CLIMATOLOGICAL DATA FOR OCTOBER, 1911.

DISTRICT NO. 5, UPPER MISSISSIPPI VALLEY.

GEORGE M. CHAPPEL, District Editor.

GENERAL SUMMARY.

The month was considerably cooler and much wetter than usual, with a large excess of cloudiness and an absence of Indian summer weather that so frequently prevails in this section of the country during October. The first half of the month was generally warm with much more than the usual amount of rainfall, and especially during the first six days, when the rainfall was above the normal in all sections, and was excessive in portions of Minnesota, Wisconsin, Iowa, Missouri, and Illinois. Another rainy period extended from the 12th to the 18th, during which time the precipitation was considerably above the average for that season of the year. From the 22d to the 27th light showers were frequent in the southern and showers or snow flurries in the northern section. The first snowstorm of the season of any importance in the central section occurred on the 26th. The warmest days were the 3d, 6th, 11th, and 12th, when the maximum temperatures, on one or more of those days, were up to or above 90° in the extreme southern portion of the district, between 84° and 89° in the central, and above 70° in the northern section. Freezing temperatures occurred in the northern States on one or more days during the first half of the month, but the first killing frost did not occur in the central sections until the 22d or 23d. The last decade of the month was cold, the lowest temperatures being recorded between the 28th and 31st. Thrashing and harvesting were greatly delayed in North Dakota by cloudiness, stormy days, and fogginess, and in the southern sections the excessive moisture was injurious to corn in shock and delayed corn husking, but it was beneficial for starting the growth of fall-sown grain, reviving pastures, and replenishing the water supply. The killing frost on the 22d and 23d did little or no damage, as all staple crops were matured, but the freezing weather later in the month injured potatoes remaining in the ground. There were no severe or damaging storms.

TEMPERATURE.

The average temperature was below the normal in all sections, the departures ranging from −0.7° in North Dakota to −4.4° in South Dakota. The deficiencies were, however, due to low day temperatures rather than to abnormally low minimum temperatures. The highest temperature recorded in Minnesota during the month was 76°, which is 4° lower than the monthly maximum for October during the 17 years of record in that State. With the exception of a few days in the northern part of the district, the first half of the month was warm. Freezing temperatures occurred in the extreme northern part of Minnesota, from the 5th to the 9th, and as far south as northern Iowa on the 8th; but killing frost did not occur over central and southern Iowa, northeastern Missouri, and the larger part of Illinois until the 22d or 23d. The last decade was cool, although the minimum temperatures were not unusually low in any part of the district. Except in Missouri, the coldest days were the 28th, 29th, and 31st. The monthly mean temperature for the district, as shown by the records of 281 stations, is 47.6°, which is 2.1° below the normal. The highest mean monthly was 60.6°, at Cobden, Ill., and the lowest, 38.2° at Hannah, N. Dak. The highest temperature reported was 92°, at Mascoutah, Ill., on the 6th, and the lowest, 6°, at Hannah and Willow City, N. Dak., and Fort Ripley, Minn., on the 31st. The monthly mean and departure from the normal for the respective States in the district are as follows: North Dakota, 42.5°, −0.7°; Minnesota, 43.6°, −2.7°; South Dakota, 43.4°, −4.4°; Wisconsin, 45.3°, −2.3°; Iowa, 48.7°, −2.9°; Missouri, 55.3°, −1.2°; Indiana, 52°, −1.4°; Illinois, 53.2°, −0.9°.

PRECIPITATION.

The precipitation was above the normal in all parts of the district, and nearly all of it was in the form of rain, the snowfall being nil in the southern and light in the northern sections. General rains fell from the 1st to the 6th, being heavy to excessive in many localities on the 3d and 6th. Another rainy period prevailed over the larger part of the district between the 12th and 22d, which was followed by scattered and generally light precipitation on several days during the remainder of the month. The rainfall was heavy to excessive in portions of Minnesota, Wisconsin, eastern Iowa, Missouri, Illinois, and Indiana between the 1st and the 6th, the heaviest being in Minnesota and Wisconsin, where it caused high stages in all rivers, which were further augmented by the heavy rains between the 12th and 16th. In most of the southern counties of Minnesota the rainfall was the heaviest ever recorded. This was particularly true of eastern Brown County, southern Dakota, Wabasha, Goodhue, Rice, Waseca, Steele, Dodge, Olmsted, western Winona, and northern Mower Counties, where the rainfall was more than 8 inches. In general, there was an excess of from 2 to more than 6 inches in the southern half of the State. Mr. C. F. Greening, cooperative observer, Grand Meadow, Minn., reports that the total precipitation for 1911, to October 31, at that place, amounting to 46.63 inches, exceeds all records for 27 years for the whole year. Eau Claire and Stanley, Wis., report 10.35 inches and 10.02 inches, respectively, for the month. The first and only snowfall of any consequence in Iowa and Illinois occurred on the 26th, and that was confined principally to the northern counties. The average precipitation for the district, as shown by the records of 311 stations, is 3.81 inches, which is 1.51 inches above the normal. The greatest amount, 10.35 inches, occurred at Eau Claire, Wis., and the least, 0.13 inch, at Edmore, N. Dak. The greatest amount in any 24 consecutive hours, 4.27 inches, occurred at Redwood Falls, Minn., on the 5th–6th. Measurable precipitation occurred on an average of 10 days. The average amounts and departures from the normal for the several States or parts of States in the upper Mississippi Valley, are as

follows: North Dakota, 2.24 inches, +0.42 inch; Minnesota, 4.13, +2.62; South Dakota, 3.70, +2; Wisconsin, 6.02, +3.45; Iowa, 3.43, +0.98; Missouri, 2.93, +0.71; Indiana, 5.09, +3.07; Illinois, 2.86, +0.59.

SUNSHINE AND CLOUDINESS.

The average number of clear days was 11; partly cloudy, 7; cloudy, 12. There was less sunshine than is usual in October.

WIND.

Northwest winds prevailed. The highest velocity reported was 48 miles an hour from the east at Minneapolis, Minn., on the 6th.

RIVERS.

The heavy rains during September and the first six days of October caused unusually high stages in the rivers, and especially the smaller streams, in Wisconsin, Illinois, eastern Iowa, and northeastern Missouri. Much damage was done to dams, mills, and crops by the floods on the Wisconsin, Black, and Chippewa Rivers, and there was considerable damage done to crops in Illinois, southeastern Iowa, and northeastern Missouri. The Wisconsin River flood was the most serious on that river since October, 1900, and with that exception the water was the highest in 30 years. The Mississippi River from Dubuque to La Crosse was the highest since July, 1908. The river rose steadily at all stations in the Davenport district during the second decade of the month. While the high water was unusual at this season of the year, the crest of the rise was everywhere considerably below the flood stage, and no damage of any consequence was reported. At Keokuk the river rose steadily after the 13th, and by the 17th work on the Illinois division of the Mississippi Water Power Dam was suspended, as the river flooded the cofferdams. The floods and high water in central Illinois caused much damage. Bridges and culverts were carried away and railroad embankments were washed out. At Vandalia, on the 4th, the Kaskaskia River had reached the highest stage ever known. Breaks occurred in the levee and much land was inundated. The Illinois River at Beardstown overflowed its banks. Mr. S. P. Peterson, official in charge, local office, United States Weather Bureau at La Salle, Ill., reports that the average flow of the Illinois River was the highest for any October in the seven years' history of the station. The river was above the flood stage from the 3d to the 10th, inclusive, but there was very little damage done in the bottom lands by the flood.

Mr. Montrose W. Hays, district forecaster, St. Louis, Mo., reports:

> The stage of the Mississippi River was higher than normal, and the high stage seriously interfered with the work on the "free bridge." At one time it was thought that all the false work would be washed away, and all work of construction was suspended and every effort was made to protect the work. The channel scoured 19 feet, and it took many carloads of sand and stone to prevent a complete washout.

WISCONSIN RIVER FLOOD OF OCTOBER, 1911.

By J. H. SPENCER, Local Forecaster, Dubuque, Iowa.

The Wisconsin River flood of October, 1911, was the most serious on that river since October, 1900, and with that exception the highest water in 30 years was experienced. The losses to dams, mills, crops, etc., amount approximately to $300,000. It is probable that property saved as the result of flood warnings exceeded the losses.

Less damage occurred below Wausau and vicinity than during October, 1900, although there was very little difference in the stages of the two floods, as shown by the following table:

	Highest stage—	
	October, 1900.	October, 1911.
	Feet.	*Feet.*
Wausau, Wis.	[1] 11.2	[2] 11.2
Grand Rapids, Wis.	[1] 14.2	13.6
Portage, Wis.	12.2	[3] 12.9

[1] River gauges were not maintained at Wausau and Grand Rapids in October, 1900, but the stages were obtained a year or so ago with reasonable accuracy from reference marks on the foundation walls of buildings.
[2] Or slightly over.
[3] There were no breaks in the levees this year, while in October, 1900, the water broke through and flooded lowlands. This fact undoubtedly explains the difference in the stages of the two floods at Portage.

CAUSES OF THE FLOOD.

In September, 1911, the average rainfall for the Wisconsin Valley from Portage to Rhinelander was about 5.98 inches, or 2.56 inches above normal. This exceptionally heavy rainfall thoroughly soaked the ground, and raised the rivers of the upper Wisconsin River system to rather a high stage for September. There was, in fact, considerable uneasiness in the vicinity of Wausau because of high water at the beginning of October. Then came the extremely heavy rains of the first 6 days of October, which gave the following amounts:

	Inches.
Rhinelander	4.34
Merrill	5.05
Wausau	5.52
Stevens Point	4.27
Grand Rapids	4.24

About one-half of this amount fell in 12 hours on the night of the 5th–6th, Wausau reporting 2.55 inches and Rhinelander 2.80 inches at 7 a. m. of the 6th.

As the result of these rains, the Wisconsin River at Wausau rose from 6.7 feet at 7 a. m. of the 5th to a crest of slightly over 11.2 feet at 2 a. m. of the 7th; at Grand Rapids from 8 feet at 7 a. m. of the 6th to 13.6 feet at midnight of the 8th; at Portage from 6.9 feet at 7 a. m. of the 6th to 12.9 feet at 6 p. m. of the 11th.

DAMAGE AT WAUSAU AND VICINITY.

The excessive rainfall that was the immediate cause of the flood at Wausau fell during the night of the 5th–6th, and within 18 hours from the time it ceased the flood crest at Wausau was reached. On the morning of the 6th, immediately upon learning the amount of rain that had fallen during the previous night, a flood warning was telegraphed to the mayor of Wausau. Warnings were issued later in the day for Stevens Point and other cities and towns southward to Portage.

About 11 o'clock on the morning of the 6th the east gate of the guard lock at Wausau gave way, and early in the afternoon of the same day the top section of the dam at Kelly was carried down the stream. These two breakages were in large part the cause of much of the damage at both Wausau and Rothschild. When the guard lock broke, the mill of the Alexander Lumber Co. was flooded, and this firm sustains a loss of about $6,000. The Wausau Street Railway Co. reports damage amounting to about $2,000, and there were a number of minor losses.

By far the greatest damage on the Wisconsin River was sustained by the Marathon Paper Mills Co., of Rothschild, a few miles below Wausau. The damage to

TABLE 1.—*Climatological data for October, 1911. District No. 5, State of North Dakota.*

