300	3	.....	.....	.....	.....	.....	.....	.....	1.65	.....	1.10	13.0	3	.....	.....	.....	.....	C. W. Burns.
Collegeville	Stearns	1,282	16	34.6	+ 3.6	67	10	3	21	33	1.45	+ 0.61	0.91	4.2	4	10	2	18	s.	Fridolin Tennbreull.
Crookston§§	Polk	863	19	28.4	+ 3.2	66	10	− 3	21	28	1.20	+ 0.52	1.00	13.0	5	10	4	16	s.	A. G. Anderson.
Detroit§§	Becker	1,364	13	28.0	+ 1.3	69	10	−10	28	37	1.05	+ 0.35	0.65	12.0	5	12	8	10	sw.	G. W. Peoples.
Fairmont, (near)	Martin	753	22	35.6	+ 4.5	69	6	6	18	29	5.61	+ 4.44	1.48	30.0	7	9	8	13	s.	W. F. Wherland.
Faribault	Rice	1,003	12	36.9	+ 3.3	69	4	1	18	36	4.16	+ 3.31	1.99	6.1	6	10	4	16	s.	A. R. T. Wylie.
Farmington	Dakota	902	21	37.0	+ 6.4	65	10	3	18	29	3.53	+ 2.28	1.32	9.0	5	7	3	20	nw.	D. F. Akin.
Fergus Falls	Ottertail	1,210	17	32.4	+ 4.4	70	10	− 2	21	26	0.95	+ 0.14	0.54	9.0	8	5	11	14	se.	Chas. E. Kissenger.
Fort Ripley	Morrison	1,135	3	34.8	.....	68	10	− 1	18	36	1.51	.....	1.12	2.8	4	13	2	15	s.	J. J. Tucker.
Fosston	Polk	1,288	.....	28.8	.....	78	10	−14	15	43	1.15	.....	0.70	10.9	3	14	5	11	se.	O. N. Hem.
Glencoe	McLeod	1,006	13	38.6[a]	+ 6.9	68	6†	8[a]	22	35[a]	1.85	+ 0.81	0.85	7.0	4	11	6	13	ne.	C. G. Selvig.
Grand Meadow	Mower	1,338	22	37.2	+ 6.8	69	6	3	18	32	7.82	+ 6.71	2.87	12.0	11	4	8	18	s.	C. F. Greening.
Hallock	Kitson	815	10	26.6	+ 0.1	63	6†	−10	28	38	0.27	− 0.43	0.10	1.5	4	16	2	12	s.	D. A. Robertson.
Halstad§§	Norman	870	3	26.4	.....	71	10	−10	16†	42	1.35	.....	0.70	15.0	2	8	6	16	nw.	A. G. Holstrom.
Hinckley	Pine	1,050	4	35.4	.....	62	3†	0	18	31	3.27	.....	1.50	9.0	6	5	6	19	n.	W. R. Newman.
International Falls	Koochiching	.....	1	29.0	.....	59	10†	− 5	22	32	1.70	.....	0.60	12.0	5	8	13	9	ne.	Rees Roe.
Kelliher	Beltrami	.....	3	29.2	.....	62	11	− 5	22	31	1.73	.....	1.20	16.5	8	6	13	11	nw.	A. Gilmour.
Lake Crystal	Blue Earth	.....	2	37.2	.....	70	4	2	18	37	3.15	.....	1.18	10.0	6	13	5	12	s.	W. P. Cobb.
Leech Lake Dam	Cass	1,300	21	30.8	+ 5.2	63	10	3	22	37	1.02	− 0.05	0.55	10.4	11	5	6	19	w.	U. S. Engineer Corps.
Litchfield	Meeker	1,129	1	35.1[e]	.....	65[f]	3†	13[e]	17†	29[e]	2.60[f]	.....	1.50	9.0[f]	2[f]	6[f]	4[f]	14[f]	nw.	N. Y. Taylor.
Little Falls	Morrison	1,117	3	33.4	.....	68	10	5	21	29	2.23	.....	1.53	6.0	4	6	14	10	se.	Maurice Coleman.
Long Prairie	Todd	1,299	17	34.0	+ 6.4	69	10	1	21	40	2.01	+ 1.09	1.47	3.0	5	9	3	18	nw.	A. W. Sheets.
Lynd (2)	Lyon	.....	17	34.4[b]	+ 3.2	78[b]	4	4[b]	18†	46[b]	2.00[b]	+ 1.09	1.70[b]	9.0[b]	3[b]	8[b]	7[b]	13[b]	nw.	Jacob Rouse.
Mankato§§	Blue Earth	747	10	.....	.....	.....	.....	.....	.....	.....	2.70	+ 1.50	1.10	11.0	7	9	6	15	nw.	Sadie H. Blake.
Milaca	Mille Lacs	1,072	12	34.2	+ 2.7	64	10	2	18	32	2.53	+ 1.35	1.11	11.0	5	8	6	16	s.	C. H. Foss.
Milan	Chippewa	995	15	32.5	+ 3.2	74	6	0	21	40	0.70	− 0.26	0.30	5.5	3	5	13	12	nw.	O. K. Opjorden.
Minneapolis (1)	Hennepin	918	18	37.6	+ 4.8	66	10	9	18	37	2.74	+ 1.56	1.08	11.0	8	7	6	17	s.	U. S. Weather Bureau.
Minneapolis (2)**§	Hennepin	850	16	36.1	+ 5.5	63	3	7	18	....	2.84	+ 1.57	1.34	9.0	7	4	12	14	s.	J. H. Ashenbeck.
Montevideo§§	Chippewa	900	19	34.8	+ 4.2	82	3	3	21	42	1.76	+ 0.94	1.18	6.1	4	6	12	12	nw.	Lloyd G. Moyer.
Moorhead	Clay	935	28	28.3	+ 3.9	70	10	− 2	22	34	1.44	+ 0.46	1.26	15.6	4	8	7	15	nw.	U. S. Weather Bureau.
Mora	Kanabec	.....	4	35.1[b]	.....	64[b]	10	0[a]	18	32[b]	1.76	.....	1.03	6.0	8	12	2	16	s.	Hans Peterson.
Morris	Stevens	1,170	24	32.5	+ 4.3	72	10	− 3	21	34	1.50	+ 0.85	0.80	8.0	3	15	2	13	nw.	D. T. Wheaton.
New London	Kandiyohi	1,215	15	35.1	+ 5.2	72	4	6	18	40	1.70	+ 0.85	0.90	6.0	3	7	11	12	nw.	Harold Swenson.
New Richland	Waseca	1,180	15	36.8	+ 4.4	70	4	6	18†	34	3.67	.....	1.20	9.0	6	10	10	10	nw.	N. O. Tyrholm.
New Ulm§§	Brown	791	29	34.9	+ 3.0	74	4	7	18	40	3.15	+ 2.07	1.15	11.9	6	8	3	19	s.	A. J. Eckstein.
Osakis	Douglas	1,343	2	33.8	.....	69	10	3	21	38	1.35	.....	1.13	3.2	4	7	4	19	s.	John B. Johnson.
Park Rapids§§	Hubbard	1,426	19	29.2	+ 3.5	66	10	− 4	21	35	1.16	+ 0.14	0.70	10.2	10	11	1	18	nw.	Dr. P. A. Walling.
Pine River Dam	Crow Wing	1,251	22	32.2	+ 5.4	65	10	7	19	34	1.39	+ 0.36	0.60	4.0	6	9	7	14	ne.	Neil McKay.
Pokegama Falls	Itasca	1,290	22	30.8	+ 6.3	61	11	2	22	35	1.20	− 0.06	0.71	9.3	6	6	7	17	nw.	U. S. Engineer Corps
Red Lake	Beltrami	.....	1	30.0	.....	67	10	− 6	22	30	0.97	.....	0.36	11.7	6	11	11	8	s.	A. C. Goddard.
Red Wing	Goodhue	708	20	38.8	+ 5.5	65	10†	3	18	34	5.90	+ 4.98	2.35	10.0	5	5	15	10	nw.	F. A. Whittier.
Red Wing (river)§§	do	680	10	.....	.....	.....	.....	.....	.....	.....	5.50	+ 4.58	1.40	8.0	9	14	2	14	nw.	Louis Bach.
Redwood Falls	Redwood	1,033	2	36.8	.....	78	4	4	18	42	3.46	.....	1.53	10.0	5	12	9	9	nw.	N. B. Andersen.
Reeds Landing§§	Wabasha	681	11	.....	.....	.....	.....	.....	.....	.....	5.08	+ 3.65	1.50	7.0	9	8	3	19	se.	John Deschneau.
Rochester§§	Olmstead	991	5	37.6	.....	67	4	2	18†	42	5.91	.....	1.35	13.0	9	8	4	18	s.	S. R. Case.
Roseau	Roseau	1,040	2	27.4	.....	62	6	− 4	21†	35	2.28	.....	.....	14.0	3	14	13	3	s.	A. Waag.
St. Charles§§	Winona	850	18	37.3	+ 5.9	63	6†	2	18†	32	4.22	+ 3.09	0.78	9.5	11	8	7	15	se.	S. W. Gleason.
St. Cloud	Sherburne	1,020	31	35.3	+ 5.7	68	10	5	18	30	2.10	+ 1.05	1.37	7.0	7	7	7	16	se.	Jos. H. Capser.
St. Paul	Ramsey	837	38	37.6	+ 6.7	65	10	7	18	38	2.66	+ 1.36	1.00	9.7	9	4	11	15	se.	U. S. Weather Bureau.