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.
North Dakota.																				
Amenia	Cass	954	14	43.2	− 1.1	75	12	12	26†	40	1.33	− 0.10	0.60	0	4	12	8	11	nw.	C. E. Wood.
Ashley	McIntosh	2,001																		F. F. Zimmerman.
Bottineau	Bottineau	1,638	16	41.0	− 2.0	78	8	8	27	39	2.48	+ 1.33	1.32		8	5	10	16	nw.	A. J. Carlson.
Cando	Towner	1,488	10																	E. T. Judd.
Crosby	Divide		5	40.8		78	9	10	31	36	1.74		1.52	T.	5	16	6	9	nw.	H. C. Kashau.
Devils Lake	Ramsey	1,482	6	41.5	+ 1.0	77	8	8	31	32	1.65	+ 0.42	0.68	0.1	10	9	8	14	se.	U. S. Weather Bureau.
Donnybrook	Ward	1,760	12	42.0	− 1.3	78	8†	9	31	41	2.03	+ 1.62	1.01	0.5	6	10	6	15	nw.	C. J. De Vore.
Dunseith	Rolette		14																	L. H. Trowbridge.
Edmore	Ramsey	1,524	6	44.6		80	10	8	28†	48	0.13		0.06	T.	3	13	6	12	w.	H. R. Aslakson.
Fessenden	Wells	1,610																		G. T. Seymour.
Forman	Sargent	1,249	17	44.8	− 0.1	77	8†	12	28	39	1.01	− 0.51	0.27	0	5	10	6	15	nw.	A. Maltby.
Grafton	Walsh	827	20	42.1	− 1.0	78	8	12	27	37	1.61	+ 0.57	0.42	0	7	13	4	14	s.	A. R. T. Wylie.
Granville	McHenry	1,504	5	43.8		79[a]	8	15[a]	27	40[a]	1.45		0.91	1.0	5				nw.	W. A. Christianson.
Hannah	Cavalier	1,568	6	38.2[f]		75[f]	8	6[f]	31	39[f]	2.08		1.56	T.	5				nw.	J. Moffatt.
Hansboro	Towner		3	41.2		76	8	9	27	36	1.72		1.20	T.	7	12	10	9	nw.	Geo. Dale.
Hillsboro	Traill	901	6	44.4		72	8	15	26†	35	1.35		0.52	T.	8	9	12	10	nw.	F. E. Mayall.
Lakota	Nelson	1,579	5	40.0		74	8	10	27†	36	2.19		1.00	0.7	8	9	13	9	se.	C. R. Pettes.
Langdon	Cavalier	1,615	16																	J. Woolner.
Larimore	Grand Forks	1,134	16																	J. M. Freeman.
Lisbon	Ransom	1,091	7	42.4	− 2.6	75	8	11	26	40	0.98	− 0.38	0.37	0	5	12	9	10	nw.	H. K. Adams.
McKinney	Renville	1,640	17	41.8	+ 0.2	79	9	10	27†	42	1.74	+ 1.07	0.78	T.	3	10	8	13	nw.	N. P. Swenson.
Manfred	Wells	1,605	10	42.4		76	8	12	31	44	1.33		0.42	T.	7	11	9	11	nw.	P. B. Anderson.
Mayville	Traill	975	15	45.3	+ 0.2	74	8	10	31	28	1.73	+ 0.25	0.40	0	7	16	2	13	nw.	W. C. Gould.
Minot	Ward	1,557	13	43.8	− 0.8	82	8	15	27	41	1.14	+ 0.33	0.55	0.5	6	15	4	12	w.	J. J. Bates.
Minto	Walsh	820	18	43.4	+ 1.2	77	8	13	27	36	2.23	+ 1.05	0.85	T.	4	11	10	10	nw.	S. S. Marsh.
Oriska	Barnes	1,270	6																	J. J. Taylor.
Park River	Walsh	998	8	44.6		82	8	10	27†	40	1.52		0.60	0	8	12	13	6	w.	A. Heyward.
Pembina	Pembina	789	13	42.2	+ 0.4	72	12	10	30	30	1.19	+ 0.15	0.68	0	7	14	6	11	w.	C. W. Shumaker.
Power	Richland	1,020	19	43.1	− 1.9	74	8	10	26	36	0.72	− 0.98	0.28	0	4	9	8	14	w.	J. A. Power.
Pratt	McHenry		6																	W. B. Ahern.
Towner	do		3	42.2		79	8	11	28	42	0.93		0.63	T.	4	15	7	9	nw.	B. Bagley.
University	Grand Forks	830	19	42.8	− 0.9	74	8	12	31	30	1.60	+ 0.16	0.60	T.	8	12	3	16	s.	U. S. Weather Bureau.
Wahpeton	Richland	962	19																	E. G. Burch.
Walhalla	Pembina	966	7	43.4[d]		79[e]	10	9[d]	27	47[e]	1.30		0.89	T.	6	11	13	7		Ivan DeL. Leo.
Westhope	Bottineau		5	42.3		78	9	11	27†	39	2.22		1.79	T.	4	4	17	10	sw.	W. A. Meddaugh.
Willow City	do	1,471	18	41.0	− 1.2	78	8	6	31	45	1.56	+ 1.02	0.97	T.	5	8	16	7	nw.	M. A. Ostby.
Minnesota.																				
Albert Lea	Freeborn	1,229	20	44.7	− 3.6	75	3	21	31	30	6.25	+ 4.19	1.50	T.	10	10	12	9	nw.	Edward Carey.
Alexandria	Douglas	1,391	17	43.6	− 2.1	71	12	18	31	29	3.63	+ 1.98	0.84	0.2	12	12	2	17	nw.	P. O. Unumb.
Angus	Polk	870	9	42.6		72	8	9	27	33	1.35		0.47	T.	7	17	4	10	nw.	John Nadvornik.
Bagley	Clearwater		5	41.0		71	8	10	26	39	1.45		0.61	2.0	5	10	11	10	nw.	Jens Nelson.
Beardsley	Bigstone	1,090	17																	R. J. Buckley.
Beaulieu	Mahnomen	1,200	9	41.5		69	13	13	26†	29	1.10		0.40	T.	7	16	8	7	w.	Dr. P. A. Slattery.
Bemidji	Beltrami	1,400	9								1.03		0.37	0	8					C. W. Warfield.
Bird Island	Renville	1,039	21	43.8	− 4.3	72	11	14	31	31	5.77	+ 3.99	1.43	T.	13	12	3	16	nw.	Dr. F. L. Puffer.
Caledonia	Houston	1,179	18	45.8	− 3.0	72	3	27	27†	24	5.87	+ 3.33	1.16	T.	12	10	1	20	nw.	W. D. Belden.
Campbell	Wilkin	984	2	42.8		71	8†	12	30	35	2.15		0.38	T.	12	9	2	20	nw.	J. T. Neisess.
Cass Lake	Cass	1,300	4								1.24		0.54	0	3					C. W. Burns.
Collegeville	Stearns	1,282	18	44.2	− 3.8	66	12†	21	30	25	3.18	+ 1.31	0.72	0	11	16	4	11	nw.	Fridolin Tembreul.
Crookston	Polk	863	21	43.4	− 0.5	69	8	12	31	29	1.01	− 0.68	0.35	T.	8	16	3	12	s.	A. G. Andersen.
Detroit	Becker	1,364	15	41.4	− 2.7	71	11	11	31	35	0.72	− 1.46	0.24	T.	4	15	5	11	nw.	G. W. Peoples.
Ely	St. Louis			41.8		71	9†	16	30	32	0.61		0.41	T.	4	13	10	8	nw.	Rev. W. H. Farrell.
Fairmont (near)	Martin	1,240	24	45.0	− 2.9	70	3†	17	31	26	4.49	+ 2.76	1.86	1.0	13	13	6	12	nw.	W. F. Wherland.
Faribault	Rice	1,003	14																	Dr. A. B. Moulton.
Farmington	Dakota	902	23	45.2	− 2.6	70	3†	22	31	31	8.75	+ 6.20	2.94	T.	13	11	6	14	sw.	E. D. Akin.
Fergus Falls	Ottertail	1,210	19	43.6	− 2.8	66	11	16	27	24	1.18	− 0.50	0.41	0.5	10	10	10	11	nw.	C. E. Kissinger.
Fort Ripley	Crow Wing	1,136	4	41.6		70	13	6	31	38	3.06	+ 1.66	0.98	T.	8	15	0	16	nw.	J. J. Tucker.
Fosston	Polk	1,289	2	42.0		70	8	11	31	28	1.28		0.53	2.0	7	21	5	5	se.	O. N. Hem.
Fram	Marshall																			A. W. Clark.
Glencoe	McLeod	1,000	15	46.6	− 0.8	69	3†	19	31	31	7.60	+ 4.88	4.00	0	5	18	13	0	nw.	F. B. Reed.
Grand Meadow	Mower	1,338	23	45.2	− 1.7	73	3	20	31	33	8.22	+ 5.77	1.74	T.	14	11	6	14	nw.	C. F. Greening.
Gull Lake Dam	Cass	1,215		39.7		62	10	12	31	31	3.52		1.20	3.0	9	11	9	11	nw.	G. A. Williams.
Hallock	Kittson	815	12	43.4	− 0.4	75	8	9	27	33	1.77	+ 0.58	1.40	0	4	15	0	16	s.	D. A. Robertson.
Halstad	Norman	870	5	42.6		72	11	11	27	34	1.50		0.55	0	7	13	4	14	nw.	A. G. Holstrom.
Hinckley	Pine	1,050	6	43.0		73	12	15	31	38	2.38		1.50	T.	5	8	8	15	sw.	W. R. Newman.
International Falls	Koochiching	1,112	3	43.2		75	9	15	31	39	0.62		0.50	T.	3	13	9	9	w.	Rees Roe.
Itasca State Park	Clearwater	1,500																		J. A. Stillwell.
Kelliher	Beltrami		4																	A. Gilmour.
Lake Crystal	Blue Earth		4	45.2		68	3	18	31	28	6.87		1.60	T.	14	10	11	10	nw.	W. P. Cobb.
Leech Lake Dam	Cass	1,301	23	41.1	− 1.9	71	12	11	31	41	1.25	− 0.80	0.52	T.	7	1	22	8	nw.	Hans Olson.
Littlefork	Koochiching			41.0		73	8†	8	31	44	0.29		0.25	0	2	14	7	10		O. C. Olson.
Long Prairie	Todd	1,299	19	41.6	− 3.8	70[d]	8†	10	30	44[d]	2.97	+ 0.89	1.10	0	3	14	6	11	nw.	A. L. Sheets.
Lynd	Lyon	1,175	19	43.8	− 4.3	70	3	14	30	32	6.93	+ 5.12	3.74	0	8	10[a]	8[a]	12[a]	nw.	J. W. Rouse.
Mankato	Blue Earth	758	12								7.60	+ 6.05	3.46	T.	11	14	2	15	sw.	Sadie H. Blake.
Milaca	Millelacs	1,072	13	42.0[d]	− 4.5	72[d]	12	15[d]	31	37[d]				0	5[d]	8[d]	9[d]	10[d]	se.[d]	C. H. Foss.
Milan	Chippewa	955	17	43.4	− 3.7	69	11	14	31	29	4.15	+ 2.27	1.04	T.	10	11	13	7	nw.	O. K. Opjorden.
Minneapolis	Hennepin	918	20	45.8	− 3.9	72	12	23	31	25	6.42	+ 3.84	2.87	T.	11	9	8	14	w.	U. S. Weather Bureau.
Montevideo	Chippewa	900	21	45.6	− 2.4	72	11	15	31	37	3.99	+ 2.17	1.11	0	10	13	8	10	se.	L. G. Moyer.
Moorhead	Clay	935	30	43.5	+ 0.7	72	8	14	31	34	1.02	− 1.05	0.39	0	7	11	6	14	se.	U. S. Weather Bureau.
Mora	Kanabec		6	43.0		73	12	13	31	39	2.65		1.00	0	13	20	3	8	nw.	Hans Peterson.
Morris	Stevens	1,170	26	43.2	− 2.9	68	11	17	31	29	2.72	+ 1.22	1.05	T.	10	14	9	8	nw.	D. T. Wheaton.
New London	Kandiyohi	1,215	17	45.8	− 1.1	72	8	20	31	24	3.37	+ 1.62	1.50	0	5	6	11	14	sw.	Harold Swensen.
New Richland	Waseca	1,180	17	45.3	− 3.8	71	12	21	31	29	8.11		2.24	0.5	14	9	13	9	nw.	N. O. Tyrholm.
New Ulm	Brown	791	31	44.4	− 4.2	71	3	18	31	29	8.71	+ 6.65	3.80	T.	13	8	3	20	nw.	A. L. Henle.
Osakis	Douglas	1,343	4	42.4		68	14	15	31	33	3.39		1.40	0.2	7	10	2	19	nw.	J. B. Johnson.
Park Rapids	Hubbard	1,426	21	41.4	− 1.6	70	8	14	26†	34	1.28	− 0.67	0.25	1.4	10	12	2	17	nw.	Dr. P. A. Walling.
Pine River Dam	Crow Wing	1,251	24	42.1	− 2.0	70	12	10	31	35	1.78	− 0.66	0.53	T.	6	13	11	7	e.	Neil McKay.
Pokegama Falls	Itasca	1,280	24	41.2	− 0.5	70	12	10	31	40	0.91	− 1.17	0.20	0.7	7	9	11	11	se.	A. L. Mampel.
Redlake	Beltrami	1,152	3	43.0		74	8	16	27	35	1.01		0.65	T.	2	7	9	15	w.	A. C. Goddard.
Red Wing	Goodhue	680	15								9.60	+ 6.74	3.30	T.	15	9	3	19	se.	Louis Bach.
Redwood Falls	Redwood	1,050	4	45.7		71	11	17	31	30	7.53	+ 6.23	4.27	T.	11	10	10	11	nw.	N. B. Andersen.
Reeds Landing	Wabasha	681	16								8.69	+ 5.39	3.40	0	13	8	1	22	se.	John Deschneau.
Rochester	Olmstead	991	6	44.8		72	3†	22	28	35	9.11		2.85	0	12	8	6	17	nw.	S. R. Case.
Roseau	Roseau	1,040	3																	A. Waag.

TABLE 1.—*Climatological data for October, 1911. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit. Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Precipitation, in inches. Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Minnesota—Continued.																				
St. Charles	Winona	850	20	45.7	− 2.5	74	3	21	31	37	7.89	+ 5.05	2.16	0	13	11	8	12	se.	S. W. Gleason.
St. Cloud	Sherburne	1,020	33	44.4	− 5.5	69	12	18	31	33	4.87	+ 2.03	1.08	T.	12	11	8	12	nw.	J. H. Capser.
St. Paul	Ramsey	837	40	45.8	− 2.3	70	12	22	31	25	7.55	+ 5.21	3.61	0	13	8	10	13	se.	U. S. Weather Bureau.
St. Peter	Nicollet	825	17	45.5	− 4.5	72	3	20	30	30	6.73	+ 4.33	3.11	T.	11	12	9	10	n.	State Hospital.
Sandstone	Pine																			A. D. Hale.
Sandy Lake Dam	Aitkin	1,234	18	42.1	− 2.5	72	12	12	31	39	1.08	− 1.07	0.31	0	6	8	12	11	nw.	A. Newstrom.
State Sanatorium	Cass		3			70	12				1.36		0.41	0.2	11	12	10	9	se.	Dr. L. B. Ohlinger.
Stillwater	Washington	694	6								7.31		3.15	0	8	10	3	18	ne.	Oscar Ostrom.
Taylors Falls	Chisago	759	4	45.0		74	12	16	31	36	5.95		2.40	0	7	12	4	15	n.	Mpls. Gen. Elec. Co.
Thief River Falls	Pennington										0.45		0.16	T.	4	12	4	15	s.	E. W. Lown.
Warroad	Roseau	1,069	2	41.4		73	9	8	26	39	1.38		0.70	T.	4	14	2	15	s.	J. H. Sawyer.
West Concord	Dodge	1,232	2	45.3		71	3	20	31	29	8.07		2.00	T.	10	9	10	12	se.	H. H. Orcutt.
Winnebago	Faribault	1,100	12	46.8	− 3.3	76	3	19	31	38	5.47	+ 3.10	2.00	T.	12	11	5	15	nw.	H. H. Haight.
Winnibigoshish	Itasca	1,300	23	42.8	− 0.8	71	12	16	31	35	1.14	− 0.79	0.30	0.3	8	12	5	14	nw.	John Duncan.
Winona	Winona	700	15	47.2	− 0.9	74	3	23	28	33	7.54	+ 5.66	2.12	0	13	13	5	13	w.	P. C. Myers.
Worthington	Nobles	1,593	16	43.6	− 4.8	67	3	17	31	26	5.26	+ 3.23	2.60	0.5	13	16	2	13	w.	M. P. Mann.
Zumbrota	Goodhue	917	15	44.8	− 3.8	71	3†	21	31	35	10.23		2.55	T.	13	10	9	12	nw.	W. C. Rowell.
South Dakota.																				
Milbank	Grant	1,148	20	43.4	− 4.4	71	11	16	31	33	3.70	+ 2.00	1.27	0	10	14	3	14	nw.	I. T. Patridge.
Wisconsin.																				
Antigo	Langlade	1,489	17	43.6	− 1.7	73	12	16	27	38	6.56		2.74	T.	8	12	7	12	w.	Elton C. Larzelere.
Barron	Barron	1,115	20	43.8	− 1.9	72	12	19	27†	38	7.26	+ 4.42	2.55	0	9	11	12	8	s.	Wm. A. Kent.
Beloit	Rock	750	45	49.5	− 1.3	74	3	24	28	26	2.32	+ 0.24	0.77	0.5	7	16	0	15	n.	Smith Observatory.
Big St. Germain Dam	Vilas	1,590	1	42.2		71	12	14	27	41	6.62		2.02	3.0	11	14	4	13	nw.	Oscar Brehmer.
Brodhead	Green	812	13	48.8	− 3.2	74	12†	20	28	34	4.69	+ 2.62	2.34	T.	7	15	7	9	nw.	Hector D. Kirkpatrick.
Burnett	Dodge	880	7	46.6		71	12	23	27†	32	4.54		1.33	0.5	13	6	8	17	nw.	Geo. W. Smith.
Cottage Grove	Dane	888									3.66		1.35	0.6	15	3	12	16	sw.	John E. Mellish.
Darlington	La Fayette	867	5	47.0		75	3	16	28	34	4.00		1.65	0	6	10	10	11	nw.	S. P. Nelson.
Deerskin Dam	Forest	1,625	1			68	12†				5.06		1.87	2.0	9	5	13	13	w.	Wm. E. O'Neal.
Delavan	Walworth	920	20	48.4	+ 0.2	72	3†	23	28	34	2.06	+ 0.29	1.02	T.	9	7	7	17	sw.	Elwood S. Austin.
Dodgeville	Iowa	1,116	11	48.1	− 3.6	72	3†	22	27	27				0.1		7p	5p	3p	sw.	Thomas Gibbon.
Downing	Dunn	983	9	45.0d		72d	12	17d	31	40d	8.84		1.80	T.	11	4d	4d	19d	w.	Eugene F. Stoddard.
Eau Claire	Eau Claire	800	20	46.0	− 2.6	75	12	22	27†	38	10.35	+ 7.13	3.27	T.	15	10	6	15	nw.	Robert D. Whitford.
Grand Rapids	Wood	1,021	12	45.2	− 1.7	75	12	11	27	38	6.71	+ 4.86	1.80	0	13	10	3	18	w.	Willis B. Raymond.
Grantsburg	Burnett	1,095	20	44.4	− 2.4	76	12	33	28	43	3.30	+ 0.60	1.50	T.	5	15	5	11	nw.	Theodore Olsen.
Hancock	Waushara	1,091	19	46.7	− 1.7	72	12	19	26	39	6.89	+ 4.68	1.90	0	10	12	6	13	se.	Frederick B. Hamilton.
Hatfield	Jackson	973	17	45.2	− 3.6	75	12	18	28	43	7.36	+ 4.29	2.02	T.	8	3i	8i	11	sw.	Walter S. Woods.
Hayward	Sawyer	1,197	20	42.2	− 2.9	73	12	9	31	40	3.70	+ 0.44	1.30	0	9	10b	2b	17b	w.	William E. Swain.
Hillsboro	Vernon	1,000	20	43.9	− 3.9	73	12	15	28	41	5.01	+ 2.65	1.30	T.	10	13	11	7	e.	Emil V. Wernick.
Koepenick	Langlade	1,683	20	42.6	− 3.2	70	12†	10	27	38	6.47	+ 3.30	1.60	0.7	10	0	21	10	nw.	Edward S. Koepenick.
Lac du Flambeau	Vilas		1	41.7i		67i	14	18i	27	26i	6.08			T.		10i	1i	11i	w.	W. J. Lovett.
La Crosse	La Crosse	714	39	47.0	− 2.9	73	3	24	28	32	6.39	+ 3.93	1.98	0	13	9	6	16	s.	U. S. Weather Bureau.
Lake Mills	Jefferson	897	20	48.5	− 2.2	71	3†	24	27†	24	5.10	+ 2.93	1.78	0.8	11	6	9	16	n.	S. Newton Dexter Smith.
Lancaster	Grant	1,070	20	45.8e	− 3.7	74d	12	20e	28	32e	4.10	+ 2.04	1.95	0.1	10	10	8	13	w.	Edward Pollock.
Long Lake	Oneida	1,592	3	41.0		71	12	10	27	45	6.06		2.17	0.2	12	7	7	17	w.	Louis Frank.
Madison	Dane	974	42	48.4	− 0.4	72	3	28	27	23	2.92	+ 0.50	1.11	0.7	12	6	7	18	nw.	U. S. Weather Bureau.
Mather	Juneau	962	7	44.2		72	13	19	28	34	8.32		1.90	T.	14	6	4	21	w.	Frank Evans.
Mauston	do	882	15	46.5	− 2.4	70	12	23	28	30	6.02	+ 3.53	1.40	0	11	7	13	11	nw.	Eugene L. Hitchcock.
Meadow Valley	do	974	20	45.5	− 2.4	74	12	20	27†	36	8.50	+ 6.04	1.96	T.	16	5	13	13	nw.	Charles H. Johnson.
Medford	Taylor	1,420	22	43.1	− 2.9	72	12	16	27	35	8.80	+ 5.39	2.95	1.0	10	11	12	8	w.	Wm. Zeit.
Merrill	Lincoln	1,267	5	45.4		79	12	15	27	46	8.77		3.00	T.	10	11	6	14	s.	J. M. Wilson.
Minocqua	Oneida	1,604	7	42.8		70	12	18	27†	36	6.25		2.10	T.	15	9	6	16	w.	Benjamin W. Applebee.
Mondovi	Buffalo	738	3	46.6		72	12	21	28	38	7.93		2.00	0	18	9	8	14	nw.	Dr. Chas. Hebard.
Mount Horeb	Dane	1,226	7	47.4		72	3†	20	28	33	3.64		1.15	1.0	10	11	4	16	nw.	W. M. Lewis.
Muscoda	Grant	666	2	47.5		74	3	19	28		4.89		1.70	T.	10	12	3	16	nw.	Wm. Hessler.
Neillsville	Clark	996	21	45.6	− 1.3	75	12	20	27†	40	8.40	+ 5.48	3.12	T.	8	11	0	20	nw.	Wm. Heaslett.
New Richmond	St. Croix	990	6	44.2		70	11†	17	31	35	7.17		2.57	T.	11	11	15	5	nw.	Franc A. R. Van Meter.
Osceola	Polk	806	20	44.6	− 2.2	75	12	17	31	39	6.72	+ 3.77	2.54	T.	6	9	7	15i	w.	Charles W. Staples.
Park Falls	Price	1,492	20	41.8		74	12	13	27	43	4.46		1.75	T.	12	8	7	16	nw.	Flambeau Paper Co.
Portage	Columbia	809	22	48.6	− 1.4	74	12	24	27	31	4.92	+ 2.79	1.22	T.	15	9	8	14	e.	James H. Martin.
Port Edwards	Wood	969	1	45.9		70	12	17	27†	35	6.56		1.90	T.	14	15	0	16	w.	Nekoosa-Edwards Paper Co.
Prairie du Chien	Crawford	690	20	49.0	− 2.9	76	3†	24	28	34	5.00	+ 2.79	1.68	T.	9	5	4	22	s.	James H. Gillis.
Prairie du Sac	Sauk	750	3	47.8		70	18	20	28	29	3.35		0.85	T.	10	9	9	13	ne.	Wis. River Power Co.
Prentice	Price	1,551	13	40.8	− 3.9	70	12†	10	27	41	6.87	+ 3.91	1.50	2.0	11	9	3	19	w.	Joseph G. Lash.
Rhinelander	Oneida	1,550	5	43.4		71	12	15	27	39	8.87		2.80	T.	13	10	5	16	w.	Rhinelander Power Co.
Shullsburg	La Fayette	1,019	5	47.3		72	3	20	28	30	4.67		1.41	T.	12	9	6	16	w.	Harrison B. Chamberlain.
Solon Springs	Douglas	1,083	5	41.5		71	12	9	31	39	2.90		1.10	T.	5	10	4	17	sw.	John M. Sayles.
Spooner	Washburn	1,104	17	42.3	− 3.5	71	12	13	26	34	3.60	+ 0.63	1.23	T.	8	15	3	13		Horace A. Bresee.
Stanley	Chippewa	1,082	7	44.2		74	12	21	28	40	10.02		4.17	0	9	15	1	15	nw.	W. Humphrey Scott.
Stevens Point	Portage	1,113	18								6.62	+ 4.09	2.15		6					Garry E. Culver.
Sugar Camp Dam	Oneida	1,582	1								6.63		2.30	3.0	13				se.	Robert Hayes.
Twin Lakes Dam	Vilas	1,625	1								5.40		2.00	0	8	5	18	8	sw.	Albert D. Hansen.
Valley Junction	Monroe	930	19	45.2	− 3.1	70	12	22	28	32	9.19	+ 6.37	2.19	T.	11	13	6	12	nw.	Frederick Muermann.
Viroqua	Vernon	1,412	21	48.0	− 1.0	72	3	24	28	27	7.84	+ 5.35	1.59	T.	15	10	9	12	nw.	Henry E. Rogers.
Vudesare	Vilas	1,600	3	40.6		69	9	12	31	39	5.21		1.70	0.5	9	11	12	8	w.	Louis L. Thomas.
Watertown	Jefferson	824	20	47.8	− 0.7	71	16	20	27	27	2.76	+ 0.85	1.25	0.5	10	6	11	14	se.	Charles J. Salick.
Waukesha	Waukesha	864	20	48.6	− 1.7	70	12	22	28	28	3.58	+ 1.80	1.63	0.8	6	9	11	11	nw.	Carroll College.
Wausau	Marathon	1,212	16	45.2	− 1.7	72	12	18	27	35	8.78	+ 5.76	3.05	T.	10	10	7	14	w.	George H. Halder.
Weyerhaeuser	Rusk	1,297	9	41.6		72	12	15	27†	38	7.08		3.02	1.3	8	11	2	18	sw.	Miss Etta Stiles.
Whitehall	Trempealeau	675	20	45.9	− 3.3	74	12	18	28	39	9.30	+ 6.84	3.10	0	10	9	0	22	w.	Hans J. Haugh.
Iowa.																				
Albia	Monroe	959	13	50.6	− 1.8	84	3	27	22	36	3.22	+ 0.65	1.67	T.	11	11	6	14	nw.	J. I. Chenoweth.
Algona	Kossuth	1,215	37	46.1	− 2.6	71	3	19	28†	27	3.35	+ 1.26	1.31	2.0	8	12	6	13	nw.	Dr. F. T. Seeley.
Alta	Buena Vista	1,513	20	45.9	− 4.4	70	3†	18	31	33	3.81	+ 1.67	1.44	1.5	12	12	8	11	nw.	David E. Hadden.
Amana	Iowa	721	35	49.0	− 0.9	80	3	23	28	31	2.19	− 0.46	1.17	T.	10	13	12	6	nw.	C. Schadt.
Ames	Story	926	35	49.6	− 1.4	82	3	21	28	37	4.10	+ 1.63	1.54		11	11	13	7	nw.	Iowa State College.
Baxter	Jasper	998	11	48.8	− 4.4	78	3	22	28	36	4.55	+ 1.74	1.15	T.	13	11	10	10	se.	W. R. Vandike.
Belle Plaine	Benton	828	21	49.2	− 1.2	78	3	20	28	37	3.59	+ 1.24	1.78	1.0	11	13	5	13	nw.	S. P. Van Dike.
Belmond	Wright		1	46.4		75	3	19	28	32	3.19		0.78	2.0	11	4	16	11	nw.	Geo. P. Hardwick.