TABLE 1.—*Climatological data for November, 1909. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	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 .01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Minnesota—Cont'd.																				
St. Peter	Nicollet	840	16	38.6	+ 5.6	72	6	4	17	40	3.39	+ 2.34	1.06	10.5	4	14	9	7	nw.	Charles C. Cavanaugh.
Sandy Lake Dam	Aitkin	1,234	16	34.0	+ 8.1	63	11	12	21	34	1.77	+ 0.49	1.24	4.2	8	11	2	17	se.	U. S. Engineer Corps.
Shakopee	Scott	750	14																	
State Sanitorium	Cass		1	31.4		65	10	4	15	35	1.72		1.32	13.5	6	7	6	17	nw.	Dr. W. J. Marcley.
Stillwater§§	Washington	694	4								2.91		0.86	6.5	10	12	3	15	nw.	W. B. Nease.
Taylors Falls	Chisago		2	38.7		66	10†	0	18	32	2.88		1.30	9.3	4	6	7	17	n.	Mpls. Gen. Elec. Co.
Wabasha[m]	Wabasha	662	17	39.1[f]		72[f]	12	5[f]	18	39[f]	4.23[f]		1.90	6.0[f]	5[f]	1[f]	14[f]	9[f]	s.	Herman Yost.
Warroad	Roseau			26.7		61	6	−11	23	36	1.65		1.17	17.5	7	12	5	13	s.	John Sawyer.
West Concord	Dodge	1,232	1	36.8		65	4†	0	18	32	5.42		1.45	14.0	5	7	14	9	nw.	O. H. Orcutt.
Willow River	Pine	1,046	11																	J. A. Brandt.
Windom	Cottonwood	1,336	3	36.8		76	4†	2	18	43	3.97		1.53	9.5	6	7	9	14	s.	Taber C. Richmond.
Winnebago§§	Faribault	1,100	10	36.2	+ 1.1	74	4	4	18	38	5.18	+ 4.03	1.57	19.0	9	10	10	10	se.	H. H. Haight.
Winnibigoshish	Itasca	1,300	21	32.0	+ 6.1	63	10	3	22	28	1.87	+ 0.81	1.18	14.2	10	9	3	18	s.	U. S. Engineer Corps.
Winona	Winona	680	14	40.1	+ 6.8	67	10†	7	18	34	5.49	+ 4.25	1.82	6.5	7	10	6	14	e.	P. C. Meyers.
Worthington§§	Nobles	979	14	33.2	+ 1.5	68	4†	5	16†	35	4.31	+ 3.26	1.35	14.1	6	15	1	14	s.	W. I. Carpenter.
Zumbrota	Goodhue	979	14	38.6	+ 6.8	69	6	1	18	34	5.77		1.40	8.0	5	10	6	14	se.	W. C. Rowell.
South Dakota.																				
Millbank	Grant	1,148	20	30.8	+ 0.5	75	6	− 1	15	48	0.74	0.00	0.38	6.1	3	14	2	14	nw.	T. T. Patridge.
Wisconsin.																				
Antigo	Langlade	1,489	14	37.9	+10.1	60	14	4	18	27	3.58		1.74	4.0	5	8	1	21	sw.	E. C. Larzeler.
Barron	Barron	1,115	16	35.6	+ 7.4	65	11	− 8	18	30	4.48	+ 3.22	1.90	11.0	5	3	15	12	se.	W. A. Kent.
Beloit	Rock	750	19	45.0	+ 9.4	68	14	12	23	39	3.51	+ 1.57	1.78	2.0	8	7	8	15	sw.	Smith Observatory.
Brodhead	Green	812	11	44.2	+ 7.0	70	13	16	18†	35	3.55		1.00	4.6	8	12	10	8	sw.	H. D. Kirkpatrick.
Burnett	Dodge	880	5	42.3		66	11†	4	23	28	2.73		0.71	4.0	10	9	7	14	se.	Geo. W. Smith.
Delavan	Walworth	930	16	44.1	+11.7	68	3	8	23	39	2.95	+ 1.16	0.76	3.0	12	6	8	16	sw.	E. S. Austin.
Dodgeville	Iowa	1,116	10	42.8		68	6†	11	23	30	3.47		0.97	4.5	15	5	5	20	se.	Geo. H. Butler.
Downing	Dunn	983	6	37.2		75	10	0	18	40	4.56		2.20	9.0	5	4	4	22	sw.	E. F. Stoddard.
Eau Claire	Eau Claire	800	18	38.6	+ 7.2	66	11	5	18	29	5.42	+ 3.93	2.06	11.8	7	5	11	14	se.	R. D. Whitford.
Ellsworth	Pierce	1,068	1																	H. G. Woods.
Glidden	Ashwood	1,519																		George Sell.
Grand Rapids	Wood	1,021	10	39.5	+ 7.8	64	10	10	15†	31	4.11	+ 2.63	1.22	11.8	10	11	3	16	se.	W. B. Raymond.
Grantsburg	Burnett	1,095	18	35.6	+ 5.3	65	6	0	18	38	3.50	+ 2.11	1.60	16.0	4	9	3	18	ne.	Theodore Olsen.
Hancock	Waushara	1,091	17	39.2	+ 6.8	63	27	2	23	35	2.64	+ 1.31	0.80	4.0	6	11	7	12	se.	F. B. Hamilton.
Hatfield	Jackson	973	1								4.43		1.49	6.9	7	2	13	15	sw.	W. S. Woods.
Hayward	Sawyer	1,197	18	35.2[g]	+ 7.2	63[g]	11	8[g]	18†	31	4.42	+ 3.07	1.60	17.0	7	7[g]	5[g]	11[g]	sw.	W. E. Swain.
Hillsboro	Vernon	1,000	18	38.6	+ 6.2	65	11†	− 9	23	38	4.40	+ 2.92	1.32	9.0	10	6	19	5	e.	E. V. Wernick.
Koepenick	Langlade	1,683	18	35.6	+ 4.6	60	14	2	18	32	3.76	+ 1.94	1.40	10.0	7	0	13	17	se.	E. S. Koepenick.
La Crosse	La Crosse	714	37	40.1	+ 6.3	67	10	11	23	39	5.80	+ 4.28	1.90	8.6	11	6	7	17	s.	U. S. Weather Bureau
Lake Mills	Jefferson	997	18	42.2	+ 8.1	67	13	7	23	30	3.23	+ 1.30	1.12	3.5	10	8	14	8	sw.	S. N. D. Smith.
Lancaster	Grant	1,070	19	42.4	+ 9.4	68	11†	10	23	33	3.62	+ 2.06	1.00	4.0	10	9	13	8	s.	Edward Pollock.
Long Lake	Oneida	1,592	1	35.2		61	14	10	29	35	5.20		1.55	6.8	11	4	7	19	s.	Louie Frank.
Madison	Dane	974	31	42.6	+ 8.4	68	13	15	23	35	2.22	+ 0.42	0.69	4.3	11	5	13	12	s.	U. S. Weather Bureau.
Mather	Juneau	962		36.8		65	5†	− 4	23	41	4.14		0.93	6.0	9	6	9	15	se.	Frank Evans.
Mauston	...do	882	13	41.0	+ 7.2	68	14	− 2	23	30	4.44	+ 3.06	1.10	9.0	8	9	14	7	se.	E. L. Hitchcock.
Meadow Valley	...do	974	18	38.6	+ 6.9	65	11	− 4	23	32	3.74	+ 2.16	1.19	7.0	6	1	19	10	s.	C. H. Johnson.
Medford[a]	Taylor	1,420	18	37.0	+ 7.4	61	11	− 1	18	28	5.10	+ 3.74	1.85	7.5	6	5	6	19	s.	William Zeit.
Merrill	Lincoln	1,267	3					− 1	18		5.89		1.50	6.5	8	13	6	11	s.	F. M. McElroy.
Minocqua[e]	Oneida	1,604	5	33.5		57	11†	8	18	27	5.27		2.10	12.0	4	6	10	14	s.	Charles W. Hooper.
Mondovi	Buffalo	738	1	39.0		65	11	− 1	18	32	4.59		1.01	8.5	6	9	12	9	se.	Dr. Charles Hebard.
Mount Horeb	Dane	1,226	5	41.4		67	13	6	23	30	2.77		0.92	4.0	7	9	8	13	s.	W. M. Lewis.
Muscoda	Grant	666		43.4		69	11	5	23	38	3.46		0.60	4.0	14	8	6	16	e.	Henry Eckstein.
Neillsville	Clark	996	20	38.8	+ 8.1	63	10†	0	18	29	4.75	+ 3.20	1.39	6.0	6				se.	William Heaslett.
New Richmond	St. Croix	990	4	37.7		63	4†	2	18	33	3.77		1.10	8.0	6	11	6	13	se.	F. R. Van Meter.
Osceola§§	Polk	806	18	36.8	+ 8.8	65	3	− 3	18	38	4.45	+ 3.21	2.05	8.0	8	9	6	15	s.	C. W. Staples.
Portage	Columbia	809	13	42.0	+ 6.9	66	13	2	23	32	2.26	+ 0.77	0.80	8.0	8	10	11	9	sw.	James Clear.
Prairie du Chien§§	Crawford	690	22	44.8	+ 8.9	70	1†	8	23	38	4.64	+ 3.27	1.21	4.8	9	9	4	17	nw.	John Ducharme.
Prentice	Price	1,551	11	37.0		60	6	− 9	18	35	4.52		1.54	9.0	7	5	2	23	s.	J. G. Lash.
Rhinelander	Oneida	1,550	4	37.0		61	14	8	18†	30	5.32		1.41	11.6	10	5	10	15	nw.	John Lind.
Sauk City	Sauk	753	1	43.6		70	13	2	23	46	2.71		0.91	5.0	8	3	12	15		K. Derleth.
Shullsburg	Lafayette	1,019	3	43.1		67	11†	5	23	32	4.61		1.34	4.0	10	9	8	13	s.	H. B. Chamberlin.
Solon Springs	Douglas	1,083	2	33.5		62	10	− 3	18	37	2.80		1.20	6.0	4	7	4	19	sw.	J. M. Sayles.
Spooner	Washburn	1,104	14	35.5	+ 6.0	63	10†	4	18	31	3.78	+ 2.47	1.90	8.0	5	16	4	10	se.	H. A. Bresee.
Stanley	Chippewa	1,083	5	37.6		61	1†	− 3	18	27	5.12		1.71	8.0	6	10	2	18	se.	L. E. Scott.
Stevens Point	Portage	1,113	16	36.6[i]		63[i]	3†	4[i]	23	26[i]			1.00	7.5	7	2	5[i]	14[i]	s.	G. E. Culver.
Valley Junction	Monroe	930	17	38.6	+ 6.1	65	11	− 4	23	29	5.19	+ 3.76	1.19	9.0	9	2	10	18	se.	F. Muermann.
Viroqua	Vernon	1,412	18	40.8	+ 8.4	66	1	10	18†	28	3.75	+ 2.16	1.00	8.0	11	6	12	12	se.	H. E. Rogers.
Vudesare[a]	Vilas	1,600	1	33.6		61	14	0	23	32	4.69		1.53	13.2	8	7	10	13	sw.	L. L. Thomas.
Watertown§§	Jefferson	824	17	41.0	+ 7.5	71	10	0	23	30	2.47	+ 0.73	0.68	3.5	12	6	14	10	se.	Charles J. Salick.
Waukesha (1)	Waukesha	970	13								2.19	+ 0.47	0.64	3.5	8					A. V. B. Dey.
Waukesha (2)	...do	864	1	44.3		68	13	9	23	33	3.01		0.85	4.0	9	3	22	5	s.	Carroll College.
Wausau	Marathon	1,212	17	39.8	+ 8.6	63	14	5	18	35	2.42	+ 0.68	0.72	6.0	6	8	9	13	se.	H. A. Beilke.
Weyerhaeuser	Rusk	1,297	2	36.0		63	11	− 5	18	31	4.06		1.89	14.0	10	6	12	12	se.	Miss Etta Stiles.
Whitehall	Trempealeau	675	17	39.0	+ 5.7	66	11	− 6	18	34	5.30	+ 4.16	1.65	8.0	7	2	20	8	e.	H. A. Towner.
Iowa.																				
Albia§, §§	Monroe	959	10	44.6	+ 5.9	81	5	11	17	39	4.51	+ 2.74	1.08	1.0	11	9	8	13	sw.	J. I. Chenoweth.
Algona§	Kossuth	1,213	34	37.6	+ 4.8	71	4†	4	18	35	8.04	+ 6.76	2.25	23.5	11	9	8	13	sw.	Dr. F. T. Seeley.
Alta§§	Buena Vista	1,513	17	37.8	+ 5.3	74	4	4	17	37	6.13	+ 4.90	1.90	11.0	14	9	8	13	s.	David E. Hadden.
Alta (near)	Buena Vista										5.56		1.40	13.2	13					W. J. Minard.
Amana	Iowa	721	31	44.7	+14.1	73	11	12	23	32	4.14	+ 2.41	0.90	3.0	11	8	12	10	se.	C. Schadt.
Ames	Story	926	27	42.8	+ 8.7	74	6	9	18	40	4.16	+ 2.97	2.07	4.5	10	8	7	15	e.	Iowa State College.
Baxter§	Jasper	998	8	43.4	+ 6.1	76	6	12	17†	38	4.23	+ 2.90	0.75	3.2	14	11	8	11	nw.	W. R. Vandike.
Belle Plaine	Benton	828	18	43.4	+ 8.5	74	6	10	23	39	3.68	+ 1.96	0.70	4.5	11	11	11	8	s.	S. P. Van Dike.
Bloomfield§	Davis																			C. R. Davis.
Bonaparte§	Van Buren		17	48.0	+ 9.5	79	5	13	18	34	3.84	+ 2.04	1.15	T.	8					B. R. Vale.
Boone§§	Boone	1,134	3	41.4		75	4†	9	18	40	7.67		2.50	5.0	10	12	4	14		Carl Fritz Henning.
Britt§	Hancock	1,236	11	39.4	+ 5.8	72	6	6	18	36	7.55	+ 6.44	2.54	16.6	13	2	14	14	se.	George P. Hardwick.
Buckingham	Tama		8								2.83	+ 1.38	0.84	0.7	8	9	15	6		W. A. Daniel.
Burlington§, §§	Des Moines	544	12	47.5	+ 7.8	76	5†	15	18	35	4.53	+ 2.75	1.35	T.	11	16	4	10	sw.	Max E. Poppe, jr.
Carroll§§	Carroll	1,265	18	38.0	+ 3.8	77	4	3	17	37	7.26	+ 6.13	2.80	7.0	8	6	5	19	nw.	Mrs. Joseph J. Wolfe.
Cedar Rapids§§	Linn	733	26	44.1	+ 8.2	74	12	15	18†	39	2.82	+ 1.42	0.89	1.0	10	14	3	13	w.	W. J. Greene.
Charles City	Floyd	1,015	20	38.9	+ 5.9	69	4	4	23	36	6.06	+ 4.67	1.77	13.6	13	5	6	19	se.	U. S. Weather Bureau.
Clear Lake§	Cerro Gordo	1,241	9	40.5	+ 6.4	70	6	10	18	30	5.87	+ 4.80	2.05	9.5	9	14	0	16	s.	Oscar Stevens.
Clinton	Clinton	593	40	45.2	+ 9.5	70	13	16	18†	33	2.58	+ 0.74	1.11	1.0	9	5	14	11	e.	Luke Roberts.
Columbus Junction§	Louisa	595	7	47.4	+ 8.4	75	6	15	18	32	4.76	+ 3.25	1.20	1.0	9	17	3	10	s.	J. B. Johnston.
Davenport	Scott	580	36	46.8	+ 9.3	72	13	17	18	35	3.42	+ 2.16	1.26	0.7	12	10	9	11	e.	U. S. Weather Bureau.
Decorah	Winneshiek	975	15	40.5	+ 7.0	67	4	0	23	35	7.91	+ 6.36	2.35	9.5	10					F. H. Baker.
Delaware	Delaware	1,083	17	41.7	+ 8.9	68	11	10	23	33	3.54	+ 1.97	0.85	3.0	8	9	15	6	se.	William Ball.

TABLE 1—*Climatological data for November, 1909. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	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, .01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Iowa—Cont'd.																				
Des Moines	Polk	861	31	44.8	+ 8.0	76	6	14	17†	36	3.71	+ 2.25	1.67	1.8	11	5	4	21	s.	U. S. Weather Bureau.
De Soto§	Dallas	866	8	44.8	+ 6.1	81	5	12	17†	42	4.27	+ 3.05	1.29	1.0	10	11	4	15	sw.	R. D. Minard
Dows§	Wright	1,142	8	40.6	+ 5.7	73	4†	2	23	34	6.04	+ 4.80	2.62	.....	7	8	4	18	nw.	G. R. Flett.
Dubuque	Dubuque	639	35	44.2	+ 8.2	71	13	13	23	36	2.94	+ 1.13	1.19	3.5	12	9	10	11	s.	U. S. Weather Bureau.
Earlham	Madison	.....	6	44.8	+ 7.0	79	5†	13	17†	41	5.87	+ 4.53	1.32	5.0	11	9	3	18	se.	George Phillips.
Elkader	Clayton	727	27	39.4	+ 6.2	72	4	12	18	40	4.51	+ 2.86	1.21	4.0	8	13	3	14	se.	Charles Reinecke.
Elma	Howard	.....	.....	.....	.....	66	4†	.....	.....	.....	6.03	.....	1.47	14.5	9	6	11	13	se.	H. A. Moore.
Estherville§§	Emmet	1,298	12	36.2	+ 4.9	75	4	0	18	44	3.46	+ 2.22	1.05	12.0	10	13	3	14	s.	A. O. Peterson.
Fairfield	Jefferson	.....	14	48.0[b]	+11.1	80[b]	5	15[b]	18	37[b]	4.72	+ 2.44	1.65	0.5	9	.....	.....	.....	s.	R. M. McKensie.
Fayette§	Fayette	1,003	18	41.1	+ 8.2	68	6†	2	23	37	4.36	+ 2.94	0.90	5.8	11	9	7	14	se.	R. Z. Latimer.
Forest City§, §§	Winnebago	1,226	14	37.6	+ 5.2	73	4	3	18	36	7.21	+ 5.98	1.90	15.5	9	11	5	14	w.	J. A. Peters.
Fort Dodge§§	Webster	1,126	8	39.2	+ 4.0	75	4†	7	18	38	7.14	+ 5.92	2.20	9.5	9	15	0	15	s.	J. F. Monk.
Fort Madison	Lee	516	59	.....	.....	.....	.....	.....	.....	.....	4.38	+ 2.14	2.25	.....	6	8	8	14	sw.	Miss L. A. McCready.
Gilman	Marshall	1,052	9	.....	.....	.....	.....	.....	.....	.....	3.97	+ 2.57	0.65	T.	11	.....	.....	.....	.....	J. L. Wylie.
Grand Meadow	Clayton	1,180	17	41.2	+ 8.2	67	10	5	23	32	4.44	+ 2.88	1.03	7.0	10	3	12	15	se.	F. L. Williams.
Greene	Butler	.....	9	40.6	+ 4.7	70	4	4	23	36	7.54	+ 6.39	2.20	11.0	9	5	10	15	s.	J. L. Cole.
Grinnell	Poweshiek	1,023	16	45.5	+ 9.5	75	4†	12	18	36	4.28	+ 2.65	1.58	2.5	10	9	8	13	s.	D. W. Brainard.
Grundy Center§	Grundy	976	17	43.0	+ 9.0	71	4†	10	23	36	5.78	+ 4.56	1.90	2.0	8	6	8	16	nw.	J. B. Calderwood.
Guthrie Center§	Guthrie	1,077	13	43.5	+ 6.2	78	4	9	18	39	7.78	+ 6.63	3.68	7.0	13	12	1	17	nw.	D. G. Beardsley.
Hampton	Franklin	1,155	18	40.1	+ 6.7	75	4	5	18	36	6.74	+ 5.18	1.50	14.0	12	7	11	12	se.	E. C. Grenelle.
Humboldt	Humboldt	1,095	17	40.4	+ 6.4	74	6	2	18	40	11.48	+10.11	3.44	14.0	9	13	4	13	nw.	Henry S. Wells.
Independence§	Buchanan	921	43	43.8	+11.2	69	4†	6	23	36	2.07	+ 0.75	0.58	4.5	6	12	7	11	s.	George Donohoe.
Indianola	Warren	969	17	46.0	+ 7.7	78	5	14	18	34	5.09	+ 3.67	1.12	4.0	11	8	0	22	se.	John L. Tilton.
Iowa City§§	Johnson	683	49	43.4	+ 7.7	73	6†	11	24	41	4.88	+ 2.62	1.12	2.0	12	12	0	18	bw.	Arthur G. Smith.
Iowa Falls§§	Hardin	1,170	15	39.6	+ 6.5	70	4†	8	18	39	5.70	+ 4.45	1.30	6.5	12	12	1	17	s.	J. B. Parmelee.
Jefferson§	Greene	.....	.....	42.5	.....	77	5	10	18	37	6.13	+ 4.82	2.71	8.0	8	8	5	17	nw.	G. W. Jackson.
Keokuk	Lee	547	37	50.2	+10.8	79	5	17	18	29	3.97	+ 2.12	1.33	T.	9	9	9	12	se.	U. S. Weather Bureau.
Keosauqua§§	Van Buren	644	16	46.6	+ 7.7	78	5	14	18†	41	3.28	+ 1.78	1.00	5.0	10	5	15	10	.....	J. H. Landes.
Knoxville§	Marion	920	12	46.9	+ 9.4	77	6	15	17†	34	5.67	+ 4.38	2.10	2.0	10	10	4	16	sw.	Casey & Belville.
Lacona	Warren	.....	9	.....	.....	.....	.....	.....	.....	.....	4.59	+ 3.12	1.20	2.0	12	3	17	10	.....	J. B. Alter.
Le Claire	Scott	576	.....	.....	.....	.....	.....	.....	.....	.....	5.10	+ 3.63	1.08	1.5	15	.....	.....	.....	.....	Miss Margaret T. Disney.
Marshalltown§§	Marshall	947	16	41.6	+ 5.6	74	6	11	18	39	4.31	+ 3.02	1.05	2.5	11	10	2	18	s.	Rolph B. Reasoner.
Mason City§	Cerro Gordo	1,132	11	38.0	+ 5.2	68	4	4	23	36	6.73	+ 5.09	2.33	13.2	8	9	13	8	nw	J. S. Mills.
Mount Pleasant§	Henry	729	26	47.7	+10.3	74	6	15	18	32	4.95	+ 3.39	2.05	0.8	9	11	9	10	sw.	J. W. Edwards.
Muscatine	Muscatine	.....	49	.....	.....	.....	.....	.....	.....	.....	5.53	+ 3.26	1.54	0.4	11	.....	.....	.....	.....	William Molis.
New Hampton§	Chickasaw	1,169	11	39.2	+ 4.5	66	6	2	23	29	7.16	+ 5.76	2.22	8.0	8	14	4	12	se.	A. F. Kemman.
Newton§	Jasper	944	19	45.6	+10.8	72	6	13	18	28	3.30	+ 1.65	0.86	3.0	7	11	6	13	s.	J. P. Beatty.
Northwood§	Worth	1,222	12	37.6	+ 4.4	68	4	2	18	34	7.40	+ 5.92	2.50	20.0	7	13	6	11	se.	Charles H. Dwelle.
Olin§	Jones	760	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. M. Miles.
Osage	Mitchell	1,184	17	40.0	+ 9.1	70	4†	4	18	35	7.51	+ 6.08	2.05	18.0	8	8	4	18	s,	A. D. Bundy.
Oskaloosa§	Mahaska	843	24	46.5	+ 9.5	75	6	15	18	37	4.01	+ 2.52	2.00	1.2	8	11	0	19	se.	Joseph Boyd.
Ottumwa	Wapello	649	14	48.4	+ 8.9	80	5†	15	18†	38	.....	.....	.....	1.2	.....	4	6	20	se.	.....
Pella	Marion	877	6	45.7	+ 8.4	78	10	11	23	41	5.50	+ 4.07	2.18	2.0	10	14	.....	16	s,	John H. Ver Steeg.
Perry§	Dallas	975	7	42.8	+ 5.0	73	4†	10	18	38	5.35	+ 3.90	2.75	.....	10	9	9	12	n.	J. A. Harvey.
Plover	Pocahontas	1,426	12	37.8	+ 3.5	73	6	0	18	36	4.73	+ 3.11	1.50	29.5	9	12	6	12	n.	J. S. Smith.
Pocahontas§	do	.....	4	37.3	.....	74	4†	8	23	38	6.92	.....	1.80	18.0	8	11	11	8	s.	F. E. Hronek.
Ridgeway§	Winneshiek	1,215	10	41.3	+ 4.1	76	3	5	18†	36	9.50	+ 7.68	2.10	14.1	12	9	9	12	s.	Arthur Betts.
Rockwell City§	Calhoun	.....	12	41.4	+ 6.4	74	6	7	17†	40	8.90	+ 7.80	3.50	8.0	8	12	4	14	.....	C. M. Randall.
Sac City	Sac	1,278	26	39.3	+ 5.8	72	4†	5	18	32	7.24	+ 6.13	1.98	10.4	10	11	1	18	sw.	E. N. Baily.
St. Charles§	Madison	1,070	7	46.4	+ 5.3	84	5	11	17	41	5.18	+ 3.75	1.62	3.0	11	15	3	12	nw.	R. D. Minard.
Sigourney§	Keokuk	877	12	46.4	+ 7.5	75	6	13	18	33	5.30	+ 3.75	0.97	3.0	12	3	20	7	se.	J. T. Parker.
Stockport§	Van Buren	.....	6	46.2	.....	79	5	12	18	38	3.51	+ 2.00	1.13	0.5	12	12	5	13	s.	C. L. Beswick.
Storm Lake	Buena Vista	1,440	12	40.0[d]	+ 3.9	71[a]	4	4[d]	17	34[d]	3.91	+ 2.89	1.19	10.5	7	.....	.....	.....	.....	S. B. Fracker.
Stuart	Guthrie	1,216	10	41.0[c]	+ 5.0	77[c]	4	10[c]	17	37[c]	.....	.....	.....	4.5	.....	.....	.....	.....	.....	.....
Tipton§	Cedar	807	10	45.6	+ 8.8	70	11†	16	18	29	4.58	+ 2.76	1.41	2.0	.....	11	12	7	se.	F. K. Gregg.
Toledo§	Tama	856	14	44.2	+ 7.8	71	6†	9	23	35	4.07	+ 2.56	0.75	3.0	10	9	9	12	se.	I. F. Giger.
Wapello§	Louisa	588	10	48.2	+ 7.0	74	6	18	18	30	3.29	+ 1.89	0.86	T.	10	10	10	10	se.	G. W. Schofield.
Washington	Washington	769	27	46.4	+10.2	76	5†	14	18	34	6.04	+ 4.63	1.98	.....	11	9	11	10	sw.	Wm. A. Cook.
Waterloo§§	Black Hawk	862	25	42.8	+ 7.1	72	4	11	23	36	3.06	+ 1.61	0.84	4.0	9	7	9	14	nw.	M. L. Newton.
Waukee	Dallas	1,039	5	43.7	.....	76	5	12	18	40	4.51	+ 3.02	1.31	2.8	13	7	12	11	ne.	Samuel F. Foft.
Waverly§	Bremer	943	12	44.9	+ 6.8	69	4†	9	23	35	6.31	+ 4.91	2.15	6.0	10	5	8	17	s.	H. S. Hoover.
Webster City§	Hamilton	.....	3	43.4	.....	73	6	7	18	34	6.86	.....	2.23	8.0	8	9	4	17	nw.	C. D. Carpenter.
West Bend§	Palo Alto	1,197	14	38.6	+ 6.1	71	4†	3	18	33	6.23	+ 4.89	2.64	12.8	10	8	7	15	s.	Joseph Dorweiler.
Whitten§	Hardin	1,036	10	42.5	+ 7.2	78	4	9	18	39	4.48	+ 3.35	1.50	T.	6	9	5	16	se.	F. P. Butler.
Wilton Junction§	Muscatine	683	13	48.2	+10.9	70	5†	15	18	32	4.63	+ 2.86	1.20	T.	8	8	13	9	w.	William Lang.
Winterset§	Madison	1,129	17	44.2	+ 7.4	75	5	13	17†	35	4.26	+ 2.97	1.17	3.0	9	11	5	14	s.	Robert S. Cooper.
Zearing§	Story	.....	4	42.0	.....	75	4	9	22	40	5.27	.....	1.85	3.5	7	1	15	14	se.	Orley Reese.
Missouri.																				
Darksville	Randolph	826	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Broaddus.
Gorin	Scotland	.....	23	.....	.....	.....	.....	.....	.....	.....	3.00	+ 0.88	1.28	T.	8	10	4	16	se.	J. W. Pulliam.
Hannibal	Marian	534	18	51.4	+10.9	80	5	19	18	34	2.72	+ 0.77	1.04	T.	8	9	9	12	sw.	U. S. Weather Bureau.
Louisiana	Pike	500	31	50.4	+ 6.8	80	5	20	17†	39	3.77	+ 1.58	1.00	T.	8	15	4	11	sw.	J. F. Farrell.
Mexico	Audrain	797	31	51.2	+ 8.7	82	5	18	18†	46	5.80	+ 3.46	1.55	T.	13	10	4	16	s.	J. F. Llewellyn.
Steffenville	Lewis	576	15	50.4	+ 7.3	84	5	16	18	38	3.25	+ 1.52	.85	0.0	7	12	8	10	s.	Frank Hall.
Sublett	Adair	1,000	29	49.0	+ 8.8	79	5	15	16	36	2.00	+ 0.17	2.00	0.0	1	7	15	8	sw.	Lewis Spriggs.
Indiana.																				
Collegeville	Jasper	.....	.....	49.4	.....	74	12	22	24.	32	4.20	.....	1.10	T.	9	5	15	10	nw.	Prof. L. C. Klosterman.
Knox§	Starke	716	.....	48.0	.....	71	11	19	24	29	4.44	.....	1.41	T.	11	12	8	10	s.	W. R. R. Tatman.
Laporte	Laporte	810	4	46.5	.....	72	11	24	23	26	3.92	.....	1.79	0.4	9	6	6	13	w.	Chas. D. Rakestraw.
Plymouth	Marshall	790	.....	47.2	.....	70	11†	21	24	26	3.32	.....	1.08	0.0	10	11	12	7	se.	J. W. Siders.
Illinois.																				
Aledo	Mercer	738	9	47.6[c]	.....	74	5†	15	18	31	4.79	.....	1.31	0.5	11	5	15	10	se.	William B. Frew.
Alexander	Morgan	670	16	51.2	+ 8.4	77	7	18	18	34	4.54	+ 2.43	1.34	T.	9	12	7	11	s.	George H. Hall.
Antioch	Lake	861	8	44.4	.....	68	13	16	22	30	3.23	.....	1.20	2.0	5	6	14	10	s.	J. C. James, jr.
Ashton	Lee	830	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. J. Yenerich.
Astoria	Fulton	650	9	49.1	+ 7.8	77	7	17	18	35	4.19	+ 2.31	1.35	T.	8	12	7	11	s.	Edward V. Bohl.
Aurora	Kane	687	30	46.6	+ 9.1	70	11†	20	23	32	4.33	+ 1.76	1.13	T.	10	5	11	14	se.	W. Holden.
Bement	Piatt	700	10	51.8[a]	.....	78[a]	7	24[a]	23	34[a]	2.98[a]	.....	1.10	0.0	6[a]	6	14	10	s.	Rev. C. S. Adams.
Benton	Franklin	598	7	.....	.....	.....	.....	.....	.....	.....	3.30	.....	1.40	0.0	7	8	9	13	nw.	F. H. Stamper.
Bloomington	McLean	840	17	49.6	+ 8.6	76	6	19	18	33	4.28	+ 1.64	1.54	0.0	8	10	6	14	s.	Prof. H. N. Pearch.
Cairo	Alexander	359	33	57.3	+10.4	82	5	28	18	32	2.58	− 1.44	0.80	0.0	7	11	7	12	s.	U. S. Weather Bureau.
Cambridge	Henry	824	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. O. Purviance.
Carlinville	Macoupin	663	19	53.1	+10.1	80	7	20	18	36	3.76	+ 1.10	1.27	0.0	7	10	11	9	se.	John H. Seaton.
Chester	Randolph	380	5	57.3	.....	82	6	28	18	36	3.76	.....	0.98	0.0	9	15	9	6	s.	F. A. Gollon, jr.
Chicago	Cook	824	36	48.5	+ 9.3	71	11	28	23	28	3.84	+ 1.34	1.31	T.	12	4	11	15	s.	U. S. Weather Bureau.
Coatesburg	Adams	763	15	50.0	+ 8.4	77	7	17	18	34	3.54	+ 1.41	1.25	0.0	6	9	6	15	s.	Dr. J. R. Lambert.
Cobden	Union	656	26	57.6	+10.5	82	3†	23	18	39	4.31	− 0.06	1.43	0.0	5	14	7	9	s.	John Buck.