TABLE 1.—*Climatological data for October, 1911. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit. Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Precipitation, in inches. Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Iowa—Continued.																				
Bloomfield	Davis		4	52.5		87	3	29	29	31	3.11		1.42	T.	10	13	5	13	nw.	Albert Power.
Bonaparte	Van Buren		20	51.2	− 3.8	85	3	27	22†	41	2.46	+ 0.70	0.95	1.0	9					B. R. Vale.
Boone	Boone	1,134	6																	Carl Fritz Henning.
Britt	Hancock	1,236	14	46.0	− 4.3	74	3	19	31	31	3.04	+ 0.88	0.75	1.4	13	14	7	10	se.	L. M. Goodman.
Buckingham	Tama		11								3.19		1.33	T.	9	4	15	12		J. S. Guynn.
Burlington	Des Moines	544	15	51.6	− 4.1	87	3	29	29	36	2.27	+ 0.05	0.70	T.	9	15	4	12	s.	Max E. Poppe, jr.
Carroll	Carroll	1,265	21	46.2	− 4.8	73	3	20	31	34	4.58	+ 2.34	1.35	1.0	10	10	7	14	ne.	Mrs. Jos. J. Wolfe.
Cedar Rapids	Linn	733	29	48.8	− 2.6	80	3	26	28†	28	3.88	+ 1.42	2.26	T.	11				w.	Chas. B. Graf.
Charles City	Floyd	1,015	20	47.0	− 1.2	76	3	24	28	30	2.81	+ 0.78	0.92	1.0	12	8	9	14	se.	U. S. Weather Bureau.
Clear Lake	Cerro Gordo	1,241	13	48.4	− 3.4	71	3	21	31	29	2.45	− 0.18	0.95	1.0	5	16	0	15	s.	Oscar Stevens.
Clinton	Clinton	593	44	50.0	− 0.5	82	3	24	28	31	1.63	− 0.77	0.50	0	8	9	10	12	nw.	Luke Roberts.
Columbus Junction	Louisa	595	10	51.6	− 2.8	84	3	28	28	39	2.58	+ 0.13	0.68	T.	10	17	9	5	nw.	J. B. Johnston.
Davenport	Scott	580	40	51.0	− 1.6	84	3	28	27	29	1.57	− 0.82	0.56	T.	9	11	6	14	nw.	U. S. Weather Bureau.
Decorah	Winnishiek	875	18	46.2	− 4.0	75	3	21	28	33	5.72	+ 3.30	1.21		11					F. H. Baker.
Delaware	Delaware	1,083	20	47.2	− 1.8	72	3	20	28	27	5.43	− 3.23	1.94	1.0	12	10	12	9	se.	William Ball.
Des Moines	Polk	861	33	50.6	− 1.9	78	3	26	28	28	2.61	− 0.07	0.92	T.	14	8	10	13	nw.	U. S. Weather Bureau.
Dubuque	Dubuque	639	38	48.9	− 3.1	76	3	27	28	30	2.34	− 0.34	1.02	0.5	10	8	7	16	nw.	Do.
Earlham	Madison		9	50.3		80	3	19	28	36	2.52		1.08	T.	6	15	6	10	nw.	George Phillips.
Elkader	Clayton	727	32	49.2	− 0.2	77	17	21	27	40	4.34	+ 1.70	1.82	T.	10	15	5	11	nw.	Chas. Reinecke.
Elma	Howard		2	45.6		74	3	20	28	31	5.87		1.50	0.5	14	9	11	11	n.	H. A. Moore.
Estherville	Emmet	1,298	16	44.4	− 4.4	78	11	18	31	33	5.23	+ 3.06	2.95	0.5	14				nw.	A.O. Peterson.
Fairfield	Jefferson		27	50.7	− 1.7	83	3	29	22	30	2.38	− 0.54	1.08	T.	11	16	4	11	nw.	R. Monroe McKenzie.
Fayette	Fayette	1,003	21	46.5	− 0.2	75	3	17	28	35	4.77	+ 2.12	1.35	1.5	11	13	5	13	nw.	R. Z. Latimer.
Forest City	Winnebago	1,226	17	45.0	− 4.7	74	3	20	28†	33	3.47	+ 1.17	1.13	2.0	9	12	5	14	w.	J. A. Peters.
Fort Dodge	Webster	1,126	11	47.8	− 4.5	75	3	20	28	35	3.64	+ 0.55	1.20	0.5	12				n.	J. F. Monk.
Fort Madison	Lee	516	62								1.71	− 0.91	0.55	0	5	6	9	16	s.	Miss L. A. McCready.
Gilman	Marshall	1,052	12								5.75	+ 3.23	2.59	T.	11					J. L. Wylie.
Grand Meadow	Clayton	1,180	20	47.4	− 1.8	75	3	23	28	27	5.82	+ 3.35	1.42	2.0	14	9	10	12	nw.	F. L. Williams.
Grinnell	Poweshiek	1,023	19	50.2	− 0.5	79	3	25	27†	33	3.57	+ 1.10	1.06	T.	10	17	5	9	w.	D. W. Brainard.
Grundy Center	Grundy	976	20	48.6	− 3.2	77	3	21	28	27	4.55	+ 2.08	1.64	1.0	11	19	0	12	nw.	J. B. Calderwood.
Guthrie Center	Guthrie	1,077	16	49.2	− 3.2	76	3†	20	28	36	4.06	+ 1.79	2.61	T.	10	19	3	9	nw.	D. G. Beardsley.
Hampton	Franklin	1,155	21	47.7	− 3.1	76	3	22	31	32	4.19	+ 1.76	1.31	0.8	11				nw.	E. C. Grenelle.
Humboldt	Humboldt	1,095	23	47.8	− 2.2	76	3	18	28	33	3.20	+ 1.31	1.61	T.	11	17	1	13	nw.	Henry S. Wells.
Independence	Buchanan	921	47	47.9	− 1.3	77	3	20	28	31	3.38	+ 1.02	1.40	T.	12	14	7	10	nw.	R. E. Dudley.
Indianola	Warren	969	20	50.8	− 2.9	78	3	28	28†	30	1.82	− 0.28	0.64	T.	12	3	10	18	nw.	Prof. J. L. Tilton.
Iowa City	Johnson	683	51	48.6	− 2.5	82	3	22	28	32	2.78	0.00	1.02	T.	11	14	5	12	nw.	Prof. A. G. Smith.
Iowa Falls	Hardin	1,170	18	46.2	− 3.5	77	3	18	28	32	3.84	+ 1.69	1.22		11	16	1	14	nw.	J. B. Parmelee.
Jefferson	Greene		12	48.9		77	3	19	28	38	2.69	+ 0.47	0.88	T.	9	11	9	11	nw.	M. E. Hall.
Keokuk	Lee	547	40	52.4	− 2.1	86	3	31	22	30	2.19	− 0.30	1.13	T.	8	10	7	14	nw.	Weather Bureau.
Keosauqua	Van Buren	644	19	51.4	− 3.4	85	3	27	22	35	2.56	+ 0.72	1.25	T.	10	4	14	13		J. H. Landes.
Knoxville	Marion	920	16																	Casey & Bellville.
Lacona	Warren		12								2.54	− 0.17	0.92	0	12	6	20	5		J. B. Alter.
Le Claire	Scott	576	11								1.96	+ 0.07	0.62	T.	13					Miss M. T. Disney.
Marshalltown	Marshall	947	19	49.1	− 3.2	78	3	22	28†	35	7.03	+ 4.65	4.10	T.	14	11	5	15	nw.	Ralph B. Reasoner.
Mason City	Cerro Gordo	1,132	14	45.5	− 4.1	75	3	21	31	27	3.26	+ 1.14	0.99	1.8	10	14	7	10	nw.	J. S. Mills.
Monroe	Jasper										3.57		1.28	T.	6					J. A. Dibel.
Mount Pleasant	Henry	729	30	50.6	− 1.9	83	3	26	29	30	2.35	+ 0.47	1.07	T.	8	13	8	10	nw.	J. W. Edwards.
Muscatine	Muscatine		51								2.48	− 0.56	0.56	T.	11					William Molis.
New Hampton	Chickasaw	1,169	14	46.6	− 4.2	70	12	22	28	28	4.98	+ 2.72	1.32	T.	9	15	7	9	n.	A. F. Kemman.
Northwood	Worth	1,222	15	45.2c	− 4.5	74c	3	20c	28	29c	4.56	+ 1.96	0.90	1.0	11	16	5	10	sw.	Chas. H. Dwelle.
Olin	Jones	760	13	49.0	− 2.2	80	3	21	27	36	3.20	+ 0.79	1.78	T.	8	12	12	7	nw.	Dr. F. W. Port.
Osage	Mitchell	1,184	24	47.6	+ 0.2	75	3	24	31	28	4.55	+ 2.13	1.12	1.0	12	21	1	9	nw.	Lester Coonradt.
Oskaloosa	Mahaska	843	35	49.9	− 2.2	80	3	27	26†	27	1.88	− 0.32	0.85	T.	9	10	4	17	nw.	Joseph Boyd.
Ottumwa	Wapello	649	16	52.6	− 2.4	85	3	30	22†	30	3.38	+ 0.43	1.73	T.	9	11	14	6	ne.	Chester Potter.
Pella	Marion	877	9	50.9		80	3	24	28	37	2.17		0.92	T.	12	18	1	12	nw.	J. H. Ver Steeg.
Perry	Dallas	975	10	49.5	− 4.7	78	3	21	28	37	3.63	+ 1.08	2.28	T.	7	15	7	9	s.	Ed. S. Gray.
Plover	Pocahontas	1,426	15	45.6	− 5.0	72	3	18	28†	32	4.19	+ 1.67	2.00	4.0	5	22	0	9	nw.	J. S. Smith.
Pocahontas	do	1,248	7	46.6		73	3	20	28	31	4.59		1.68	1.5	8	18	4	9	s.	F. E. Hronek.
Ridgeway	Winneshiek	1,215	13	48.9	− 3.5	75	12	22	28	32	4.81	+ 1.64	1.02	0.4	14	11	10	10	s.	Arthur Betts.
Rockwell City	Calhoun		15	47.4	− 4.6	70	11	15	31	35	2.65	+ 0.24	1.25	2.0	6	17	2	12		C. M. Randall.
Sac City	Sac	1,278	35	47.6	− 2.4	72	3	20	31	31	2.82	+ 0.53	0.86		11	12	6	13	nw.	E. N. Baily.
St. Charles	Madison	1,070	10	51.0	− 4.5	78	3	26	28†	32	2.52	+ 0.11	1.10	T.	12	16	10	5	nw.	R. D. Minard.
Sigourney	Keokuk	877	15	50.8	− 3.5	82	3	24	28	29	2.34	− 0.22	1.18	T.	9	5	20	6	nw.	J. T. Parker.
Stockport	Van Buren	745	9	50.6		85	3	26	29	32	2.11	+ 0.11	0.88	T.	9	15	7	9	nw.	C. L. Beswick.
Storm Lake	Buena Vista	1,440	22	47.4	− 4.9	70	3†	20	31	27	2.08		0.74	T.	7	13	4	14	nw.	Prof. Warren Ingold.
Tipton	Cedar	807	12	51.7	− 1.2	81	3	29	29	28	1.99	− 0.03	0.92	0	8	19	4	8	sw.	F. K. Gregg.
Toledo	Tama	856	17	49.2	− 2.9	78	3	20	28	30	6.34	+ 4.30	3.63	T.	13	15	8	8	nw.	I. F. Giger.
Wapello	Louisa	588	13	51.7	− 2.7	80	3	31	29	25	1.68	− 0.19	0.50	T.	7	15	8	8	se.	G. W. Schofield.
Washington	Washington	769	29	51.2	− 1.0	84	3	27	29	30	1.33	− 0.71	0.45	0	7	11	14	6	nw.	Wm. A. Cook.
Waterloo	Black Hawk	862	28	48.8	− 1.4	78	3	21	28	33	5.49	+ 3.23	2.50		12	14	3	14	se.	Ralph B. Slippy.
Waukee	Dallas	1,039	8	49.5		78	3	24	28	30	3.08		0.96	T.	13	18	4	9	sw.	Samuel F. Foft.
Waverly	Bremer	948	15	47.8	− 4.2	78	3	20	28	32	6.13	+ 3.82	1.90		10	10	12	9	ne.	Earl C. Moore.
Webster City	Hamilton		6	48.0		78	3	17	28	36	2.70		0.65	1.8	7	12	6	13	nw.	C. D. Carpenter.
West Bend	Palo Alto	1,197	18	46.2	− 2.7	72	3	17	31	31	3.69	+ 1.85	1.72	2.0	11	13	7	11	nw.	Phil. Dorweiler.
Whitten	Hardin	1,036	14	47.0	− 4.6	74	3	20	28	29	4.11	+ 1.79	1.24	T.	8	10	9	12	nw.	Dr. F. P. Butler.
Winterset	Madison	1,129	20	50.4	− 2.9	78	3	24	28	29	2.82	+ 0.58	1.29	T.	12	8	8	15	nw.	Dr. Robt. S. Cooper.
Missouri.																				
Gorin	Scotland	700	25								1.99	− 0.20	1.13	0	8	5	7	19	nw.	J. W. Pulliam.
Hannibal	Marion	534	33	54.4	− 1.8	88	3	31	29	29	1.66	+ 0.02	1.02	T.	11	8	8	15	sw.	U. S. Weather Bureau.
Louisiana	Pike	500	34	55.4	− 0.6	88	3	28	22	33	3.44	+ 1.17	1.47	T.	6	17	8	6	n.	J. T. Farrel.
Mexico	Audrain	797	34	54.9	− 1.7	88	3	31	22	30	3.40	+ 1.18	1.31	T.	11	9	2	20	nw.	J. F. Llewellyn.
Steffenville	Lewis	576	19	55.5	− 1.6	88	3	30	22	33	3.17	+ 1.22	2.00	T.	9	12	6	13	ne.	Frank Hall.
Sublett	Adair	1,000																		Lewis Spriggs.
Vandalia	Audrain	776	1	56.4		89	3	30	22	34	3.38		2.23	0	3	4	4	23	ne.	C. B. Ellis.
Warrenton	Warren	865	22	55.0	− 0.5	88	3	32	22	34	3.50	+ 0.95	1.19	T.	14	5	8	18	n.	Prof. J. H. Frick.
Indiana.																				
Collegeville	Jasper		12	53.9	− 0.1	84	6	25	29	40	5.82	+ 3.85	0.91	0	13	7	15	9	ne.	Otto Miller.
Knox	Starke	716	6	52.4		79	6	26	29	28	5.17		0.59	0	15	10	13	8	s.	W. R. R. Tatman.
Laporte	Laporte	810	15	50.6	− 2.6	78	6	25	29	27	4.65	+ 2.29	0.86	0	18	11	8	12	n.	Wm. M. Walton, jr.
Plymouth	Marshall	790	8	51.2		75	6†	25	29	29	4.73		0.79	0	14	8	10	13	sw.	J. W. Siders.