TABLE 1.—*Climatological data for November, 1909. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	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, .01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Illinois—Cont'd.																				
Colchester	McDonough	694	7																	Eli V. Kinsey.
Dakota	Stephenson	929		43.9		69	13	8	24	30	3.77		1.07	4.5	14	7	13	10	e.	Harold Leitzel.
Decatur	Macon	685	17	50.8	+ 9.1	76	6†	19	18†	45	3.13	+ 0.64	1.05	0.0	8	18	3	9	s.	Prof. J. H. Coonradt.
Dixon	Lee	735	19	45.2	+ 8.2	70	13†	15	23	34	2.59	+ 0.97	0.80	T.	11	14	1	15	s.	Mrs. E. E. Shaw.
Du Quoin	Perry	459	18	57.1	+11.6	85	3†	22	18	43	3.13	+ 0.12	1.08	0.0	8	17	6	7	sw.	G. H. Knetsger.
Dwight	Livingston	600	15	48.2	+ 8.4	71	5†	20	23	33	4.24	+ 1.56	1.65	T.	11	8	8	14	ne.	Edward O. Welsh.
Galva	Henry	842	17	46.4	+ 8.3	75	6	16	18†	38	5.39	+ 3.55	1.97	1.1	12	13	8	9	sw.	Prof. F. U. White.
Greenville	Bond	635	26	53.0	+10.2	78	6	26	23	31	5.09	+ 1.62	1.33	0.0	9	10	5	15	se.	M. S. Oudyn.
Griggsville	Pike	650	22	50.9[b]	+ 8.8	79[b]	7	17[b]	18	36[b]	3.30[b]	+ 1.07	1.35	0.0[b]	6[b]	9	13	8	se.	George F. Kneeland.
Halfway	Williamson	569	13	56.6[a]	+ 8.5	82[a]	5	23[a]	18	36[a]	3.51[a]	+ 0.77	0.97	3.0[a]	6[a]	15	5	10	s.	E. L. Hearn.
Havana	Mason	475	16	51.2	+ 8.8	76	7	19	18	31	3.61	+ 1.45	1.40	0.0	7	6	21	3	ne.	F. & C. Borgelt.
Henry	Marshall	500	20	48.4	+ 9.5	75	5	17	18	34	4.66	+ 2.23	1.19	0.0	12	16	5	9	sw.	Dr. F. A. Powell.
Hillsboro	Montgomery	675	14	55.0[b]	+10.6	78[b]	5†	20[b]	18	37[b]	6.23[b]	+ 3.52	2.45	0.0[b]	7[b]	9	4	17	s.	Ira L. Woodward.
Joliet	Will	541	17	46.8	+ 7.6	73	11	23	23	33	4.55	+ 2.18	1.35	T.	13	13	4	13	sw.	F. M. Muhlig.
Kishwaukee	Winnebago	730	19	45.4	+ 8.1	70	13	10	23	30	4.11	+ 1.85	1.44	2.0	11	8	10	12	s.	George Stevens.
Knoxville.§	Knox	775	19	48.2	+ 9.2	74	6	13	18	34	5.52	+ 3.46	2.25	T.	8	12	8	10	s.	C. N. Butt.
La Grange	Cook	657	16	46.4	+ 7.9	71	11	22	23†	29	4.05	+ 1.68	1.17	T.	8	10	9	11	sw.	Prof. F. E. Sanford.
La Harpe	Hancock	698	30	50.0	+10.1	78	7	16	18	43	3.61	+ 1.60	1.10	T.	8	14	4	12	se.	John S. Campbell.
Lanark	Carroll	883	18	44.2	+ 7.9	69	13	2	23	38	4.37	+ 2.37	1.05	4.0	12	19	2	9	se.	M. N. Wertz.
La Salle	La Salle	536	33	47.2	+ 9.4	72	5	20	18	31	3.82	+ 1.18	1.10	T.	12	9	8	13	sw.	U. S. Weather Bureau.
Lincoln	Logan	482	20	49.8	+ 8.3	74	7	19	18	32	4.22	+ 1.85	1.05	T.	7	15	4	11	s.	Prof. C. S. Oglebee.
Martinton	Iroquois	633	21	48.4	+ 8.5	75	6	24	23†	36	5.53	+ 2.97	1.83	T.	9	12	4	14	sw.	Joseph H. Peltier.
Mascoutah	St. Clair	425	18	55.8	+11.2	83	5	22	18	42	4.56	+ 1.25	0.98	0.0	9	14	7	9	se.	George Henrich.
Minonk	Woodford	745	15	48.6	+ 8.6	76	6†	18	18	35	3.83	+ 1.79	1.17	T.	8	8	14	8	sw.	O. M. Davison.
Monmouth	Warren	784	16	48.7	+ 9.4	76	5	16	18	30	5.98	+ 4.12	2.35	0.0	9	10	11	9	se.	Hugh R. Moffet.
Morrison	Whiteside	685	13	47.0	+ 8.5	71	13	14	23	38	4.50	+ 2.71	1.02	1.0	11	14	6	10	se.	Harold A. Maxwell.
Morrisonville	Christian	638	9	51.6	+ 7.9	76	7	19	18	37	2.74	+ 0.65	0.97	0.0	7	13	9	8	s.	J. D. Lowis.
Mount Vernon	Jefferson	511	14	54.6	+ 8.7	83	7	23	18†	42	3.23	+ 0.22	0.95	0.0	8	11	9	10	s.	Theodore P. Stelle.
Oregon	Ogle	702		46.3		70	6†	11	23	30	5.07		1.51	1.5	8	10	6	14	se.	Samuel Ray.
Ottawa	La Salle	500	23	47.8	+ 8.5	72	5	21	17†	34	2.57	+ 0.15	1.14	T.	9	15	1	14	sw.	Miss Maud M. Harris.
Pana	Christian	692	22	51.2	+ 9.1	73	2†	21	18	28	4.48	+ 1.11	1.05	0.0	11	20	1	9	s.	C. W. Sibley.
Peoria	Peoria	609	33	48.0	+10.5	74	6	18	18	30	5.53	+ 2.89	1.47	T.	12	8	14	8	s.	U. S. Weather Bureau.
Pontiac	Livingston	546	7	49.8		79	14	20	18	33	4.00		1.85	0.0	11	9	10	11	se.	George Butterworth.
Riley	McHenry	956	50	44.8[a]	+10.3	66[a]	13†	12[a]	23	29[a]	3.91[a]	+ 1.94	0.88	2.0[a]	12[a]	7	9	14	sw.	John West James.
Rockford	Winnebago	763	13	43.6	+ 6.4	68	11†	11	23	33	4.15	+ 1.71	1.28	1.2	14	10	7	13		Hosmer C. Porter.
Rushville	Schuyler	670	8	50.0	+ 9.4	77	7	18	18	30	3.57	+ 0.41	0.93	0.0	6	6	6	18	s.	H. F. Dyson.
St. Charles	Kane	700	12	46.2	+ 7.9	70	1†	19	23	31	5.27	+ 2.82	1.40	2.0	13	10	11	9	sw.	Dr. Wm. H. Bishop.
Springfield	Sangamon	644	28	50.4	+ 9.7	75	7	20	18	27	3.70	+ 1.04	1.27	0.0	9	8	11	11	s.	U. S. Weather Bureau.
Staunton	Macoupin	625		55.7[m]		81[m]	2	29[m]	17		5.49[m]		2.75	0.0[m]	6[m]	10	5	15	s.	William F. Schaefer.
Streator	La Salle	626	15	47.2	+ 7.0	74	5†	19	18	37	3.73	+ 1.35	1.39	0.0	12	13	10	7	sw.	Edward F. Sweetser.
Sullivan	Moultrie	530	9	51.8	+ 8.4	78	5†	19	18	35	3.34	+ 0.89	0.98	0.0	6	10	11	9	se.	C. A. Corbin.
Sycamore	De Kalb	855	28	45.0	+ 8.8	71	13	14	23	46	5.42	+ 3.01	1.22	T.	15	6	8	16	se.	Miss E. J. Davis.
Tilden	Randolph	500	23	56.4	+11.3	83	3	21	18	43	5.56	+ 1.96	1.96	0.0	10	17	3	10	s.	James A. Caldwell.
Tiskilwa	Bureau	798	14	47.6	+ 8.5	73	5†	15	18	34	3.67	+ 1.47	1.07	T.	11	12	5	13	s.	F. I. Smucker.
Walnut	do	717	17	47.2	+ 8.1	71	6	18	18	31	5.24	+ 3.34	1.11	1.0	10	15	6	9	s.	O. C. Nussle.
White Hall	Green	573		51.5		79	7	18	18	39	5.85		1.62	0.0	9	12	8	10	s.	Dr. R. A. Pritchett.
Windsor	Shelby	681	10	52.0	+ 9.8	79	5†	18	18	36	3.73	+ 0.87	0.93	0.0	9	11	9	10	s.	Herbert Rose.
Winnebago	Winnebago	900	21	44.8	+ 8.4	69	13	11	23	28	4.00	+ 1.90	1.17	3.0	10	16	4	10	s.	Frank Osborn.
Yorkville	Kendall	584	21	45.9	+ 9.4	70	11	19	23	30	4.82	+ 2.38	1.38	T.	11	13	3	14	w.	Herman A. Grimwood.
Zion	Carroll	938	13	45.8	+ 8.8	69	6†	12	23	29	4.92	+ 3.09	1.21	T.	10	15	4	11	sw.	Robert F. Gillogly.

* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of fall not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ 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.
[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—*Daily precipitation for November, 1909. District No. 5, Upper Mississippi Valley.*

Stations.	River basins.	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	31	
North Dakota.																																	
Amenia	Red																												T.				T.
Bottineau	Mouse					T.						.11	T.					T.	T.	T.	.36			T.			T.						0.47
Cando	Sheyenne																							.34									0.34
Crosby	Mouse		T.								T.	.05	T.	T.	T.			T.		T.	.16	.11	.11	T.		T.		.10	.05				0.58
Devils Lake	Sheyenne		T.			T.					.01	.05	T.	.02	T.		T.	.01	T.	T.	.10		.02	.05		T.		T.					0.26
Donnybrook	Mouse											T.	T.	T.							.20												0.20
Dunseith	...do											.10					T.			.30													0.40
Edmore	Sheyenne												T.				T.		T.														T.
Forman	...do													T.	T.	.40	.10																0.50
Grafton	Red														.20									.20				.05					0.45
Granville	Mouse											.04	.02																				0.06
Hamilton	Pembina																																
Hannah	...do		.02		T.										T.		T.			.10							.60						0.72
Hansboro	Red											T.			T.				.04		.20		.06	.02									0.32
Hillsboro	...do											T.				.80		.02			.03			.03			.02	.05					0.95
Lakota	Sheyenne		T.									T.	T.		T.		T.			T.	.10		.10	.10		T.	T.	.20					0.50
Langdon	Pembina											.05									.17				.21								0.43
Larimore	Red																																
Lisbon	Sheyenne													T.	.30	.20	.10	T.			T.								T.				0.60
McKinney	Mouse		T.																		.40	.10											0.50
Manfred	Sheyenne										T.	T.	T.	.10	T.						T.			.10									0.20
Mayville	Red														.40													.10					0.50
Milnor	Sheyenne																																
Minot	Mouse											.02	.02	.06	T.						.05		.01	.06			T.						0.22
Minto	Red												.02						.18					.40			.20						0.80
Oriska	Sheyenne												T.	*	.60												T.						0.60
Park River	Red																																
Pembina	...do											.01				.01																	0.02
Portal	Mouse																																
Power	Sheyenne													*	1.60		.10			T.			.05					.10					1.85
Pratt	Mouse										T.	T.										.20	.02	.02									0.24
Towner	...do																																
University	Red											T.			.60	.05					T.	.05				T.		.05			T.		0.75
Wahpeton	...do																																
Walhalla	Pembina																																
Westhope	Mouse										T.	.11								T.	.25			.10			T.						0.46
Willow City	...do											.10	T.								.10		.05	.05									0.30
Minnesota.																																	
Albert Lea	Mississippi	1.30										1.55		2.00			.75						.80					T.		T.			6.40
Alexandria‖‖	...do													.08	.80	T.	.21	T.									.04	.10			T.		1.23
Angus	Red									.50				.35				.05		.08		.10	.05		.02		.05						1.20
Bagley	...do											T.		.10	.60	.50					.10		.04	.05				T.					1.39
Baudette	Rainy														.28	.92			T.	T.	T.	T.	.08	.22				T.	.15				1.65
Beardsley	Minnesota													.18	.92			.17															1.27
Beaulieu	Red										T.	T.		.10	.60		T.						T.	T.			T.	T.	.12				0.82
Bird Island	Minnesota	.29			T.									.29	.90	T.	.31				T.			T.			.03	T.					1.82
Caledonia‖‖	Mississippi	.54						T.			T.	1.90	.61	.36		.26	.16		T.			.85	T.		.10			T.					4.78
Campbell‖‖	Red													.10	.30	T.	.10										T.						0.50
Cass Lake‖‖	Mississippi		T.								T.		T.	1.10	.25		T.				T.						T.	.30					1.65
Collegeville	...do	T.									T.			.10	.91		.42								.02					T.			1.45
Crookston‖‖	Red												T.			1.00		.05	T.	T.	.05			.05	.05		T.	T.					1.20
Detroit‖‖	...do							T.		T.		T.		T.	.10	.65	.05	.05	T.			T.		T.	T.		T.		.20				1.05
Fairmont	Minnesota	1.48										.48		.20	1.05		1.40				T.		.90	.10				T.					5.61
Faribault	Mississippi	1.99										.56		.82	.28		.45					T.					T.	.06			T.		4.16
Farmington	...do	1.32										.23		.52	.56		.90				T.			T.	T.		T.	T.					3.53
Fergus Falls	Red													.10	.54		.20	.03						.02			.04	.01			.01		0.95
Fort Ripley‖‖	Mississippi										T.	T.		T.	1.12	.14	.05	.20						T.				T.	T.				1.51
Fosston	Red											.01		.24		.70			T.		.15		T.	T.			T.	.05					1.15
Glencoe	Mississippi	.28												.20	.85		.52					T.		T.			T.	T.					1.85
Grand Meadow	...do	1.75								.19		1.65		2.87			.09	.35				.07	.71	T.	T.		.08	T.	.03	T.	.03		7.82
Hallock	Red		.02									T.			.10		T.	T.				.05		.10				T.					0.27
Halstad‖‖	...do												T.		.70	.65	T.							T.									1.35
Hinckley	St. Croix	.19									T.			.30	.68		1.50			T.				T.			.40	T.			.20		3.27
International Falls	Rainy										T.				.60				T.	T.	T.	T.	T.	.40	.10	T.	.50	T.	.10	T.			1.70
Kelliher	Red										T.			.03	1.20		.06	T.	T.		.09	T.	.05	.12			.06	T.	.12				1.73
Lake Crystal	Minnesota	.72									.14			T.	1.18		1.00					T.					.03	.08					3.15
Leech Lake Dam	Mississippi										.02			.03	.55		.02				.04		.03	.09	.01		.15	.05			.03		1.02
Litchfield	...do													1.50			1.10																2.60
Little Falls	...do									T.	T.			.20	1.53		.40					T.	T.	T.	T.	T.	.10	T.			T.		2.23
Long Prairie	...do										.07		T.		1.47		.30							T.	T.	T.	.16	.01			T.		2.01
Lynd(2)	Minnesota	.06												*	1.70	T.	.24	T.						T.			T.						2.00
Mankato‖‖	Minnesota	.47	.29									.18		.33	1.10		.31	.02				T.											2.70
Milaca	Mississippi	.14												.24	1.11		1.00							T.	.04		T.				T.		2.53
Milan	Minnesota													.25	T.	.15	.30							T.							T.		0.70
Minneapolis(1)	Mississippi	.52			T.					T.	T.	T.	.04	.86	.34	.05	.87				T.	T.		T.	.05		T.	.01			T.		2.74
Minneapolis(2)	...do	.65			.01					T.	T.	T.	T.	.92	.42		.74				T.			T.	.08		T.	.02					2.84
Montevideo‖‖	Minnesota	T.			T.									.16	1.18	.02	.40							T.			T.						1.76
Moorhead	Red													.08	1.26		.06				T.		T.	T.			T.	.04					1.44
Mora	St. Croix	.09									.02			.13	1.03		.45								.02		.01				.01		1.76
Morris	Minnesota													.20	.80		.50																1.50
New London	Mississippi	T.												.10	.90	.70													T.	T.	T.		1.70
New Richland	Minnesota	1.20								T.		.73		.39	.14	T.	.87					T.	.34	T.			T.	T.					3.67
New Ulm‖‖	...do	.65	.11									.05		T.	1.15	T.	.73	.46				T.	T.	T.	T.	T.	T.	T.			T.		3.15
Osakis	Mississippi													.05	1.13	T.	.16	T.							T.		T.		.01			T.	1.35
Park Rapids‖‖	...do							.01				.03			.70	.10	.12	.02		T.	T.			.01	.05	T.	T.	.10	.02		T.		1.16
Pine River Dam	...do										.10			.40	.60		.18										.06				.05		1.39
Pokegama Falls	...do										T.			.05	.71		.21	T.		T.	.04		.03	.16			T.				T.		1.20
Red Lake	Red										T.				.36		.15					.12	.08	.12			T.		.14				0.97
Red Wing	Mississippi	2.35										.95		1.10			1.20						T.		T.	T.	T.	.30	T.	T.			5.90
Red Wing (river)‖‖	...do	.94	1.40									.26	.42	.54	1.02		.44	.42							T.	T.	T.	T.	.06				5.50
Redwood Falls	Minnesota	.93												.20	1.53		.70					.10											3.46
Reeds Landing‖‖	Mississippi	.98	.92									.48	.54	.38	1.50		.16	.08											.04				5.08
Rochester‖‖	Mississippi	1.04	.12									.80	.45	1.35	.85		.20	.40					.70										5.91
Roseau	Rainy											T.	T.		*	2.00			.12		T.		.16	T.									2.28
St. Charles‖‖	Mississippi	.78	.18									.40	.25	.65	.66		.70	.20					.53		T.	.02			.03		T.		4.22
St. Cloud	...do	.08												.16	1.37		.42								.04	.01	.02						2.10
St. Paul	...do	.50			T.					T.	T.	.01	.05	.97	.16	.05	.87				T.			T.	.02		T.	.03			T.		2.66
St. Peter	Minnesota	.92						T.						.36	1.06			1.05										T.			T.		3.39
Sandy Lake Dam	Mississippi													.03	1.24		.19				.11			.08		.03		.07			.02		1.77
Shakopee	Minnesota																																
State Sanitorium	Mississippi													.05	1.32		.17						.03	.03			.12				T.		1.72
Stillwater‖‖	St. Croix	.86	.24									.04	.10	.28	.86		.16	.22							T.		T.	.14			.01		2.91
Taylors Falls	...do	1.30									T.			.30	.70		.58										T.	T.					2.88
Wabasha	Mississippi	1.90	.04									1.22	.07				1.00																4.23

TABLE 2.—*Daily precipitation for November, 1909. District No. 5*—Continued.