TABLE 1.—*Climatological data for October, 1911. 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.
Illinois.																				
Aledo	Mercer	738	11	50.8	− 2.4	83	3	27	29	29	2.50	+ 0.54	0.65	0	12	14	8	9	ne.	William B. Frew.
Alexander	Morgan	670	18	54.8	− 1.0	86	3	29	29	35	2.03	+ 0.18	0.85	0	11	11	7	13	n.	George H. Hall.
Antioch	Lake	861	10	49.0	− 2.2	73	3†	23	28	25	4.16	+ 2.37	2.00	T.	8	7	7	17	ne.	J. C. James.
Astoria	Fulton	650	12	52.6	− 0.8	86	3	29	24†	31	2.66	+ 0.77	1.62	T.	7	11	8	12	nw.	Edward V. Bohl.
Aurora	Kane	687	32	50.6	− 1.4	80	3	25	24	30	3.64	+ 1.11	0.90	T.	9	8	8	15	sw.	W. Holden.
Bement	Piatt	700	4	55.1	.....	86	3†	28	29	41	2.76	.....	0.62	0	12	16	6	9	n.	Rev. C. S. Adams.
Bloomington	McLean	840	20	53.5	− 2.1	85	3	26	29	33	2.58	+ 0.95	1.12	T.	12	12	4	15	se.	Prof. H. N. Pearce.
Cairo	Alexander	359	33	60.3	+ 1.2	89	3	37	21	24	1.08	− 1.55	0.39	0	7	9	5	17	n.	U. S. Weather Bureau.
Carbondale	Jackson	412	6	60.2	.....	90	3	32	24	34	3.69	.....	1.40	0	9	12	7	12	sw.	State Normal University.
Carlinville	Macoupin	663	21	56.3	− 0.1	89	3	32	29	33	3.49	+ 1.07	1.10	T.	9	19	8	4	ne.	W. T. Eddy.
Carlyle	Clinton	470	26	.....	.....	.....	.....	.....	.....	.....	2.59	+ 0.35	0.68	T.	9	.....	.....	.....	.....	J. E. Rogan.
Chester	Randolph	380	5	.....	.....	.....	.....	.....	.....	.....	4.38	.....	1.46	0	12	.....	.....	.....	.....	F. A. Gollon.
Clinton	Dewitt	727	1	53.5	.....	85	3	28	24	29	3.04	.....	1.10	0	12	10	10	11	sw.	J. Frank Ziegler.
Coatsburg	Adams	763	19	53.0	+ 0.3	85	3	30	29	28	1.95	− 0.39	1.14	0	6	4	9	18	s.	Dr. J. R. Lambert.
Cobden	Union	656	28	60.6	+ 0.3	91	3†	32	23	35	2.11	− 1.29	0.68	0	5	13	3	15	s.	John Buck.
Dakota	Stephenson	929	6	48.8	.....	78	3	23	28	28	3.52	.....	2.50	T.	9	10	9	12	se.	Rev. G. W. Kerstetter.
Decatur	Macon	685	20	54.2	− 1.3	86	3	28	29	36	2.59	+ 0.52	0.70	0	10	18	7	6	ne.	Prof. J. H. Coonradt.
Dixon	Lee	725	21	49.4	− 2.2	75	3†	26	24†	34	2.08	+ 0.17	0.50	T.	11	14	9	8	.....	H. U. Bardwell.
Du Quoin	Perry	459	23	59.6	+ 1.5	90	3†	31	24	38	3.02	+ 0.84	1.05	0	8	12	10	9	sw.	G. H. Knetzger.
Dwight	Livingston	600	18	52.4	− 0.2	83	3	27	24†	31	4.30	+ 2.49	0.75	T.	14	8	6	17	ne.	Edward O. Welch.
East St. Louis	St. Clair	418	.....	.....	.....	.....	.....	.....	.....	.....	2.99	.....	1.20	0	10	.....	.....	.....	.....	W. McK. Brown.
Edwardsville	Madison	554	12	.....	.....	.....	.....	.....	.....	.....	2.80	+ 0.36	0.92	T.	7	.....	.....	.....	.....	W. H. Morgan.
Elgin	Kane	716	4	51.6	.....	81	3	27	24	31	2.55	.....	0.49	0	15	4	11	16	nw.	Elgin Observatory.
Galva	Henry	842	19	51.4	− 1.6	84	3	28	27†	33	2.05	+ 0.16	0.48	T.	12	13	5	13	s.	Prof. F. U. White.
Grafton	Jersey	422	18	.....	.....	.....	.....	.....	.....	.....	3.10	+ 0.59	0.86	0	9	.....	.....	.....	.....	R. C. Goodrich.
Greenville	Bond	635	33	56.2	− 0.3	85	3†	36	23†	26	5.59	+ 2.75	2.00	T.	10	8	9	14	sw.	M. S. Oudyn.
Griggsville	Pike	650	26	55.4	− 0.5	87	3	32	24	34	3.00	+ 0.74	1.75	0	5	12	4	15	ne.	George F. Kneeland.
Havana	Mason	475	19	55.6	− 1.3	87	3	29	29	35	2.07	+ 0.01	1.30	0	6	7	18	6	se.	F. and C. Borgelt.
Henry	Marshall	500	23	52.4	− 0.3	84	3	26	29	31	2.24	+ 0.25	0.74	T.	10	12	9	10	n.	Dr. F. A. Powell.
Hillsboro	Montgomery	675	17	56.6	− 0.8	88	3†	33	24	32	4.08	+ 1.14	1.32	T.	10	13	3	15	s.	Ira L. Woodward.
Joliet	Will	541	20	50.0	− 2.1	80	6	26	24†	29	4.18	+ 2.21	1.04	T.	12	11	10	10	sw.	F. M. Muhlig.
Kishwaukee	Winnebago	730	23	49.6	− 1.6	82	3	24	28	32	2.39	− 0.18	0.82	0.1	10	9	11	11	se.	George Stevens.
La Grange	Cook	657	19	50.8	− 1.1	79	3	27	28	30	3.70	+ 2.11	0.65	T.	15	7	13	11	w.	Prof. F. E. Sanford.
La Harpe	Hancock	698	32	52.4	− 2.0	87	3	25	29	34	2.06	− 0.38	0.73	T.	6	14	10	7	nw.	George E. Campbell.
Lanark	Carroll	883	22	48.6	− 1.6	80	3	19	28	42	1.45	− 0.55	0.43	0.3	13	14	5	12	nw.	M. N. Wertz.
La Salle	La Salle	536	33	51.8	− 0.1	85	3	30	27	31	2.40	− 0.18	0.54	T.	12	6	12	13	w.	U. S. Weather Bureau.
Lincoln	Logan	482	23	53.2	− 1.6	83	3	25	29	30	2.49	+ 0.63	1.08	0	7	11	12	8	n.	Prof. C. S. Oglevee.
Loami	Sangamon	624	11	.....	.....	.....	.....	.....	.....	.....	1.92	− 0.02	0.67	0	6	11	0	20	sw.	H. C. Foster.
Manteno	Kankakee	711	.....	.....	.....	.....	.....	.....	.....	.....	3.40	.....	0.64	0	15	16	6	9	n.	J. F. Schmeltzer.
Martinton	Iroquois	633	24	52.0	− 0.6	83	3	25	29	35	2.99	+ 0.81	0.75	0	12	8	13	10	nw.	Joseph H. Peltier.
Mascoutah	St. Clair	425	21	58.2	+ 1.3	92	6	29	24	38	3.51	+ 0.85	1.20	T.	12	12	7	12	se.	George Henrich.
Minonk	Woodford	745	18	53.4	− 0.7	82	6	25	29	35	3.75	+ 2.14	1.04	T.	14	10	5	16	nw.	M. H. Pfaffle.
Monmouth	Warren	784	19	51.2	− 2.4	86	3	28	24	33	2.38	+ 0.52	1.10	0	11	17	1	13	.....	Dr. J. C. Hutchison.
Morrison	Whiteside	685	17	50.6	− 2.2	81	3	24	28	31	2.20	+ 0.30	0.50	0.1	11	10	11	10	ne.	S. A. Maxwell.
Morrisonville	Christian	638	12	54.0	− 2.3	87	3	29	29	33	2.32	0.00	0.78	0	10	14	7	10	s.	J. D. Lowis.
Mount Vernon	Jefferson	511	17	56.8	− 1.2	89	3†	30	24	39	2.62	+ 0.21	1.05	0	6	9	7	15	n.	Theodore P. Stelle.
Oregon	Ogle	702	2	50.2	.....	83	3	26	27†	32	2.58	.....	0.89	T.	11	6	6	19	n.	Samuel Ray.
Ottawa	La Salle	500	25	53.4	+ 0.3	84[c]	3	27	29	31[c]	2.61	+ 0.67	0.61	T.	14	11	2	18	sw.	Miss Maude M. Harris.
Pana	Christian	692	25	55.2	− 0.1	85	3†	34	23†	28	2.61	+ 0.20	0.90	0	9	7	14	10	s.	C. W. Sibley.
Peoria	Peoria	609	33	51.3	− 0.6	86	3	25	29	31	2.65	+ 0.08	1.49	T.	11	5	11	15	n.	U. S. Weather Bureau.
Pontiac	Livingston	546	9	53.4	.....	85	3	30	24†	32	2.68	.....	0.72	T.	13	8	9	14	w.	George Butterworth.
Quincy	Adams	481	.....	55.0	.....	86	3	33	22	30	1.76	.....	0.70	T.	8	14	0	17	nw.	Fred J. Brinkoetter.
Riley	McHenry	956	52	49.6	+ 0.8	79	3	25	28	29	2.16	− 0.04	1.10	T.	12	7	7	17	nw.	John West James.
Roberts	Ford	774	.....	.....	.....	.....	.....	.....	.....	.....	3.75	.....	0.87	T.	12	15	7	9	sw.	R. E. Bradbury.
Rockford	Winnebago	763	19	49.9	− 0.5	77	3	26	28	27	2.86	+ 0.17	0.93	.....	12	21	0	10	.....	Hosmer C. Porter.
Rushville	Schuyler	670	20	55.2[d]	+ 0.3	86[e]	3	27	24	29[e]	2.18	+ 0.52	1.46	0	6	11	5	15	n.	H. F. Dyson.
St. Charles	Kane	700	16	50.4	− 1.6	81	3	24	24	32	2.81	+ 0.89	0.65	T.	14	7	16	8	ne.	Dr. William H. Bishop.
St. Peter	Fayette	500	10	57.8	− 0.4	88	6	32	24	34	4.40	+ 1.31	1.65	T.	9	11	8	12	nw.	M. L. Lansford.
Sparta	Randolph	538	25	57.8	+ 0.4	89	3†	33	24	34	3.71	+ 1.23	0.97	0	9	13	7	11	nw.	James A. Caldwell.
Springfield	Sangamon	644	33	54.4	− 0.2	86	3	34	27	27	2.00	− 0.60	0.60	0	8	5	14	12	s.	U. S. Weather Bureau.
Streator	La Salle	626	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss Lora Sweetser.
Sullivan	Moultrie	530	11	54.8	− 1.3	87	3	29	29	36	3.42	+ 0.96	0.73	0	12	11	11	9	nw.	C. A. Corbin.
Sycamore	De Kalb	855	31	48.6	− 1.6	82	3	24	24†	38	2.91	+ 0.36	0.50	0	13	13	4	14	nw.	Miss Edna J. Davis.
Tiskilwa	Bureau	798	27	.....	.....	.....	.....	.....	.....	.....	1.71	− 0.22	0.53	T.	7	.....	.....	.....	.....	F. I. Smucker.
Walnut	do	717	20	51.0	− 3.4	82	3	27	27	29	2.90	+ 1.26	0.68	T.	12	10	9	12	nw.	O. C. Nussle.
Warsaw	Hancock	501	13	.....	.....	.....	.....	.....	.....	.....	2.17	− 0.63	1.22	0	4	.....	.....	.....	.....	W. R. Kirkbride.
White Hall	Greene	573	3	54.8	.....	87	3	29	29	36	2.51	.....	1.12	T.	8	10	6	15	w.	Dr. R. A. Pritchett.
Windsor	Shelby	681	12	55.9	+ 2.3	88	3	27	29	35	3.78	+ 1.66	0.81	0	10	11	9	11	sw.	Herbert Rose.
Winnebago	Winnebago	900	24	49.4	− 1.8	80	3	23	28	30	3.32	+ 1.12	0.85	0.5	12	11	10	10	sw.	Frank Osborn.
Yorkville	Kendall	584	24	49.6	− 0.6	81	3	25	24†	31	4.04	+ 1.70	0.70	T.	15	9	5	17	w.	Herman A. Grimwood.
Zion	Carroll	938	17	48.3	− 3.0	80	3	20	28	31	2.21	+ 0.26	1.64	T.	6	16	5	10	w.	Robert F. Gillogly.

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

TABLE 2.—*Daily precipitation for October, 1911. District No. 5, North Dakota.*

Stations.	Watershed.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
North Dakota.																																	
Amenia	Red			.30	.08		.35							.60							T.	T.											1.33
Ashley	Missouri																																
Bottineau	Mouse			1.32	.72			.02						.15			.01			.08	.05		.13										2.48
Cando	Sheyenne																																
Crosby	Mouse		*	1.52															.04	T.	T.	.11		.07									1.74
Devils Lake	Sheyenne	.01	.04	.39		.28							.51	.31			T.			.04	.05	.01	T.			T.						.01	1.65
Donnybrook	Mouse		*	1.01									.74						T.		.09	.17				T.						.02	2.03
Dunseith	do																																
Edmore	Sheyenne			.06	T.	.05	.02						T.	T.							T.	T.	T.									T.	0.13
Fessenden	James																																
Forman	Sheyenne			.25		.27	.15						.09	.25						T.													1.01
Grafton	Red	.08		.27	.30		.32							.42	.07								.15										1.61
Granville	Mouse			.91										.21						.07	.22	.04											1.45
Hannah	Pembina			T.	1.56								.34							.09	.03		.06		T.	T.						T.	2.08
Hansboro	Red			1.27		.01							.20	.10						.03	.07		.04									T.	1.72
Hillsboro	do			.29		.03	.26						.05	.52						.05	.09		.06									T.	1.35
Lakota	Sheyenne		T.	.50	T.	1.00	.10						.10	.40	T.					.03	.04		.02			T.						T.	2.19
Langdon	Pembina																																
Larimore	Red																																
Lisbon	Sheyenne			.17			.37							.32	.05							.07											0.98
McKinney	Mouse			.71									.78							T.		.25										T.	1.74
Manfred	Sheyenne	T.	T.	.29		.40	.08						.03	.42	.03					T.	.08											T.	1.33
Mayville	Red		.31			.40	.09						.03	.30						.30	.30												1.73
Minot	Mouse		T	.55	.08									.24						.03	.15	T.	.09										1.14
Minto	Red			.60		.85								.61								.17				T.						T.	2.23
Oriska	Sheyenne																																
Park River	Red		.48		.03	.19	.12						.04	.60						.02	.04												1.52
Pembina	do	T.		.38	.68		T.								.02	.04				.01	.02		.04										1.19
Power	Sheyenne		.23			.28							.17	.04						T.			T.										0.72
Pratt	Mouse																																
Towner	do		T.	.63										.13						.10	T.		.07		T.							T.	0.93
University	Red			.32	.04	.43	.10						*	.60						.01	.02		.08			T.						T.	1.60
Wahpeton	do																																
Walhalla	Pembina			.89		.01												.18		.05	.09			.08									1.30
Westhope	Mouse		.17	1.79																.10		.16			T.							T.	2.22
Willow City	do		.11	.97									T.	.17						T.	.24	.07										T.	1.56
Minnesota.																																	
Albert Lea	Mississippi		.20	1.50		1.50	.90							.05	.15	.80	.90		.20				T.				.05						6.25
Alexandria ‖ ‖	do	.32		.20	.06	T.	.84	T.						.51	.25	T.	.45	.80		.05	.05		.05	.05									3.63
Angus	Red			.47	.03	.37								.27						.05	.04		.12			T.							1.35
Bagley	do			.43	.05									.61					.12			T.	.24										1.45
Beardsley	Minnesota																																
Beaulieu ‖ ‖	Red			.40	.10		.09							.30	.08	T.			.10	.03		T.	T.										1.10
Bemidji ‖ ‖	Mississippi			.18	.15		.10							.37	.02			.01				.08	.12										1.03
Bird Island	Minnesota	.06	.02	1.16		1.06	1.43						.10	.17	.04	.13	1.43			.10			.03	.04		T.	T.						5.77
Caledonia ‖ ‖	Mississippi	.77		.82	.06		1.09	.09							.82	.03	1.16	.76	.06	.03				T.	T.	.18							5.87
Campbell ‖ ‖	Red	.16		.36	.02		.38						.30	.20	.06		.02	T.		.04	.20	T.	.26	.15									2.15
Cass Lake ‖ ‖	Mississippi				.54									.50			.20											T.					1.24
Collegeville	do	.02		.31		.42	.72							.21	.66	.08	.59					.02	.08		.07								3.18
Crookston ‖ ‖	Red			.07	.28		.08							.35	.02				.03		.06		.12										1.01
Detroit ‖ ‖	do	T.	T.	.15	.18	T.	.15							T.	.24		T.			T.	T.	T.	T.			T.							0.72
Ely	Rainy			.08	.04	T.								.08		T.	.41	T.		T.	T.			T.									0.61
Fairmont (near)	Minnesota	.06		.26		1.86	.78	.15					.25	.08			.21	.32	.16	T.			.05		*	.15	.16					T.	4.49
Faribault	Mississippi																																
Farmington	do	.10	T.	1.46		1.42	2.94							T.	.28	.18	1.42	.38	.05		T.	T.	.05	.04	.21	.22	T.						8.75
Fergus Falls	Red			.41	.02	.25	.15						.09	.11			.02			.04	.01	T.	.08	T.									1.18
Fort Ripley ‖ ‖	Mississippi	.09		.18			.98							.30	.75		.15	.45					T.	.16									3.06
Fosston	Red			.24		.14								.53			.01		.11	.05	T.		.20										1.28
Fram	do																																
Glencoe	Mississippi			1.75		4.00								.45	.50		.90						T.										7.60
Grand Meadow	do	.43	.03	1.43		1.33	1.07	.05						.09	.24	1.21	1.74		.23			T.	T.	T.	.22	.12	.03						8.22
Gull Lake Dam	do			.25		.15	.54						.48		1.20		.65		T.	T.	.08	.02	.15										3.52
Hallock	Red			1.40	.17	T.															.05		.15										1.77
Halstad ‖ ‖	do			.15	.22		.30							.55					.09		.04		.15										1.50
Hinckley	St. Croix			.46				1.50							.09						.07		.26	T.									2.38
International Falls	Rainy			.50	.07									T.				.05			T.		T.							T.			0.62
Itasca State Park	Mississippi																																
Lake Crystal	Minnesota	.60		.32		1.60	1.56	.31						.40	.14	.64	.54	.10	.49		.06			.04	.07		T.						6.87
Leech Lake Dam	Mississippi			.12										.52		.03	.20				.02		.13	.14									1.25
Littlefork	Rainy			.25	.04																												0.29
Long Prairie	Mississippi								1.10					.90			.97																2.97
Lynd	Minnesota	.07		.76			3.74						.60	.01			1.60		T.	.11	T.		.04										6.93
Mankato ‖ ‖	do	.44	.11	.51			3.46	.18							.14		1.90	.14	.45		.07		T.			.20							7.60
Milaca	Mississippi																																
Milan	Minnesota	.01	T.	.33		1.04	.44						.90	.08		*	1.00			.10					.25								4.15
Minneapolis	Mississippi			1.52		2.31	.57						T.	.59	.10	.39	.81	T.	0.1			.03	.03	.06	T.							T.	6.42
Montevideo	Minnesota	.34		.69			1.11	.04						.40	.06		1.00	.24					T.	.05		.06							3.99
Moorhead	Red			.39		.17							.16	.17						.04	.01		.08										1.02
Mora	St. Croix	.05		.47	.03	.15	1.00							.10	.04		.56				.05	.01	.05	.11	.03								2.65
Morris	Minnesota			.23		.80	.25						.40	.06		.10	.70			.06			.10		.02								2.72
New London	Mississippi	T.	T.		.42	.61	.42									1.50	T.							T.	.42	T.							3.37
New Richland	Minnesota	.26	.77			2.00	.42						.19		.04	T.	2.24	.65	.41	.46			.02		.20	.36	.09						8.11
New Ulm ‖ ‖	do	.38	.07	1.25	.03		3.80	.23						.35	.15		1.48	.20	.30	.02			T.	T.		.45	T.	T.					8.71
Osakis	Mississippi			.27		.48	.48						T.	.64	.02	T.	1.40			T.			.10		T.								3.39
Park Rapids ‖ ‖	do	.09		.15	.08	T.	.25							.20	.20	.01		.15	T.		.01	T.		.14			T.						1.28
Pine River Dam	do			.12		T.	.45							.44			.53			T.	.08		.16										1.78
Pokegama Falls	do			.15	T.		.09							.19	T.		.20	T.	T.	T.	.14		.05	.09									0.91
Redlake	Red													.65									.36										1.01
Red Wing ‖ ‖	Mississippi	.42	T.	1.16	.28		3.30	.18						.04	.08		.88	2.40	.06	.04		.02	T.	.10	.02	.62		T.					9.60
Redwood Falls	Minnesota	.06		1.15		1.35	2.92						.27	.14	.04	.10	1.46		.01	T.		T.	.03										7.53
Reeds Landing ‖ ‖	Mississippi	.30	.14	.63	.30		3.40	.10							.40		1.35	1.12	.30	.04				.13		.48							8.69
Rochester ‖ ‖	do	.75	.11	.67	.54		2.85	.11						T.	.44	T.	2.35	.27	.49					.05		.48							9.11
Roseau	do																																
St. Charles	do	.77	.06	.71		.88	2.16							.10	.28	.27	1.74		.46					.06	.22	.18							7.89
St. Cloud	do	.03		.96		.40	1.08							.26	.99	T.	.85			.07			.07	.03	.07	.06							4.87
St. Paul	do			1.69		2.64	.98						.05	.28	.09	.51	1.13		.06		T.	.01	.05	.02	.04							T.	7.55
St. Peter	Minnesota	.18		.70		2.00	1.11							.10	.10	1.13	.68		.31				T.		.32	.10	T.						6.73
Sandstone	St. Croix																																
Sandy Lake Dam	Mississippi			.14			.31								.17		.23			.03				.20									1.08
State Sanatorium	do			.13	.01		.16							.36		.01	.22	.02			.41		.01	.01	.02								1.36