Stations.	River basins.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
Minnesota—Cont'd.																																	
Warroad	Rainy			.05							.01		T.		1.17				.20					.10	.07		.05						1.65
West Concord	Mississippi	1.45										1.23		.90	.74		1.10																5.42
Willow River	St. Croix																																
Windom	Des Moines	.72									T.	.16		.30	1.53		1.00					T.	.26	T.			T.	T.		T.	T.		3.97
Winnebago‖‖	Minnesota	1.57	.14					T.	T.			.45	.09	.15	1.26		.72	.20				T.	.60	T.	T.				T.				5.18
Winnibigoshish	Mississippi		T.	.04							T.			.03	1.18		.18			T.	.09		.05	.12	T.		.03	.10	.05		T.		1.87
Winona	...do	1.49						.09				1.08		1.82	.22		.62	T.		T.			.17		T.				T.	T.	T.		5.49
Worthington‖‖	Des Moines	1.05									.30		.20	1.35		.11	T.				T.	1.30											4.31
Zumbrota	Mississippi	1.40										1.07		1.15	.90		1.25								T.								5.77
South Dakota.																																	
Milbank	Minnesota													.32	.38	.04																	0.74
Wisconsin.																																	
Antigo	Wisconsin	T.									T.	1.74	T.	1.20	.24		.30								.10								3.58
Barron	Chippewa	1.90										.18		*	1.80		*	.40							T.			.20			T.		4.48
Beloit	Rock	1.78						.01				.08	.22	.02			.50						.20						.70				3.51
Brodhead	...do	.97						.18				.36		.27	.15		1.00						.46		T.				.16				3.55
Burnett	...do	.65	.02		T.	.03					T.	.19		.30	.09		.71					T.	.60			.08			.06				2.73
Delavan	...do	.36				.02		.24		.02		.42	.01	.33	.06		.76						.54		.01				.18				2.95
Dodgeville	...do	.48	.10					.07	.04	.01		.14	.01	.34	.17		.97					.08	.90		.02	.06			.08				3.47
Downing	Chippewa	1.20										.24		2.20	.12		.80											T.			T.		4.56
Eau Claire	...do	1.00		.05								.85		2.06	.40		1.02							T.	.04			T.			T.		5.42
Ellsworth	Mississippi																																
Glidden	Chippewa																																
Grand Rapids‖‖	Wisconsin	.30	.19			T.						.12	1.10		1.14	.01	.32	.48					.21	T.		.24							4.11
Grantsburg	St. Croix	.70												*	1.60		1.20									T.					T.		3.50
Hancock	Wisconsin	.30				T.						.80		.72	.07		.35						.40					T.					2.64
Hatfield	Black	.77										1.30		1.40	.05		.64						.05			.13							4.43
Hayward	St. Croix	1.37		T.								T.		*	1.60		1.00			T.				.10	*			.35					4.42
Hillsboro	Wisconsin	.43	.04		T.	T.		.16				1.32		.67	.24		.50		T.				.80		.15				.09				4.40
Koepenick	Wisconsin	.25	.08								*	.73		1.40	.30		.80		T.						.20								3.76
La Crosse	Mississippi	1.25				T.		.28			T.	1.90	.20	.91	.07	.16	.44		T.		T.		.50	T.	.05				.04				5.80
Lake Mills	Rock	1.12	.02					T.			.04	.54	T.	.08	.12		.82	T.		T.		.06	.35		T.				.08				3.23
Lancaster	Mississippi	1.00						.28				.22		.79	.32	T.	.85					.03	.07		.04				.02				3.62
Long Lake	Wisconsin	1.55	.11									.94	T.	1.49	.31		.58	.02	.04	.05		T.		.09	T.				.02		T.		5.20
Madison	Rock	.31			T.	.01		T.			T.	.25	.06	.14	.18		.69	T.	T.			.04	.43		.02				.09				2.22
Mather‖‖	Wisconsin	.44	.50									.08	.93	.82	.55		.46						.31			.05							4.14
Mauston	...do	.73	.05									1.10		.85	.21		.75						.45						.30				4.44
Meadow Valley	...do	.62										1.19		1.13	.15		.45						.20										3.74
Medford	Black	.65										1.85	.10		1.85		*	.60						.05	T.								5.10
Merrill	Wisconsin	1.00	.05									1.07		1.32	.83		1.50		T.			.02			.10								5.89
Minocqua	...do	1.90					T.				T.		2.10	.47			.80			T.											T.		5.27
Mondovi	Mississippi	1.00	.10									.93		1.01	.60		.95	T.	T.						T.			T.			T.		4.59
Mt. Horeb	Rock	.60	.15									.32		.30			.92						.40	T.					.08				2.77
Muscoda‖‖	Wisconsin	.60	.12						T.			.06	.21	.55	.20	.10	.48	.10				.17	.28	.12		.15			.32				3.46
Neillsville	Black	.63	.30									1.39		1.30	.33		.80																4.75
New Richmond	St. Croix	1.10	.07									.10		.60	1.10		.80							T.	T.	T.	T.						3.77
Osceola‖‖	...do	2.05								.03	.02		.40	.88			.80							T.	T.	T.		.20		.07			4.45
Portage	Wisconsin											.25		.30	.08	.08	.80						.60		.05			.10					2.26
Prairie du Chien‖‖	Mississippi	1.21			T.	T.		.11	T.		T.	1.21		.84		T.	.27			T.		.11	.60		.07				.22				4.64
Prentice	Chippewa	1.54									.21	.74		1.12	.41		.45											.05					4.52
Rhinelander	Wisconsin	1.13	.03									1.26	.04	1.41	.35		.43	.50	T.	.03					.14								5.32
Sauk City	...do											.65		*	*	*	.91						.50		.40				.25				2.71
Shullsburg	Mississippi	.94						.14	.15		T.	.41		.42	.24		1.34						.58		.17				.22				4.61
Solon Springs‖‖	St. Croix	.60											T.	*	1.20		1.00					T.	T.										2.80
Spooner	...do	1.90												.59	.69		.54					T.						.06					3.78
Stanley	Chippewa	1.03										1.33		1.71	.15		.75								.15				T.				5.12
Stephens Point	Wisconsin																																
Valley Junction	...do	.94						T.	.19			1.19		1.17	.22		.50						.58		T.	.23		.17					5.19
Viroqua	Mississippi	.30	.03		T.	T.		.12	T.		T.	1.00		.60	.07		.56					.26	.56		.06				.19		T.		3.75
Vudesare	Wisconsin	1.33	T.				T.	T.				.90		1.53	.08		.67	.08	.03	T.		T.	T.		.07		T.						4.69
Watertown‖‖	Rock		.30		T.		.04				.04		.40	.30	.12	.09	.68	.14				.14				.12			.10				2.47
Waukesha (1)	Fox	.54						.01				.27		.32			.64		T.			.01	.35			.05			T.				2.19
Waukesha (2)	...do	.65						.07			.02	.46		.34	.05		.85						.40						.17				3.01
Wausau	Wisconsin	.27									T.	.70	.07	.72			.59		T.						.07								2.42
Weyerhaeuser	Chippewa	1.89			.01						.01	.23		.60	.50		*	.66						T.	.05				.08		.03		4.06
Whitehall	Mississippi	1.00	.12									1.20		1.65	.23		.80								.30								5.30
Iowa.																																	
Albia	Des Moines	.15	.01					T.	1.08	T.			.20	.70	.20		.89						.85	.05		.05			.33	T.	T.		4.51
Algona	...do	1.50										1.29	T.	2.25	.28	.02	.70					.10	.80	T.	.07			T.	1.03	T.	T.		8.04
Amana	Iowa	.19						.55	.05			.10	.05	.75	.36		.90	T.					.64		.12				.43				4.14
Ames	Skunk	.74						.47			T.		.07	2.00	.04	.05	.10					.30	T.						.37	T.	.02		4.16
Baxter	...do	.27						.75	.21		.01	.37	.31	.88	.05	.17	.30						.31		T.		.02		.56		.02		4.23
Belle Plaine	Iowa	.52						.34			.04	.10	.15	.70	.14		.68						.45		.11				.45				3.68
Bloomfield	Mississippi																																
Bonaparte	Des Moines	.43						.62	.10				.11		.53		1.15						.75						.15				3.84
Boone	...do	2.20	T.					.04	.07			.36	.12	2.50	.60		.78						.60	T.					.40				7.67
Britt	Iowa	1.23						.03				1.44	.06	2.54	T.	.07	.80					.21	.80		T.		T.	.05	.21	.05	.06		7.55
Buckingham	Cedar	.16						.40				.37	.84		.24		.40						.07						.35				2.83
Burlington	Mississippi	1.35	.06						.77				.60	.06	.08		.50					T.	.70	.04					.03	.35			4.53
Carroll	Raccoon									1.00			2.80	1.95		.30						.30	.10					.58			.23		7.26
Cedar Rapids	Cedar	.20						.44				.09	.68	.21		.44	T.	T.			T.	.22	.12		.12			.30	T.				2.82
Charles City	...do	.41						.19				1.56	.44	1.33	.24	.49	.11				.18	.50	.43	T.	.06			.08	.04				6.06
Clear Lake	...do	.20						.50				1.42		2.05			.30					.05	.60							.25	.50		5.87
Clinton	Mississippi							.65			.01	.22		.30	.20		1.11						.81		.01				.27				3.58
Columbus Jct.	Iowa	.67	.05					1.20					.05		.38	T.	1.00	T.					1.00		T.				.40	.01			4.76
Davenport	Mississippi	.15						1.25	.01	T.		.17	.14	T.	.16	.06	.87					.27	.57		.06				.21				3.92
Decorah	...do	1.25						.02			T.	2.35	.35	1.40	.32		.68					.30	.94						.30		T.		7.91
Delaware	...do	.82						.28				.16		.83			.85						.08		.19				.33				3.54
Des Moines	Des Moines	.03						.49		T.	T.	.02	.85	.83	.03		2.20					.09	.17	T.	T.			T.	.78	T.	T.		3.71
De Soto	Raccoon	.59						.33				.31	.10	1.29	.03	T.	.58						.29	T.		T.	T.		.73		.02		4.27
Dows	Iowa	.96						.50				1.13		2.62			.56						.06						.21				6.04
Dubuque	Mississippi	.15						.15				.16	.29	.19	.16	.15	1.04					.01	.32		.16				.16				2.94
Earlham	Raccoon	.50						.89			T.	.36	.20	1.82	.04	.14	.61						.31	.10					.90				5.87
Elkader	Mississippi	1.21						.15				.79	.67		.14							T.	1.17		.14				.24				4.51
Elma	Wapsipinicon	1.20						.10			T.	1.40		1.47	.05	T.	.60					.05	1.14		T.			.02					6.03
Estherville	Des Moines	1.05										.60	T.	.20	.60		.30	.10					.30				.20	.05			.06		3.46
Fairfield	Skunk	.23						1.65	.07			T.	.12	.17	.33	T.	1.00						.85	T.					.30	T.			4.72
Fayette	Mississippi	.48						.25			T.	.60	.10	.80	.40	.10	.58						.48		.17			T.	.40				4.36
Forest City	Cedar	1.55	.14									1.10		1.12	1.90		.60					.05	.65					.10					7.21
Fort Dodge	Des Moines	.88	.05						.16			1.20	.40	2.20	1.35		.30					T.	.60	T.	T.						T.		7.14
Ft. Madison	Mississippi	.25					2.25					.30				T.	.55						.85						.08				4.28
Gilman	Iowa							.65	.49		.03	.41	.23	.53	.32	.20	.43						.26	T.					.43				3.97
Grand Meadow	Mississippi	.91	T.					.09			T.	1.03		.68	.18		.45					.10	.60		.06				.34				4.44
Greene	Cedar	1.37						.25				1.83		2.20	.15		.67						.69		.08				.30				7.54

TABLE 2.—*Daily precipitation for November, 1909. District No. 5*—Continued.