TABLE 2.—*Daily precipitation for October, 1911. District No. 5*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
Minnesota—Con.																																	
Stillwater ‖	St. Croix	.30		1.36	.36		3.15								.06		1.18	.80						.10									7.33
Taylors Falls	do			1.30		2.40								.09	T.		1.54	.34						.18		.10							5.91
Thief River Falls	Red			.12		.13								.16									T.	.04									0.45
Warroad	Rainy			.70	.40								.15				T.						.13			T.							1.35
West Concord	Mississippi	T.		.65		1.20	1.90							.17	.40	.75	2.00	.10	.50				T.		T.	.40	T.						8.08
Winnebago ‖	Minnesota	.80	.05	.28			2.00	.15						.10	T.		.10	1.30	.40	T.		T.	T.	.06		T.	.21	.02					5.47
Winnibigoshish	Mississippi			.21			.09							.21	.02		.30			T.	.10		.12	.09									1.17
Winona	do	.62	.02	1.10		.82	1.26							.34	.10	.16	2.12	.15	.42	T.			T.	.07	.36	T.							7.54
Worthington ‖	Des Moines	1.00	.06	.13			2.60	.18						.15	.01		.71	.02	.18		.01			.06			T.	.15					5.24
Zumbrota	Mississippi	.35		1.45		1.00	2.55							.20	.25	.88	2.50		.64		T.		.01	.02	.17	.21	T.						10.26
South Dakota.																																	
Milbank ‖	Minnesota	.21		.35			1.27	.03						.53	.10		.63	.29			.09		T.	T.		.20							3.70
Wisconsin.																																	
Antigo	Wisconsin	.50		1.55	.03	T.	2.74								.45	T.	.70	T.	T.	.08			T.	T.	T.	.51						T.	6.56
Barron	Chippewa	.23		1.59		.65	2.55							T.	.25		1.00	.58	.16				T.	.10	T.	.15							7.26
Beloit	Rock		.15	.69			.25						.22		.77												.05				.19		2.32
Big St. Germain Dam.	Wisconsin	.07		.90	.03		2.02								.19		1.77	.65	.44	.07		T.		.04		.44							6.62
Brodhead	Rock	2.34		.67		T.	.18							T.	.98	.05	.29										T.				.18		4.69
Burnett	do	1.20	T.	1.33	.02	T.	.73	.01						T.	.48	.02	.45	.01	T.	.15				.07	T.	.06	.01				T.		4.54
Cottage Grove	do	.96	T.	1.35		.01	.08	T.			.04			.02	.58	.04	.40	.01		.01		T.	T.	.01		.01	.11				.03		3.66
Darlington	do	1.65		.70		.15	T.							.25	1.10	T.	.15										T.				T.	T.	4.00
Deerskin Dam	Wisconsin			.61	.07		1.87								.13		1.28	.45	.25	.15		T.		T.		.25					T.		5.06
Delavan	Rock			1.02		.03	.27							.44	.05	.02	.04						T.				.05				.14		2.06
Dodgeville	do																																
Downing	Chippewa		.40	1.24		.80	1.80							T.	.20	.10	1.80	.92	1.40	T.	T.	.06	T.	.12								T.	8.84
Eau Claire	do	.40		1.87		.62	3.27							.11	.77	.03	1.95	.26	.09		.04	T.	.05	.10	.38	.41							10.35
Grand Rapids ‖	Wisconsin	.63		.63	.91		1.80	.20							.87	.07	.78	.20	.12	.15				.05		.30							6.71
Grantsburg	St. Croix					T.	1.50							T.	T.		1.40			T.	.10		.10			.20							3.30
Hancock	Wisconsin	1.42	.05	1.11		T.	1.90							.30	1.10		.45		.15					.23	.18								6.89
Hatfield	Black			1.32	2.00										1.00	.08	2.02	.20	.09						.65								7.36
Hayward	St. Croix			.48	T.	T.	1.30							.10		.12	.97	.35	.05		.13	T.		.20	T.								3.70
Hillsboro	Wisconsin	T.	.10	1.17		*	1.20				T.			1.30		.65	.37		.04				.11	T.	.07		T.				T.		5.01
Koepenick	do	.50		1.50		1.00	1.60								.30		1.30		.20					.02		.03					.03		6.47
Lac du Flambeau	Chippewa	*		*	*	*	4.00									T.	1.68		.30			T.		T.	.10								6.08
La Crosse	Mississippi	.26		1.07		.42	1.30					T.		1.01	.01	1.03	.93	T.	.16				.03	.01	.13	.01						T.	6.39
Lake Mills	Rock	1.38	T.	1.78		.02	.12	T.			T.			.57	.54	T.	.97	.04	T.					T.	T.	.02	.12				.04	T.	5.10
Lancaster	Mississippi	.80		.37		.02	.22							.62	1.33	*	.43						.10				.13				.08		4.10
Long Lake	Wisconsin	.10		.83	.03		2.17								.39	.01	1.47	.39	.26	.06				.10		.25					T.		6.06
Madison	Rock	.49		1.11		.06	.10	T.						.15	.65	.03	.18	T.	.01				T.	T.	T.	.03	.07				.04	T.	2.92
Mather ‖	Wisconsin	.85	.09	1.06	.48		1.90	.15							.93	.05	1.23	.72	.32	.08				.08	T.	.38		T.					8.32
Mauston	do	1.40	.10	1.00				1.25							1.40	.20	.32		.10	.05				.10	.10								6.02
Meadow Valley	do	.73	.10	1.50	.02	.18	1.68	.04						.13	1.00	.21	1.96		.35	.07				.09	.36	.08							8.50
Medford	Black	.50		1.70		2.95									.20		2.50	.20		.17	.20			.28		.10							8.80
Merrill	Wisconsin	.45		1.60			3.00								.30		2.15	.23	.14	.05				.30		.55							8.77
Minocqua	do	.11		.90	.03		2.10							.06	.09	.01	1.60	.40	.40	.03	.10	.03		.12		.27							6.25
Mondovi	Mississippi	.36	T.	1.23	.01	.67	2.00		.01			.01		.10	.01	.06	1.76	.78	.16		.03		.02	.11	.23	.38							7.93
Mount Horeb	Rock	.50	T.	1.08	T.	.08	.25							.08	1.15	.07	.27								T.	.05	.11					T.	3.64
Muscoda ‖	Wisconsin	1.23		.65	.11		.21	.09							1.70	.50	.20	.10		.10			T.				T.	T.					4.89
Neillsville	Black	.53		1.25		3.12									.90		1.20	.10	.40					T.		.90							8.40
New Richmond	St. Croix	.22		1.16		.54	2.57							.10	.17	.22	1.84	.14	.17		T.	.04	T.										7.17
Osceola ‖	do	T.		1.80	T.		2.54							.19	T.		1.96		.03	T.	T.	T.		T.	.20								6.72
Park Falls	Chippewa	.08		.70	.06	1.75								.04	.03		.84	.64	.12			.02		.11		.07							4.46
Portage	Wisconsin	1.17	.07	1.22		.02	.95	.02						.05	.76	.06	.18	.17		.15				.03	.04	.03	T.						4.92
Port Edwards	do	.58		1.52		.04	1.90	.02						.10	.79	.27	.70		.19	.08				.12	.15	.10							6.56
Prairie du Chien ‖	Mississippi	1.68	.04	.62	.12		.24	.08							1.10	.34	.78	T.		T.				T.				T.					5.06
Prairie du Sac	Wisconsin	.80	.02	.85		.03	.34	T.						.20	.81		.10	T.		.10				T.	T.		.10						3.35
Prentice	Chippewa			1.23	T.	1.50	.72							.13	.10	.36	1.05		1.10		.08	T.		.29		.31							6.87
Rhinelander	Wisconsin	.25		1.25	.04		2.80								1.14	.03	1.82	.70	.22	.07	.03			.20		.32					T.		8.87
Shullsburg	Mississippi	1.33	.06	.49		.17	.18				.21			.04	1.41	.05		.25									.05				.43		4.67
Solon Springs	St. Croix			.50		1.10										T.	.70	.40			T.	.20	T.									T.	2.90
Spooner	do	.13		.65	T.	.45	.70							.07		1.23	.10	T.				T.	T.	.27									3.60
Stanley	Chippewa	.56		2.06		.10	4.07							.08	.35	T.	2.14	.47				T.		.19	T.								10.02
Stevens Point	Wisconsin	(*)		2.07			2.15							.77			.88		.25						.50								6.62
Sugar Camp Dam	do			1.00	.06		2.13								.23	.02	2.30		.35	.06	.02	.06	.04	.12		.24							6.63
Twin Lakes Dam	do			.60	2.00										.15		1.60	.10		.40	.25				.30								5.40
Valley Junction	do	1.31	.30	1.10		.19	2.00							.39	.92	1.80	.78							.12	.28								9.19
Viroqua	Mississippi	1.36	.04	1.47		.07	1.17	.01						.55	1.12	.22	1.59	.05	.03	.02				.07	.07								7.84
Vuedesare	Wisconsin	T.		.51	.20		1.52							T.	.20	T.	1.70	.30	.43		T.			.15	T.	.20	T.				T.		5.21
Watertown ‖	Rock		.40	1.25			.14	.11							.43	T.	T.	.14		T.				.07		.05		.05				.12	2.76
Waukesha	Fox	1.63		1.56			.18																T.	.03			.08				.10		3.58
Wausau	Wisconsin	.44	T.	1.65	T.		3.05					T.		T.	.45		1.98	.30	.11	.05				.20		.55							8.78
Weyerhaeuser	Chippewa			1.53		(*)	3.02								.21		1.15	.45	.19	T.				.31	T.	.22							7.08
Whitehall	Mississippi	.30	T.	.80		.70	3.10							.70		.10	2.40		.30					T.	.30	.40							9.30
Iowa.																																	
Albia ‖	Des Moines	1.67	.10		T.	T.	.18	.13	.01					.42	.13		.25	T.										.04			.22	.07	3.22
Algona	do	.11		.35		.60	.71	.15						T.			1.10	.01					T.		T.		.22						3.25
Alta ‖	Raccoon	1.28	.04	.21		.07	1.44	.10				T.	.20	.05				.18						.04			.10	.10					3.81
Amana	Iowa	1.17		T.		.37	.05	.12			.02		T.	.10	.02	T.	.08						.09				T.				.17		2.19
Ames	Skunk	1.54	T.	.49		.52	.51	.11					.01	T.		.29	.42						.03				.08				.10		4.10
Baxter	do	1.15	.03	.43		.34	.38	.08					T.		.40	.57	.88	.01					.02				.02				.24		4.55
Belle Plaine	Iowa	1.78	.03	.37		.53	.09	.10						.19	.08	.02	.30										.10						3.59
Belmond	do	.45		.28		.28	.50	.12					.73	T.	.02	.08	.53		T.				.06		T.		.14				T.		3.19
Bloomfield	Mississippi	1.42				.67	.01	.12						.58		.26	.07	.01									.22				.35		3.11
Bonaparte	Des Moines	.95	.04	.02		.05	.08							.53		.25							T.				.20				.34		2.46
Boone ‖	do																																
Britt	Iowa	.20		.47		.45	.64	.04	.02					.10	.04		.75	.03					T.	.09	.07		.14						3.04
Buckingham	Cedar	.10		.42		.40	.21							.50		.07	1.33										.05				.11		3.19
Burlington ‖	Mississippi	.70	.20		.12	T.	T.	.20						.20	.20	T.												.15			.15	.35	2.27
Carroll ‖	Raccoon	1.12	.71	.13		.08	.94	.08					.02	.05				1.35										.10					4.58
Cedar Rapids ‖	Cedar	2.26	.33	.26	T.		.41	.10			.14	T.		.04	.12	T.		T.		T.				.05				.02			T.	.15	3.88
Charles City	do	.10		.59		.25	.55						.08	.02	.01	.47	.61						.02		.03		.08						2.81
Clear Lake	do																																
Clinton	Mississippi	.50		.21		.20	.13							.17		.04							.07								.31		1.63
Columbus Junction	Iowa	.68	.06	.06		.28	.05	.18						.62		T.	T.							.08			.05				.52		2.58
Davenport	Mississippi	.56		T.		.25	.10	.09			.02			.18	T.		T.			.02			.02				T.				.33		1.57

TABLE 2.—*Daily precipitation for October, 1911. District No. 5*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
Iowa—Continued.																																	
Decorah	Mississippi	1.08	T.	.86		.09	.45	T.						.35	.72	.66	1.21	.02	T.	T.					.22			.06					5.72
Delaware	do	1.94	.08	.55		.39	.13							1.03	.78	.08	.13						.04				.09				.19		5.43
Des Moines	Des Moines	.14	.01	.36		.17	.24	.01					.03	.44	.01	.82	.10						.03				T.			.02	.23		2.61
Dubuque	Mississippi	.33		.48		.09	.02	T.						.54	.48	.07	.15		T.				T.		T.		.05				.13		2.34
Earlham	Raccoon	1.08		.48		.14	.20	T.					T.	.18		T.	T.						T.				T.				.44		2.52
Elkader	Mississippi		.03	1.12		.35									1.82	.35				.47			.05		.04		.05				.06		4.34
Elma	Wapsipinicon.	.55	.05	.45		.28	.55	.05						.18	1.45	.50	1.50		T.	T.			.05	T.	.08	.08	.10						5.87
Estherville ‖ ‖	Des Moines	.95		.25	.05	.03	2.95	.15						.10			.10	.20	.05					.10	.05		.05	.20					5.23
Fairfield	Skunk	1.08	.02			.11	.04	.09						.28	.03	.10	.02						T.				.14				.47	T.	2.38
Fayette	Mississippi	.83	.04	.51		.10	.45							1.10	.22	.65	.70		T.					.05	T.		.12				T.		4.77
Forest City ‖ ‖	Cedar			.75	.08		1.13	.13					.05	T.			.53	.40							.05		T.	.35					3.47
Fort Dodge ‖ ‖	Des Moines	1.20		.32		.05	.70	.10	.05					.03			.03	.85						.05				.11			.15		3.64
Fort Madison	Mississippi	.55	T.				T.	.17						.54		.10	T.			T.			T.				.35						1.71
Gilman	Iowa	2.59	.63	.31	T.	.40	.13	.18								.13	.98						.05	T.	T.			.03			.32		5.75
Grand Meadow	Mississippi	1.42	.05	1.30		.02	.27	.62						.11	1.25	.37	.72	.08	T.				.08		.03		.10						5.82
Grinnell	Iowa	1.06	.05	.40		.45	.10	T.						T.	.13	T.	1.06						.10				.02				.20		3.57
Grundy Center	Cedar	1.64	.03	.28		.45	.22							.20	.20	.40	1.00	.03					T.										4.55
Guthrie Center	Raccoon	2.61	.02	.10		.36	.49	.05					.16			T.	.05						T.				.02				.20		4.06
Hampton	Cedar	.06	.95			.40	.37						.62	.20		.26	1.17						.07		T.		.09						4.19
Humboldt	Des Moines	.32		.27		.40	.37	.05						.04			1.40	.21				.02					.10				.02		3.20
Independence	Wapsipinicon.	1.40	.08	.45		.27	.15				.01			.35	.12	.25				.02			.01				T.				.27		3.38
Indianola	Des Moines	.22	.02	.17		.16	.04	.07					.04		.04	.23	.41						.04				T.				.38		1.82
Iowa City ‖ ‖	Iowa	1.02	.30	.02	T.		.50	.30	T.					.30	.10	T.								.04				.02			.05	.13	2.78
Iowa Falls ‖ ‖	do	1.22	.04	.45	.20		.55	.07						.08	.07		.90	.12	T.	T.				T.	T.			.14				T.	3.84
Jefferson	Raccoon	.88		.31		.49	.39	.05					.16				.23											.17			.01		2.69
Keokuk	Mississippi	1.13		.24		T.	.03	.02						.16		.23				T.			T.				.06				.32		2.19
Keosauqua ‖ ‖	Des Moines	1.25	.04	T.		T.	.04	.06	T.		T.			.20	T.	.20	.01							T.				.20			.30	.26	2.56
Knoxville	do																																
Lacona	do	.81	.01	.02		.15	.02							.10	.03	.08	.92			.05							.05				.30		2.54
LeClaire ‖ ‖	Mississippi	.33	.02	T.	.01		.20	.14							.18	.02		.01		.01				.01				.02			.10	.31	1.96
Marshalltown ‖ ‖	Iowa	4.10	.14	.19	.34	.02	.61	.19	.01					T.			.93	.08	T.					.09				.06			.05	.22	7.03
Mason City	Cedar	.53		.35		.35	.52	.06						.12		.09	.99						.07				.18						3.26
Monroe	Des Moines	1.28	.09	.18										.47		1.27											T.				.28		3.57
Mount Pleasant	Skunk	.85		T.		.05	T.							1.07		.06	T.							T.			.05	.09			.17	.01	2.35
Muscatine ‖ ‖	Mississippi	.50	.15		.11		.47	.15						.10	.42		.02			T.				.04				T.			.20	.25	2.48
New Hampton	Wapsipinicon.	1.32	.02	.82		.22	.30							T.	.30	.60	1.28						T.		.12		T.						4.98
Northwood	Cedar	.20	T.	.70		.88	.66							T.	.14	.90	.80	.08	T.				.03		.04		.13						4.56
Olin	Wapsipinicon.	1.78	.42	.12		.31	.07				.10			.22	T.											T.				.18			3.20
Osage	Cedar	.65	.05	.69		.31	.60							.09	.53	.17	1.12					.14			.10		.10						4.55
Oskaloosa	Des Moines	.85	T.			.10	.05	.04					.19			T.	.31		.04				T.				.04				.26		1.88
Ottumwa	do	1.73		T.		.13	T.	.09						.77	.28	.06		.04									.07				.21		3.38
Pella	do	.92	.03	.04		.17	.05	.05					T.	.08	.09	T.	.51		T.				.04				.01				.18		2.17
Perry	Raccoon	2.28		.15		.45	.33						.15			T.	T.						.05				T.				.22		3.63
Plover	Des Moines			.20			1.30	.29					T.				2.00										.40						4.19
Pocahontas	do	.10		1.61		.40	.61						.02				1.68						.02				.15						4.59
Ridgeway	Mississippi	.05		.81		.20	.71						.10	.14	.77	1.02	.65		T.			.04	.06		.17	.03	.06						4.81
Rockwell City	Raccoon	.35		.30		.55							T.				1.25							T.			.10					.10	2.65
Sac City	do	.11	.04	.28		.56	.63	.05					.02	.03			.80	.07									.17						2.82
St. Charles	Des Moines	1.10	.04	.02		.18	.02	.07					.23		.05	.02	.47						.02				T.				.30		2.52
Sigourney	Skunk	1.18		.06		.09	T.	.09			T.			.25		.02	.33			T.			T				.10				.22		2.34
Stockport	do	.88	.06	T.		.04	T.	.10		T.				.45		.06	T.	T.					T.				.10	.08			.34		2.11
Storm Lake	Raccoon	.02	.02	.27		.70	.74						.27				T.						.06				T.						2.08
Tipton	Cedar	.92			.34	.16	.09							.16										.06							.23	.03	1.99
Toledo	Iowa	3.63	.18	.25		.38	.30	.13					T.	.15	.10	.10	.73	.03					.06				T.				.30		6.34
Wapello	do	T.	.12			.38		.20						.50		.06								.01			T.				.41		1.68
Washington	Skunk	.25		.02		.18	.04	.08						.45									T.								.31		1.33
Waterloo ‖ ‖	Cedar	1.17	.08	.12	.12		.40	.05						.12	.70		.55	2.05										.01				.12	5.49
Waukee	Raccoon	.96	.02	.53		.20	.11	.04					.23	.41	.04	.05	.18						.02				T.				.29		3.08
Waverly	Cedar			.55		.23	.37						.25			.81	1.90						.12		.90		.60				.40		6.13
Webster City	Des Moines	.65	T.	.75		.40	.24	T.	T.						.43	T.	T.	.05					T.		T.		.18				T.		2.70
West Bend	do	.03		.33		.65	.64						T.		.10		1.72						.04		.02		.16						3.69
Whitten	Iowa	1.24	.07	.38		.44	.37							T.	.32	.29	1.00						T.		T.		T.				T.		4.11
Winterset	Des Moines	1.29	.06	.36		.16	.11	.10					.14	.10	.01	.05	.04						T.				T.				.40		2.82
Missouri.																																	
Gorin	Mississippi	1.13		.03		.02		.08						.17		.07											.17				.32		1.99
Hannibal	do	1.01	.01	.04		.02	T.	.03						.10		.10		T.									.02	.01		.13	.19		1.60
Louisiana	do	1.15	1.47		.12	T.								.10		.10															.50		3.44
Mexico ‖	do	1.31	.62	.10	.58		.16	.16	.04					T.		.01												.01			.35	.06	3.40
Steffenville	do	2.00	.05	.20		.02								.27		.25											T.	T.	.10		.25	.03	3.17
Sublett	do																																
Vandalia	do		2.23		.65																										.50		3.38
Warrenton ‖	do	1.19	.71	.05	.47		.01	.22	.03						.01	.09							.35					.09	.02		.22	.04	3.50
Indiana.																																	
Collegeville	Iroquois	.91	.12	.23		.09	.67								.86		.42	.23			.15	.81	.79				T.				.28	.26	5.82
Knox	Kankakee	.68	.39	.05	.08	T.	.04	.10							.57	.66	T.	.43			.09	.78	.81					.10			.13	.26	5.17
Laporte	do	.55	.42	.13	.18	.01	.10	.04							.40	.10	.42	.10			.08	.48	.86	.02				.10			.06	.60	4.65
Plymouth	do	.65	.36	.03	.04	T.	.27			T.					.79	T.	.17	.68			.13	.47	.59	T.				.08			.11	.36	4.73
Illinois.																																	
Aledo	Mississippi	.65	.07	.64		.27	.03	.15						.14	.01	.08							T.				T.	.07			.33	.06	2.50
Alexander	Illinois	.85	.01	.01	.33	T.	.09	.03						T.	T.		.03				T.	.28	.04					T.			.34	.02	2.03
Antioch	do	2.00		.85			.30								.20		.20					.09	.10				T.				.42		4.16
Astoria	do	1.62	.07	.60		T.		T.						T.	T.		T.	T.		T.	T.	.01	T.				T.	.08			.25	.03	2.66
Aurora	do	.36	.44	T.	.17	T.	T.								.90		.66			T.	.04		.52					T.			.35	.20	3.64
Beardstown ‖	do	.50	.30	.04	.14		T.	.06	.03						.04		T.		T.				.09					.07			.18	.15	1.60
Bement	Mississippi	.27	.47		.22		.01	.07									.11	.26			.08	.62	.37								.27	.01	2.76
Bloomington	Illinois	1.12	.15	.03	.05	.03		.10									.08				T.	.50	.13				T.	.05			.33	.01	2.58
Cairo	Mississippi	T.	T.		.27		T.	.39	T.	.06							.17					.12	.01								.06		1.08
Carbondale	do	.78			.26			1.40	.02	.02						.10	T.					.33	.38								.40		3.69
Carlinville	Illinois	.99	1.10	.06	.23	T.	.03	.04													T.	.68	.13					T.			.23		3.49
Carlyle	Mississippi	.68	.03		.25			.45													.20	.60	.20					.05			.13		2.59
Chester ‖	do	.02	1.46	.02	.44			.86	.04				T.			.02		T.				.14	1.12		.02				T.		.06	.18	4.38
Clinton	Illinois	1.10	.15		.25	T.	.06	.12							T.		.20				.02	.53	.25					.02			.31	.03	3.04

TABLE 2.—*Daily precipitation for October, 1911. District No. 5*—Continued.

Stations.	Watershed.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Illinois—Continued.																																	
Coatsburg	Mississippi	1.14	.04		.16		.08	T.						.08													T.				.45		1.95
Cobden	do	.68			.62			.25														.19	.37								T.		2.11
Dakota	Mississippi	2.50	.03	.13		.04	.08								.31		.20										T.				.14	.09	3.52
Decatur	Illinois	.70			.41		.10	.05									.10				.12	.53	.19								.33	.06	2.59
Dixon ‖	Mississippi	.50	.38	.12	.06		.05	.08							.19	.15		.12										T.			.05	.38	2.08
Duquoin	do	1.05			.25		.61		T.	.01		T.				.20	.01	T.				.79							T.		.10		3.02
Dwight	Illinois	.75	.20	.13	.09	.01	.57	.04							.71		.30					.44	.39				T.	.07			.30	.30	4.30
East St. Louis	Mississippi		1.20	.04	.12			.10	.01												.13	.44	.83					.02	T.		.10		2.99
Edwardsville	do	.92	.20	.04				.25													.43	.76					T.				.20		2.80
Elgin	Illinois	.43	.30	.05	.49		.19	T.							.05	.03	.14	.18		.05	.01	.07	.20								.07	.29	2.55
Galva	do	.54	.10	.06		.35	.01	.21						.05	.22		T.			.02			T.				T.	.04			.40	.05	2.05
Grafton ‖	Mississippi	.52	.86	.08	.04			.46														.68						.04			.24	.18	3.10
Greenville	do	1.30	2.00		.08		.52								.10		.12				.52	.80						.05			.10		5.59
Griggsville	Illinois	1.75	T.		.52	T.	.13	T.						T.								.10						T.			.50		3.00
Havana	do	1.30			.17	T.		.05						T.			T.					.19									.30	.06	2.07
Henry	do	.74	.04	T.		.15		.22						T.	.28		.04			T.	T.	.05					T.	.13			.39	.20	2.24
Hillsboro	Mississippi	1.32	.90		.24		.08	.10							T.		.04				.30	.55	.35					T.			.20		4.08
Joliet	Illinois	.65	.06	.60		.01	.02							T.	.42		1.04				.20	.70	.09				.06				.33		4.18
Kishwaukee	Mississippi	.82		.44		.02	.18								.38	.04	.10						T.				.03				.20	.18	2.39
La Grange	Illinois	.62	.42	.11	.31	.03	.06	.02							.18		.65	.02			.13	.44	.57	.03				T.			.11		3.70
La Harpe	do	.73	.10	.51			T.	T.						.24	.06					T.							T.				.42		2.06
Lanark	Mississippi		.14	.23		.07	.09	.03						.02	.43	.05	.05							.02			.03	T.			.18	.11	1.45
La Salle	Illinois	.46	.02	.47		.17	T.	.01						T.	.26		.24			.06	T.	.12	.01				.04				.54		2.40
Lincoln	Illinois	1.08	.09	T.	.24	T.	T.	T.						T.				T.			T.	.45	.24					.06			.33		2.49
Loami	do	.67	T.		.30	T.	T.	.06						T.	T.	T.	T.				T.	.50	.04								.35		1.92
Manteno	do	.64	.20	.09		.10	.05	.02							.46		.23	.02			.10	.54	.54					.05			.20	.16	3.40
Martinton	do	.10	.05	T.		T.	.37								.16		.25	.18			.08	.75	.54					.05			.31	.15	2.99
Mascoutah	Mississippi	1.20	.03	.01	.24			.55							.02		T.				.25	.78	.25					.05	.02		.11		3.51
Minonk	Illinois	1.04	.06	T.	.45	.05	.36	.22							.33		.22	T.				.34	.14	.01			T.	.09			.22	.22	3.75
Monmouth	Mississippi	1.10		.20		.10	.02	.14						.20										.02				.11		.20	.28	.01	2.38
Morrison	do	.35	.37	.50	T.	.14	.16	.07						T.	.15		.06			T.							.01				.24	.15	2.20
Morrisonville	Illinois	.78	.07	T.	.15		.12	.05	T.						.05	T.	T.				.12	.37	.39								.22		2.32
Mount Vernon ‖	Mississippi		1.05		.30			.43								.05							.73								.06		2.62
Oregon	do	.89	.37	.27	.04	.02	.08								.50	.03	.18										T.				.02	.18	2.58
Ottawa	Illinois	.30	.05		.20	.12	.03	.04							.18		.61					.18	.13				.05	.10			.52	.10	2.61
Pana	Mississippi	.90	.13		.12		T.	.03							.03		T.	T.			.23	.55	.37								.25		2.61
Peoria	Illinois	1.47	.04	.02		.05	.31	.10						.02	T.		T.	T.			T.	.14	T.				.09	T.		.05	.36	T.	2.65
Pontiac	do	.10	.01	T.	.03	.04		.72							.05		.39	.01				.35	.42					.05			.25	.26	2.68
Quincy ‖	Mississippi	.60	.70			T.		.03						*	.09	.03												.05			.08	.18	1.76
Riley	do	1.10	.06	.07	.12	T.	.10								.20		.11			T.		T.	.06	.07				.01			.10	.16	2.16
Roberts	Illinois	.87	.05		.19	T.	.37	.03							.62		.36	T.			.10	.59	.25				T.				.26	.06	3.75
Rockford	Mississippi	.93	.06	.70		T.	.12	.01						.03	.70		.02			T.			.01				.01				.13	.14	2.86
Rushville	Illinois	1.46	.22	.10		T.	.02	T.						.03		T.						T.					T.				.35		2.18
St. Charles	do	.41	.38	.03	.65	.02	.09	.02							.15		.20	.08		.03	.04	.10	.25	T.			T.	T.			.06	.30	2.81
St. Peter	Mississippi	.85	1.65		.10			.45							.10	T.	.35				.10	.50	.30					T.	T.		T.		4.40
Sparta	do	.97	.17					.91	.03											.04	T.	.95	.38					T.	.09		.17		3.71
Springfield	Illinois	.60	T.	.45		T.	T.	.03						.05		T.	T.	T.			T.	.54	.02				T.	T.		.01	.30		2.00
Streator	do																																
Sullivan	Mississippi	.73	.41		.18		.21	.05							.07		.15	.03			.43	.72	.29								.15		3.42
Sycamore ‖	do	.47	.30	.05	.50			.15							.25	.25		.30			.10		.08	.02							.02	.42	2.91
Tiskilwa	Illinois	.42	T.	.15		.30							.03		.13									T.				.15			.53		1.71
Walnut	Mississippi	.68	.41	.55		.17	T.	.08						.02	.40		T.			.10				.05			T.	.01			.25	.18	2.90
Warsaw ‖	do	1.22												.30		.25															.40		2.17
White Hall	Illinois	1.12	.25		.38	T.	T.	.02						.05	.01			T.				.30						T.			.38		2.51
Windsor	Mississippi	.72	.66		.01		.05	.03									.17				.60	.81	.60								.13		3.78
Winnebago	do	.84	.16	.85		.06	.21	.05						.02	.44		.30										.02				.22	.15	3.32
Yorkville	Illinois	.70	.40	.10	.70	T.	.10	.10							.50		.22	.01		.02	.01	.50	.08				T.	T.			.50	.10	4.04
Zion	Mississippi	1.64				T.	.10							.15	.20	.05											T.				.07		2.21