Stations.	River basins.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
Iowa—Cont'd.																																	
Grinnell	Iowa							1.58			.12	.11	.22	.56	.34	T.	.72						.15		T.				.44	T.	.04		4.28
Grundy Center	Cedar	.55						1.90				.66		1.20	.37	.40	T.	T.					.20						.50				5.78
Guthrie Center	Raccoon	.75						.22			T.	.73	.10	3.68	.18	.20	.48						.49	.04	.01				.89	T.	.01		7.78
Hampton	Cedar							.35		.02	1.15	.40	1.50	.83			.95				.03	.85	.05					.58		.03			6.74
Humboldt	Des Moines	3.44						.10				1.96		2.68	.68		.73						.70	1.07							.12		11.48
Independence	Wapsipinicon							.28				.33		.58	.23	T.							.45	.20									2.07
Indianola	Des Moines	.37						1.12	.01		T.	.56	.46	.58	.05	.11	.47					T.	.52			T.			.74				5.09
Iowa City	Iowa	.82	.08						.67		.03	T.	.33	.58	.31		1.12						.54	.05		T.			.30	.05			4.88
Iowa Falls	...do	.98	.04						.54		T.	.61	.33	1.30	.52		.56	T.				T.	.40	T.		.02			.40		T.		5.70
Jefferson	Raccoon	1.07						T.			.50	.05	1.00	2.71		.10	.10						.60	T.					T.	T.	T.		6.13
Keokuk	Mississippi	.35						1.33				.60	.01		.03	.20	.74					.40	.31		T.				T.				3.97
Keosauqua	Des Moines	.72	.03						.37					.15	.27		1.00						.55	.05		.02			T.	.12			3.28
Knoxville	...do							2.10	.18	T.	T.	.15	.20	.47		T.	1.05						.70				.04		.73	T.	.05		5.67
Lacona	...do							1.20				.30	.20	.30		.30						1.00	.53		.25		.10		.03	.33	.05		4.59
Le Claire	Mississippi	.71	.26						1.08			.03	.18	.19	.03	.07	.90	.02					.95	.20	T.	.14			.24	.10			5.10
Marshalltown	Iowa	.88	.02	.01					.43		T.	T.	.33	1.05	.28		.38						.45	T.	T.		T.		.45		.03		4.31
Mason City	Cedar	1.01						.25				1.56		2.33			.68					.21	.64						.05		T.		6.73
Mt. Pleasant	Skunk	.40						2.05	.13			T.	T.	.10	.40		.98						.66		.03				.20	T.			4.95
Muscatine	Mississippi	1.09	.20						1.54				.24	.08	.20		1.08						.64	.07		T.			.34	.05			5.53
New Hampton	Wapsipinicon	1.38						.05			T.	2.22		1.54			.77						.60		.20				.40				7.16
Newton	Skunk							.40	.36			.60		.86	.15		.75						.18										3.30
Northwood	Cedar	1.20										1.55		2.50	.52		.80						.80							T.	.03		7.40
Olin	Wapsipinicon																																
Osage	Cedar	1.10						.10				1.56		2.05		T.	.60	.26				.18	1.20	.46									7.51
Oskaloosa	Des Moines	.03						2.00				.15		.13		.80						T.	.57		T.			.30	.03				4.01
Pella	...do	.18						2.18	.05	T.	T.	.15	T.	.73	.13	T.	.73						.73		T.				.60		.02		5.50
Perry	Raccoon	.70						.32				.44	*	2.75	T.	*	.70						.06		.04			T.	.34	T.	T.		5.35
Plover	Des Moines	1.15										1.50		1.10	.90	.10	1.30					.20	.80	.15	T.			T.		.08			7.28
Pocahontas	...do	1.71							.11			1.25	T.	1.80	.60	T.	1.00					.40		.05						T.	T.		6.92
Ridgeway	Mississippi	1.81						.12				2.05		1.75	.63	.12	.40					.16	2.10			.05			.23		.08		9.50
Rockwell City	Raccoon	1.00							1.00		1.10		3.50	.40		.60							.80						.50				8.90
Sac City	...do	1.40						T.				1.41	T.	1.98	.94	T.	.50						.50	.02			.35	T.	.12	.02	T.		7.24
St. Charles	Des Moines	.30						.86			T.		.45	1.17	.11	.10	.36						.80	.11					.86		.06		5.18
Sigourney	Skunk	.25						.95	.60			.24	.05	.75	.16		.97						.80		.02				.31	.20	T.		5.30
Stockport	...do	.33						.50	.63			T.	.03	.16	.17	.04	.85					T.	.63		.02				.11	.04	T.		3.51
Storm Lake	Raccoon	.88										1.19		1.05	T.		.40						.33	.05				.01					3.91
Tipton	Cedar	.32						.49				.27	*	.34	.38		1.41					*	.79		.23				.35				4.58
Toledo	Iowa	.10						.70	.50			.40		.75	.25	T.	.65						.10		.12				.50				4.07
Wapello	Iowa	.50						.25	.28	T.		.09	.04	.03	.13		.86						.86		T.				.25				3.29
Washington	Skunk	.70	.03					1.98				.02	.13	.19	.98		1.05				*	.72							.24				6.04
Waterloo	Cedar	.06						.18		T.	T.	.35		.84	.26	T.	.46						.36		.13				.42				3.06
Waukee	Raccoon	.44						.17		T.	T.	.20	.54	1.31		.30	.39				T.		.25	T.	.06	.01			.82	.01	.01		4.51
Waverly	Cedar	.66						.43			.04	2.15		1.30	.10	.22	.32						.42		.14				.53				6.31
Webster City	Des Moines	1.55						.37				1.36	T.	2.23	.25	T.	.10		.10				.60	T.	T.				.30	T.	T.		6.86
West Bend	...do	1.28									T.	1.18			*	2.64	.45					.05	.50	.03			T.	.08		T.	.02		6.23
Whitten	Iowa	.93						.36				.19	.25	1.25		T.	T.								T.				1.50		T.		4.48
Wilton Junction	Cedar	.96						.90				.33	.18	.23		1.20						.60	T.					.23					4.63
Winterset	Des Moines	.34						.60			T.	.05	.24	1.00		.22	.34						.30						1.17		T.		4.22
Zearing	Iowa	.65						.18				1.52		1.85		.10						.25						.72					5.27
Missouri.																																	
Darksville	Chariton																																
Gorin	Mississippi	.04						.34				.17	.09	.15			1.28						.64						.29		T.		3.00
Hannibal	...do	.32						.55				.28	T.		.05	.76	.28						.18		T.				T.	T.	T.		2.72
Louisiana	...do	.40						.10	.80		.60	.25		.27		1.00							.35							T.			3.77
Mexico	...do	1.24					*	.01	1.55	*	.01	*	1.06	.01	.20		1.43				*	.01	.21	.05		T.			T.	.01	.01		5.99
Steffenville	Mississippi	.85						.30	.35			.25	T.		.35		.65					T.	.50	T.	T.				T.	T.	T.		3.25
Sublett	Chariton							T.							T.	2.00																	2.00
Warrenton	Mississippi																																
Indiana.																																	
Collegeville	Iroquois	.40		.20					T.	1.05			.25		.20		1.10	T.				.10	.80						T.	.10			4.22
Knox	Kankakee	.25	.11					T.	.81				.20	.12	.17	.02	1.41	T.				.03	1.28			T.			T.	.04			4.44
Laporte	...do	.38	.03					.02				T.	.01		.13		.48	.04					1.79							.04			3.23
Plymouth	...do	.32	.09					T.	.49		T.		.12		.18	.07	.88	T.				.06	1.08			T.			.03				3.32
Illinois.																																	
Aledo	Mississippi	1.22	.05					.05	.81			.16	.03		.22		.73						1.31		.02				.19				4.77
Alexander	Illinois	.44						.37	.60			.11	1.34		.05		1.12					.01	.50		T.					T.			4.54
Antioch	...do	.30	.23					T.													1.20		.60			.90							3.23
Ashton	Mississippi																																
Astoria	Illinois	1.18						.02	.30			.03	.11		.15		1.05					T.	1.35		T.				T.				4.19
Aurora	...do	.22	.30					.19	.67		.02		.27	.43			1.13						.87		T.				.23				4.33
Beardstown	...do																																
Bement	Mississippi	.47	.03										.65		.25		1.10						.48										2.98
Benton	...do	.05							1.30	.10					.70	.25							.70							.20			3.30
Bloomington	Illinois	.73						.04	.37			.44	.05		.10		1.01						1.54		T.				T.				4.25
Cairo	Mississippi	T.					.01		.41	.01					.63	.47	.47					T.	.58										2.58
Cambridge	...do																																
Carlinville	Illinois	.66						.03	.72			T.	1.27		.23		.61					T.	.24		T.								3.76
Carlyle	Mississippi	.35						1.80	.70				.90		.40		.75						1.10										6.00
Chester	...do	.36							.98					.01	.04	.47	.73						.40	.86						.01			3.76
Chicago	Illinois	.53						.55	.14		T.	.12	.05	.02	.05	T.	.96	T.				.16	1.15		.01				.10				3.22
Coatsburg	Mississippi	.57						.24	.18			T.	.25		T.		1.25						1.05						T.				3.54
Cobden	...do	T.							.83						.80	.40	1.43						.85										4.31
Colchester	Illinois																																
Dakota	...do	1.04	.03					.42	.02		.02	.27	.05	.23	.03		.96					.03	.44		.03	T.			.20				3.77
Decatur	...do	.49						.02	.13			.90	.15		.15		1.01					T.	.28		T.								3.13
Dixon	Mississippi	.11						.35		.08	.14	.07	.12	.07		.80	.03					.75							.07				2.[illegible]
Du Quoin	...do	.07								.82			.04		.34	.60	.16						1.08							.02			3.[illegible]
Dwight	Illinois	.36	.02					.16	.48			T.	.05	.10	.08		1.25	T.				T.	1.65		.06				.03				4.[illegible]
Galva	...do	.44	.01					1.97	.26		.02	.61	.02	.05	.05		.74						1.08	T.					.14				5.[illegible]
Grafton	Mississippi	.40	.12					.04	1.12	.22			3.10	.25	.12		.84	.08					.45										6.[illegible]
Greenville	...do	.42						.54	.57				1.33		.06	.10	.72					.04	1.31										5.[illegible]
Griggsville	Illinois	.45						T.			.50	.30			.20		1.35						.50		T.					T.			3.30
Halfway	Mississippi	T.							.97	.06					.53	.30	.95						.70										3.51
Havana	Illinois	.12	.12					.46				.35			.13		1.40						1.03		T.								3.61
Henry	...do	.89						.22	.70		.02	.21	.18	.05	.05		1.19						1.03		T.				.09	.03			4.[illegible]
Hillsboro	Mississippi	.52						1.10	.42				2.45		.32		.90					T.	.52										6.22
Joliet	Illinois	.59						1.25	.10	T.	.02	.18	T.	.15	.03	.05	.83	T.				.49	.76		.04				.06				4.56
Kishwaukee	Mississippi	1.44						.33			.06	.23	.01	.19	.04		.87					T.	.58		.13				.23				4.11
Knoxville	Illinois	.88						2.25				.50	.10		.10		.81						.70						.18				5.53
La Grange	...do	.44						.20	.60				.16	.14			1.17						1.16						.18				4.[illegible]
La Harpe	...do	.85						1.10				.26	.10	T.	.09	T.	.51						.61						.09				3.61
Lanark	Mississippi	.86						.37	.16			.44	.02	.24	.13		1.05					.01	.57		.22				.30				4.[illegible]
La Salle	Illinois	.28						.77	.05	T.	T.	.45	.02		.03	.08	1.02	T.				.18	.75		.10				.09				3.[illegible]
Lincoln	...do	.63						.25	.36			.95	T.		.07		1.05					T.	.91		T.								4.[illegible]

TABLE 2.—*Daily precipitation for November, 1909. District No. 5*—Continued.

Stations.	River basins.	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	31	
Illinois—Cont'd.																																	
Loami	Illinois	.64						.20	.41				1.40		.11		.80						.18		T.				T.	T.			4.14
Martinton	do	.40						1.83		T.		.13	.08		.13	1.13	.15	T.				1.18	.50						T.				5.53
Mascoutah	Mississippi	.45						.39	.82				.98		.55	.05	.59					T.	.72							.01			4.56
Minonk	Illinois	.39						.78	T.	T.		.07	.22	.04	.08	T.	1.08	T.				T.	1.17		T.			T.	T.				3.83
Monmouth	Mississippi	.85							2.35			.52	.05	.05	.15		.63						1.08						.30				5.98
Morrison	do	1.02	T.					.25	.44			.30	.02	.27	.10		.91			T.		T.	.90		.04				.25				4.50
Morrisonville	Illinois	.29						.26	.28			T.	.97		.14		.68						.12										2.74
Mt. Vernon	Mississippi								.32	.36			.17	.27		.38	.18	.60					T.	.95									3.23
Oregon	do	1.51	T.					.30	.30			.20		T.			1.00						.65		.20				.91				5.07
Ottawa	Illinois	.35						.23	.50			.04		.14								1.14			.05	.02			.10				2.57
Pana	Mississippi	.47						.89	.18	.02			1.05	.03	.33	.02	.85				.03	T.	.61	T.									4.48
Peoria	Illinois	.50						1.45	.02	T.	T.	.81	.01		.08	.56	.70	T.				.50	.85		.01				.04				5.53
Pontiac	do	.37						.10	.39			.02	T.	.07	.08		1.03					.01	1.85			T.			.02	.06			4.00
Riley	Mississippi	.33	.25					.20	.37		T.	.31	.29	.18	.04		.88					.01	.86						.19				3.91
Rockford	do	1.28	.28						.25		T.	.26	.12	.17			.89	.01		T.	.03	.46	.20	T.	.02				.15	.03			4.15
Rushville	Illinois	.56						.47				.13	.13		.36	T.						.92											2.57
St. Charles	do	.40	.15					.20	1.40		.04	.09	.39	.10	.11		1.28	T.					.95			.05			.11				5.27
Springfield	Illinois	.59						.37	T.			1.13	.15		.07	.93	.25					.20	.01		T.				T.				3.70
Staunton	Mississippi							.30	.90				2.75		.28		.66						.60										5.49
Streator	Illinois		.15						.74		.01		.25	.05	.05		.85	.15				T.	1.33	.06		.06				.03			3.73
Sullivan	Mississippi	.43						T.	.10				.61		.27		.95					T.	.98										3.34
Sycamore	do	.35	.35						1.22	T.	.05	.12	.45	.23	.12	.02	.90						1.18	.08		.10		.05		.20			5.42
Tilden	do	.34						.58	.70	.06			1.96		.27		.72					.02	.90							.01			5.56
Tiskilwa	Illinois	.21	.06					.47	.41		T.	.24	.35	.06	.13		.64	T.					1.07		T.					.03			3.67
Walnut	Mississippi	.89						.67	.90			.25	T.	.10	.01		.97					T.	1.11		.07				.27				5.24
Warsaw	do	1.60						.93								1.53						.67											4.73
White Hall	Illinois	.44						.28	.80			.80	1.62	.01	.16		1.33						.41		T.								5.85
Windsor	Mississippi	.74						.10	.03				.75	.02	.30		.83					.03	.93										3.73
Winnebago	do	1.17						.28	.05		T.	.20	T.	.18	T.		1.00					.05	.75		.12				.20				4.00
Yorkville	Illinois	.30	.40					.38	1.00		T.	.01	.33	.10	.10		1.00						1.00						.20				4.82
Zion	Mississippi	.98						.81				.40	.02	.26	.21		1.21					.55			.20			.28					4.92