* 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 October, 1911. 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	42	50	38	64	34	48	38	54	38	53	46	56	43	54	46	56	43	57	45	55	45	57	41	59	48	56	42
2....	53	42	57	42	60	44	53	42	59	44	54	42	63	47	55	48	56	47	58	44	59	49	56	39	56	50	58	38
3....	54	43	55	43	66	44	56	45	48	41	64	46	55	49	73	48	70	48	59	47	71	49	60	45	69	48	55	45
4....	47	39	46	38	62	46	58	42	60	38	59	44	52	42	60	45	69	46	55	40	49	49	62	42	56	45	54	40
5....	59	38	54	40	52	40	63	37	55	36	52	40	55	37	46	37	48	46	52	38	47	40	51	30	50	40	54	33
6....	60	39	54	40	50	44	68	36	60	38	51	41	57	42	55	44	46	43	58	44	47	43	61	34	51	41	63	40
7....	70	40	67	39	65	35	75	45	60	40	58	37	58	40	57	40	69	32	62	36	55	35	60	29	58	38	58	33
8....	78	39	77	45	75	42	82	41	70	32	63	39	69	40	62	30	69	40	72	38	62	33	59	36	62	37	68	40
9....	75	40	79	43	72	32	78	39	71	44	60	39	66	43	61	30	65	37	68	42	63	37	65	30	63	42	67	39
10....	68	42	66	42	64	33	76	37	68	40	60	40	65	43	65	40	66	38	66	42	64	37	63	29	62	47	67	34
11....	67	41	66	40	72	36	78	37	70	37	65	40	68	44	71	38	72	39	71	43	66	41	67	32	66	42	69	37
12....	61	42	59	47	55	36	64	37	72	42	66	43	67	46	72	40	62	45	65	46	65	45	70	36	70	47	71	36
13....	59	46	52	48	56	44	61	40	70	46	66	46	57	50	59	50	71	48	59	46	69	46	64	38	56	51	61	45
14....	58	42	58	49	56	41	67	35	68	44	56	47	58	45	65	46	62	46	59	45	61	49	60	40	55	48	58	43
15....	63	43	62	44	56	36	66	37	66	41	54	47	62	47	61	39	54	42	60	42	61	42	56	45	56	45	58	47
16....	62	38	61	39	54	41	68	37	60	48	52	47	62	48	68	47	53	44	62	43	53	48	60	43	63	48	54	45
17....	55	30	56	35	64	36	58	33	58	32	57	41	57	39	63	43	64	34	62	35	63	41	58	40	63	46	56	42
18....	45	28	51	33	56	35	50	32	50	34	54	41	55	39	50	43	54	38	56	38	45	41	53	34	55	43	56	39
19....	39	30	40	36	47	32	44	35	47	35	48	31	45	39	54	35	53	30	45	34	48	34	46	35	51	36	47	32
20....	38	32	37	31	42	26	41	31	46	34	46	37	43	34	47	34	50	30	45	28	46	34	46	36	48	38	46	37
21....	43	20	44	28	44	26	45	27	42	30	45	32	43	28	48	28	57	33	45	29	36	33	43	32	44	33	40	28
22....	40	25	40	27	42	30	45	34	44	32	43	32	38	28	42	25	43	34	39	30	42	29	35	30	42	30	35	29
23....	45	24	42	25	37	22	47	30	43	24	41	31	42	26	45	33	45	29	45	26	45	30	41	29	43	33	40	28
24....	36	25	37	26	47	27	38	31	34	25	43	32	42	30	43	27	43	34	47	31	41	30	46	25	46	33	45	30
25....	32	20	32	21	41	23	39	26	31	22	41	31	34	24	43	30	43	30	36	20	40	31	40	30	42	32	38	27
26....	38	15	38	19	40	11	41	18	38	15	40	24	36	18	36	29	42	26	40	16	40	30	38	12	39	29	37	17
27....	39	8	38	15	42	12	42	15	26	11	38	24	37	16	43	24	43	20	40	16	42	23	48	16	41	26	38	20
28....	48	9	47	23	54	12	51	18	40	14	46	25	48	22	45	23	51	21	52	20	46	23	45	24	45	25	44	26
29....	34	18	34	16	47	17	36	24	36	12	48	30	38	27	54	28	53	30	44	21	54	25	44	31	51	32	43	27
30....	37	10	34	11	40	15	41	22	40	10	41	21	32	16	49	30	43	19	32	18	46	26	38	13	42	24	38	17
31....	20	10	18	8	34	17	22	17	39	14	39	22	25	12	40	20	40	15	28	14	44	18	33	10	38	22	30	16
Mns..	50.9	31.0	49.7	33.3	53.4	31.3	54.9	32.8	52.4	32.0	51.7	36.7	51.1	35.6	54.4	36.1	55.5	35.7	52.9	34.1	52.3	36.6	52.4	31.8	53.0	38.7	51.7	33.9

Date	Wisconsin.														Iowa													
	Delevan.		Eau Claire.		La Crosse.		Madison.		Mauston.		Spooner.		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....	59	50	59	47	56	48	55	50	54	46	58	42	53	45	52	51	59	44	54	49	64	55	60	53	57	51	70	60
2....	56	51	58	46	59	51	56	50	55	49	62	37	55	45	57	49	59	53	58	51	60	54	59	53	58	52	60	56
3....	72	51	63	50	73	53	72	50	66	50	60	47	55	46	71	50	80	53	76	50	84	55	78	55	76	53	86	56
4....	67	50	64	50	59	41	61	48	67	52	53	40	55	44	62	44	60	50	57	41	64	47	61	50	60	46	66	52
5....	54	36	53	36	51	38	51	42	54	36	48	38	51	32	51	41	66	42	56	40	59	44	59	46	54	41	61	47
6....	69	49	51	42	53	47	63	47	55	43	52	40	48	41	60	45	66	45	64	46	78	50	69	48	69	47	81	52
7....	55	43	62	44	57	39	53	45	50	45	56	33	56	42	51	41	55	47	54	37	57	44	51	47	56	44	54	46
8....	60	32	63	34	61	36	61	40	60	32	62	35	63	31	57	30	60	37	58	33	59	40	60	40	60	34	59	42
9....	63	40	61	34	61	39	62	45	60	35	62	36	63	34	61	37	62	37	63	38	60	43	61	38	62	42	59	44
10....	60	50	64	40	61	45	61	49	64	42	64	40	58	42	63	37	62	40	63	45	63	48	62	48	61	47	65	49
11....	69	48	70	38	66	42	65	48	64	40	66	40	66	44	68	44	68	44	67	46	68	46	68	46	66	43	70	49
12....	71	37	75	37	72	40	69	49	70	40	71	37	72	37	68	48	70	43	70	40	71	45	72	54	72	42	72	50
13....	63	38	61	46	55	49	57	47	60	42	56	42	70	44	69	55	60	43	60	54	57	50	67	56	55	48	60	54
14....	65	50	63	50	63	47	61	50	62	50	61	48	53	48	61	44	60	52	64	48	61	48	61	48	63	48	64	50
15....	61	49	59	44	55	45	57	49	57	42	54	47	56	50	58	42	66	41	60	44	68	43	72	47	60	43	74	48
16....	72	52	63	52	67	54	65	52	64	52	59	40	60	50	67	50	71	43	68	51	71	53	63	53	70	53	68	57
17....	65	47	64	47	64	48	61	51	63	48	51	40	61	49	64	42	64	52	64	46	67	49	68	48	64	48	66	55
18....	69	39	55	43	60	46	67	47	65	44	53	32	59	44	58	44	71	49	62	45	70	49	68	46	70	47	70	54
19....	58	44	54	35	58	39	57	45	56	48	50	32	59	38	53	34	57	46	55	38	59	46	57	44	56	42	54	44
20....	57	33	49	32	49	35	54	39	54	32	50	33	52	30	49	32	51	39	48	34	56	42	50	37	54	39	53	41
21....	50	35	48	31	47	34	46	38	48	32	43	32	48	32	43	28	47	34	46	29	47	36	47	34	47	37	46	38
22....	52	37	42	31	49	32	48	35	48	30	45	25	48	34	44	25	55	30	43	27	55	33	51	31	52	33	57	31
23....	46	38	41	34	46	32	42	34	45	36	40	27	46	33	46	29	48	30	45	29	51	36	53	34	46	35	53	34
24....	47	25	45	25	42	29	46	30	44	27	42	25	44	27	53	30	58	30	48	28	57	35	64	36	50	31	62	36
25....	45	32	47	36	47	35	47	37	45	38	40	24	40	33	47	33	50	32	47	36	54	38	57	41	51	37	57	40
26....	41	28	37	25	38	30	38	30	40	30	34	13	38	29	40	30	41	35	36	30	48	30	42	33	39	29	45	35
27....	44	25	43	22	42	27	42	28	38	25	39	17	38	18	41	24	43	29	42	26	46	28	45	31	43	29	44	33
28....	47	23	45	22	46	24	43	29	43	23	48	21	42	23	45	19	46	26	46	24	48	32	48	26	46	27	49	36
29....	52	28	54	32	55	32	53	30	53	28	50	21	50	32	53	27	53	26	54	29	53	32	54	30	54	31	48	32
30....	44	34	42	28	48	32	45	37	46	28	39	21	49	28	49	34	43	30	51	32	44	42	45	40	45	42	45	40
31....	42	32	42	22	41	27	40	32	40	28	35	14	39	29	39	19	42	31	39	26	43	30	43	28	44	31	45	33
Mns..	57.3	39.5	54.7	37.3	54.9	39.2	54.8	42.0	54.5	38.5	51.7	32.9	53.1	37.2	54.8	37.4	57.8	39.8	55.4	38.5	59.4	42.7	58.5	42.6	56.8	41.0	60.1	45.0

TABLE 3.—*Maximum and minimum temperatures for October, 1911. District No. 5*—Continued.

Date.	Hannibal, Mo.		Laporte, Ind.		Illinois.															
					Cairo.		Greenville.		La Salle.		Monmouth.		Mount Vernon. § §		Peoria.		Springfield.		Winnebago.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	81	63	67	50	85	69	72	65	69	56	74	54	76	60	74	57	73	64	61	50
2	63	58	58	50	88	73	72	62	58	54	60	53	77	67	63	54	69	57	57	50
3	88	60	77	50	89	71	85	62	85	54	86	53	89	64	86	55	86	59	80	50
4	68	55	75	63	77	62	76	54	66	49	72	52	77	62	66	48	68	54	72	47
5	65	52	67	49	78	55	68	48	55	43	58	41	74	48	59	42	62	48	55	39
6	83	54	78	56	87	63	85	59	80	52	82	53	89	50	82	53	84	59	68	48
7	54	50	62	41	73	53	72	52	57	45	56	46	59	55	57	45	59	48	56	47
8	58	46	60	34	56	52	55	48	60	40	61	36	57	49	58	39	59	44	60	35
9	60	49	63	42	60	54	62	52	59	47	62	39	60	51	60	43	62	52	65	42
10	66	44	65	52	69	57	68	52	63	49	63	49	71	54	66	47	66	53	65	48
11	71	48	60	48	72	61	72	51	67	43	71	42	72	49	70	42	70	48	69	42
12	73	53	65	40	74	59	73	51	72	43	73	43	72	50	72	41	70	50	72	43
13	69	55	65	42	70	53	68	52	65	43	56	48	69	47	64	46	67	50	62	42
14	71	54	59	50	80	56	76	55	64	53	66	48	77	50	69	45	71	53	65	50
15	79	53	63	45	83	64	78	55	68	43	73	43	80	55	72	42	73	48	64	43
16	70	55	76	52	75	60	75	56	73	53	70	60	83	52	74	51	72	53	69	55
17	67	47	59	49	60	52	64	50	66	49	70	49	75	51	67	44	65	52	63	51
18	71	44	65	51	70	46	70	45	69	44	70	43	70	48	70	40	69	44	68	42
19	56	47	60	40	72	51	68	47	56	46	53	42	72	40	57	45	62	48	56	45
20	53	44	52	40	65	49	52	45	55	43	54	37	57	47	54	45	55	49	58	37
21	47	40	52	42	50	37	46	40	50	39	46	34	49	45	46	38	49	39	49	35
22	58	33	48	39	57	37	52	37	54	39	57	31	55	36	55	35	54	37	53	34
23	55	36	45	36	60	41	53	36	51	38	54	32	56	40	52	30	53	36	50	35
24	61	35	40	29	61	38	61	36	56	32	59	28	59	30	58	27	58	35	50	25
25	61	46	60	34	67	43	64	38	58	43	52	40	68	32	61	40	62	38	53	36
26	47	36	50	34	69	46	62	42	51	33	50	29	59	35	49	34	54	38	43	30
27	45	34	47	30	53	39	48	36	44	30	49	29	43	39	45	30	44	34	43	27
28	49	35	46	27	54	40	47	37	48	30	50	29	50	37	49	28	48	37	46	23
29	48	31	51	25	55	43	51	39	54	33	53	29	55	38	54	25	50	34	53	28
30	50	43	44	32	61	48	52	45	45	42	45	37	57	41	46	42	49	43	46	36
31	48	36	47	42	55	44	51	38	48	37	45	35	50	45	46	30	48	35	43	32
Means	62.4	46.3	58.9	42.4	68.5	52.1	64.5	47.9	60.2	43.4	61.0	41.4	66.4	47.3	61.3	41.4	62.3	46.4	58.5	40.2

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