TABLE 3.—*Maximum and minimum temperatures at selected stations, November, 1909. 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...	55	28	58	29	64	25	60	25	46	17	45	36	53	25	65	40	55	37	59	25	45	29	49	34	47	39	44	33
2...	57	16	55	25	58	25	63	24	49	19	53	33	50	30	54	35	61	32	54	30	56	37	52	36	53	36	54	30
3...	53	20	61	36	66	30	65	30	51	22	62	39	60	35	65	39	82	40	64	37	63	36	58	38	63	43	54	38
4...	60	29	61	34	67	32	59	40	50	26	60	38	60	43	66	36	78	37	61	35	74	34	59	26	57	38	56	31
5...	59	34	57	39	63	32	65	36	46	25	57	39	60	39	65	37	64	30	61	30	62	36	58	24	59	41	57	29
6...	60	35	62	36	63	33	55	35	39	22	58	35	63	37	69	40	77	40	64	39	71	38	59	42	60	42	56	35
7...	58	20	42	20	50	35	48	21	46	20	57	40	45	39	60	37	54	38	52	24	56	34	46	20	58	36	54	39
8...	44	18	44	14	48	9	49	13	55	30	44	24	43	20	45	26	44	18	45	16	48	25	44	20	46	29	43	27
9...	46	22	49	20	51	13	54	18	50	46	44	30	56	25	48	27	53	32	52	33	58	25	49	38	53	32	43	29
10...	45	30	57	31	70	35	41	28	29	29	67	44	66	40	62	46	75	31	70	36	48	38	65	46	65	53	63	43
11...	51	26	31	21	39	22	30	28	48	10	64	31	40	35	62	30	51	33	40	28	47	31	62	32	58	38	61	34
12...	30	4	21	8	31	25	14	7	50	20	39	24	30	20	39	27	35	25	31	19	38	24	38	26	41	32	37	26
13...	36	0	18	11	20	15	16	8	32	23	34	26	26	20	37	32	35	28	24	18	49	26	38	30	40	33	30	24
14...	20	9	16	3	20	15	14	9	12	10	46	17	18	15	44	26	24	24	21	11	32	31	33	21	58	20	30	20
15...	15	−5	19	−3	18	−7	20	−10	10	0	24	11	15	0	35	17	24	5	12	−2	28	15	25	12	31	17	23	12
16...	18	10	23	12	25	−3	24	8	26	5	28	20	20	5	31	24	21	15	22	10	30	15	26	20	30	24	27	18
17...	18	8	23	12	27	9	26	8	22	10	28	15	23	10	26	10	18	10	22	11	26	16	23	11	25	10	27	14
18...	20	10	36	12	26	7	49	15	18	5	22	11	24	8	30	3	30	4	20	6	31	7	22	14	29	7	22	14
19...	32	18	50	25	45	9	52	22	26	0	38	14	40	17	41	19	44	15	41	19	38	9	35	7	41	16	36	16
20...	40	11	25	−5	31	24	22	11	28	5	46	25	23	21	45	32	46	35	32	3	43	17	35	22	47	25	37	20
21...	12	−15	12	−11	17	9	16	−5	32	10	29	3	11	−3	39	20	22	3	8	−2	39	9	22	11	26	18	23	9
22...	10	5	12	−1	24	9	20	6	38	8	29	12	25	2	31	18	25	11	15	−2	41	10	23	10	33	24	19	3
23...	16	2	30	9	27	15	38	10	46	12	29	20	33	10	25	4	35	15	32	14	37	16	27	12	32	22	25	13
24...	24	14	47	24	43	.....	59	16	41	18	41	25	37	25	35	25	45	25	36	26	41	20	35	25	41	31	33	20
25...	34	5	24	10	33	.....	15	6	54	12	36	28	35	24	47	28	44	28	32	24	46	23	43	30	38	34	33	29
26...	15	4	18	14	29	.....	20	6	40	22	52	32	35	20	58	35	53	35	35	21	57	24	48	34	60	38	41	39
27...	18	10	24	7	26	20	32	12	38	14	55	28	20	16	61	40	28	28	23	19	38	38	52	24	61	30	40	23
28...	20	−1	35	6	26	1	46	6	32	12	35	18	20	−2	40	25	24	18	19	7	31	23	24	8	35	24	28	8
29...	40	14	54	28	36	11	61	20	36	10	38	23	35	8	34	24	44	16	32	14	45	17	43	12	39	20	46	29
30...	44	24	52	30	44	23	61	33	40	10	44	32	35	20	42	28	52	39	38	32	46	26	46	12	43	33	45	36
31...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	35.0	13.5	37.2	16.8	39.6	17.5	39.8	16.2	37.7	15.7	43.5	25.8	36.7	20.1	46.7	27.7	44.8	24.9	37.2	19.4	45.5	24.3	41.3	23.2	45.6	29.5	39.6	24.4

Date.	Wisconsin.														Iowa.													
	Delavan.		Eau Claire.		La Crosse.		Madison.		Mauston.		Spooner.		Wausaw.		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...	63	49	60	47	59	45	59	44	64	55	45	40	62	48	55	38	60	58	59	41	61	49	52	47	61	47	61	49
2...	59	49	55	45	54	39	54	43	58	40	50	32	54	36	55	35	57	41	54	38	57	42	60	44	55	41	61	44
3...	68	47	62	40	63	40	62	41	60	42	59	39	59	36	66	40	67	41	65	40	69	43	72	44	66	43	70	45
4...	62	33	53	30	59	34	57	43	55	33	52	33	57	33	71	36	68	38	69	34	69	42	75	43	65	37	72	46
5...	58	37	63	34	62	41	59	44	60	39	58	31	57	35	66	36	70	38	65	40	71	50	75	47	64	43	79	51
6...	61	42	60	40	64	40	61	43	60	35	61	37	56	39	71	43	71	44	68	43	71	45	76	48	67	45	74	48
7...	63	44	59	39	56	43	59	45	58	37	57	41	59	40	60	43	65	44	54	40	62	51	65	45	62	49	78	56
8...	57	36	51	27	49	33	52	34	56	30	43	24	58	30	47	25	49	40	50	32	58	37	51	35	54	36	61	46
9...	47	29	50	26	51	30	49	33	50	23	47	30	47	29	49	32	55	32	50	30	56	33	54	40	55	30	60	38
10...	62	42	65	47	67	50	62	44	65	44	63	41	57	39	66	48	69	33	64	50	69	51	67	54	66	48	71	50
11...	65	58	66	37	64	38	66	42	65	46	63	36	61	54	62	38	74	54	58	35	69	41	70	43	70	40	70	52
12...	59	33	44	29	45	30	42	35	46	28	39	32	54	34	42	26	57	34	44	28	46	37	44	34	45	34	52	39
13...	67	40	41	32	52	36	68	41	64	38	36	32	52	33	37	32	72	33	58	35	72	46	63	37	71	40	74	45
14...	57	40	58	30	63	24	63	28	68	38	57	26	63	52	53	24	61	56	60	24	66	31	64	28	63	27	65	41
15...	40	24	34	18	35	21	34	24	38	11	29	15	55	20	30	15	41	25	34	20	44	26	34	24	39	25	44	27
16...	55	31	33	27	34	27	45	30	34	28	30	20	34	26	30	22	41	24	33	24	49	31	36	22	44	31	49	32
17...	33	26	32	18	29	16	32	22	32	22	24	14	29	24	25	10	29	25	24	9	31	21	25	14	31	20	32	22
18...	32	17	25	5	34	11	34	17	29	12	25	4	27	5	35	4	39	15	35	8	40	17	44	14	38	16	42	17
19...	50	31	38	17	45	25	47	29	46	24	34	14	36	23	42	22	53	15	44	25	54	36	54	33	51	32	59	39
20...	58	43	50	31	54	37	56	42	56	39	48	29	49	33	45	32	62	33	54	32	62	47	63	37	61	42	64	48
21...	54	31	40	25	37	28	49	28	54	30	30	18	47	26	33	14	39	33	32	24	56	34	37	28	42	31	59	39
22...	33	22	34	23	31	14	30	21	32	24	28	18	31	23	27	11	32	29	29	5	34	23	37	20	33	19	44	31
23...	33	8	27	19	33	11	32	15	28	−2	27	20	27	17	33	8	33	15	30	4	36	21	36	20	34	13	36	25
24...	37	28	36	22	40	33	36	29	37	28	36	22	33	25	39	28	40	19	37	27	42	33	54	32	40	32	47	33
25...	51	34	42	34	51	36	47	35	46	33	38	33	36	32	43	23	50	29	47	25	54	34	62	31	51	34	60	35
26...	59	31	52	33	60	36	56	34	54	25	48	35	46	34	60	38	65	29	63	38	63	40	70	47	61	38	68	46
27...	65	45	62	49	63	43	64	49	65	50	58	41	61	44	61	32	69	44	62	34	70	54	65	37	67	55	71	59
28...	58	36	52	29	43	29	59	32	62	35	42	21	60	35	35	25	43	37	42	28	60	41	43	33	63	34	65	40
29...	46	31	31	19	31	25	43	31	40	22	40	18	59	21	38	20	41	32	34	26	43	35	42	34	45	30	48	40
30...	50	26	40	28	42	26	49	28	46	23	39	29	36	22	43	34	50	32	44	33	53	32	46	39	48	31	48	41
31...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mns	53.4	34.8	47.2	30.0	49.0	31.4	50.9	34.2	50.9	31.1	43.5	27.5	48.1	31.6	47.3	27.8	54.1	34.1	48.7	29.1	56.2	37.4	54.5	35.1	53.7	34.8	59.5	40.8

TABLE 3.—*Maximum and minimum temperatures at selected stations, November, 1909. District No. 5*—Continued.

Date.	Hannibal, Mo.		Laporte, Ind.		Illinois. Cairo.		Greenville.		La Salle.		Mt. Vernon.§§		Peoria.		Springfield.		Winnebago.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	63	50	66	48	69	57	61	52	59	49	71	60	60	49	59	50	60	51
2	65	42	60	44	72	51	67	47	58	44	71	49	60	43	63	46	52	40
3	73	40	60	35	80	48	72	42	68	40	80	39	69	39	69	42	62	36
4	76	42	55	43	79	51	75	48	67	40	78	41	69	39	68	49	65	37
5	80	52	60	39	82	56	75	51	72	43	80	44	72	47	72	47	64	41
6	74	46	65	41	68	56	78	51	70	43	81	46	74	45	74	50	67	40
7	78	57	64	43	78	60	76	60	65	51	83	49	73	56	75	57	63	41
8	58	45	62	40	66	59	65	49	59	36	64	52	58	37	60	44	58	37
9	61	43	54	30	60	52	58	48	52	34	60	47	55	38	56	44	47	28
10	73	54	65	43	75	54	70	53	67	48	76	54	68	51	70	52	66	41
11	70	50	72	57	74	61	73	60	68	48	74	55	68	49	70	60	67	55
12	58	44	62	44	74	59	65	55	49	40	65	65	53	41	60	47	55	34
13	74	58	69	43	76	59	73	54	72	49	70	54	72	53	72	56	69	42
14	68	34	58	43	69	56	66	46	67	36	76	44	65	35	64	40	65	40
15	46	30	45	32	64	47	46	34	46	29	65	39	46	28	47	32	43	25
16	59	30	59	33	66	36	60	34	60	32	65	38	58	31	60	33	55	32
17	34	24	45	28	45	32	37	28	32	28	48	32	33	23	34	26	34	26
18	42	19	35	25	43	28	38	32	39	20	44	23	37	18	40	20	35	16
19	62	40	52	31	59	36	57	35	54	37	60	23	56	33	57	36	52	30
20	65	47	58	41	66	44	62	44	61	47	72	30	62	43	62	43	60	43
21	58	43	56	36	70	60	66	52	57	36	71	34	54	37	57	44	56	36
22	43	28	39	31	69	38	66	35	38	24	68	63	40	27	45	31	37	27
23	37	27	39	24	45	34	43	26	39	21	55	27	38	22	40	26	32	11
24	48	34	.....	.....	52	34	49	31	42	32	50	32	47	31	47	32	37	30
25	63	38	.....	.....	62	39	57	32	55	37	60	30	55	35	57	34	52	32
26	71	44	.....	.....	66	45	64	40	64	39	67	35	64	39	63	40	62	34
27	73	58	.....	.....	72	52	68	44	66	48	70	40	70	50	69	49	64	48
28	62	42	.....	.....	72	51	70	48	56	40	75	40	55	41	66	44	58	42
29	49	42	48	29	58	47	56	44	45	31	60	40	44	35	47	39	46	30
30	50	44	51	26	60	44	58	37	53	26	58	34	53	33	55	34	51	25
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Means	61.1	41.6	56.0*	37.2*	66.4	48.2	62.4	43.7	56.7	37.6	67.2	42.0	57.6	38.3	59.3	41.6	54.5	35.0