Climatological Data for December, 1910.
DISTRICT NO. 5, UPPER MISSISSIPPI VALLEY.

GEORGE M. CHAPPEL, District Editor.

GENERAL SUMMARY.

The weather over the upper Mississippi Valley during December, 1910, was cold, and, except in North Dakota, unusually dry; but as a whole the month was pleasant and favorable for outdoor work, to railroad transportation, and all lines of business not dependable on the surface water supply. Although the temperature was below the normal in all parts of the district, the monthly mean was 5.3° higher than the average for December, 1909, and the average precipitation was 1.51 inch less than it was for the same month last year. The percentage of sunshine was above the normal, and the month was characterized by the absence of severe winter storms. The average depth of snowfall was 5.3 inches, as compared with 14.4 inches in December, 1909.

The month opened with fair weather, which continued during the first three days. From the 4th to the morning of the 7th light snow flurries were quite general over the northern and rain over the extreme southern portions of the district, due to the eastward passage of an area of comparatively low barometric pressure across the middle Mississippi Valley. A disturbance over Lake Superior caused general snow flurries over Minnesota, Wisconsin, Iowa, and Illinois on the night of the 9th. With the exception of light and scattered snow flurries on the 19th and 20th, fair weather prevailed generally from the 10th to the 22d, after which precipitation was frequent, the heaviest being in the form of rain over the southern sections on the 28th and 29th.

The first general cold wave of the winter, with temperature near or below zero in the southern section, did not occur until the 24th, although temperatures from −10° to −20° prevailed over the northern part of the district from the 5th to the 13th, and were again below zero at many stations on the 19th and 20th. The lowest temperature of the month was, however, recorded in northern Minnesota on the 30th. There were no unusually high temperatures recorded, but the 14th was the warmest day generally.

TEMPERATURE.

The temperature was below the normal in all sections, the average departure ranging from −0.1° in Minnesota to −2.8° in Illinois, and the monthly means for the several States in the district were as follows: North Dakota, 0.9°; Minnesota, 14.7°; South Dakota, 16.8°; Wisconsin, 16.8°; Iowa, 23.1°; Missouri, 28.7°; Indiana, 24.4°; and Illinois, 26°. The most striking features of the temperature were its comparatively small variability during the month and the fact that the severe cold waves were confined to the extreme northern portion of the district, where the minima on several days ranged from −15° to −45°. Comparatively moderate temperatures prevailed during the first five days of the month, except over North Dakota and northwestern Minnesota, where temperatures from zero to −10° were recorded. On the 6th a cold wave spread over the district which continued until the 13th, and caused temperatures of zero or below on one or more days north of northern Iowa and Illinois, and from −20° to −29° at several stations in North Dakota. The 14th was generally the warmest day of the month, and moderate temperatures continued until the 20th, when another cold wave started in the Northwest, culminating in temperatures of zero or below north of central Iowa. From the 25th to the 29th the weather was moderate except over the extreme northern sections. Abnormally low temperatures obtained over North Dakota and northern Minnesota on the 30th, which was the coldest day of the month at many stations, the lowest temperature recorded being −47° at Warroad, Minn.

The monthly mean temperature for the district, as shown by the records of 291 stations, was 19.6°, which is 1.3° below the normal. The highest monthly mean was 35.2°, at Cairo, Ill., and the lowest was 4°, at Pembina, N. Dak. The highest temperature was 63°, at Cobden, Ill., on the 28th, and the lowest was −47°, at Warroad, Minn., on the 30th.

PRECIPITATION.

The average monthly precipitation was below the normal in all parts of the district, except in North Dakota, although there were several stations in Minnesota, Wisconsin, and Illinois from which a slight excess was reported. The average amounts for the several States or parts of States ranged from 0.40 inch in South Dakota to 1.81 inch in Indiana, and the departures varied from +0.09 inch in North Dakota to −1.23 inch in Missouri. Practically all of the precipitation was in the form of snow over the northern and central portions of the district, and a majority of the storms caused snow in the southern portion; but the largest amounts recorded during the month were in the form of rain over southern Iowa, northeastern Missouri, southern Illinois, and northeastern Indiana and fell on the 28th and 29th. The number of storms with measurable precipitation were not well distributed geographically, but the precipitation was fairly well distributed throughout the month, except in the southern section where the bulk of it fell during the 28th and 29th.

The average precipitation for the district, as shown by the records of 303 stations, was 0.69 inch, which is 0.67 inch below the normal. The averages for the various States were as follows: North Dakota, 0.49 inch; Minnesota, 0.43; South Dakota, 0.40; Wisconsin, 0.81; Iowa, 0.44; Missouri, 0.71; Indiana, 1.81; and Illinois, 1.24 inch. The greatest amount, 3.39 inches, occurred at Cairo, Ill., and the least, a trace, at Amenia, N. Dak. The greatest amount in 24 consecutive hours, 1.72 inch, occurred at Cairo, Ill., on the 28th–29th. The average depth of unmelted snowfall was 5.3 inches; the averages for the several States or parts of States within the district were as follows: North Dakota, 5.4 inches; Minnesota, 5.4; South Dakota, 2.8; Wisconsin, 9.7; Iowa, 3.3; Missouri, 0.9; Indiana, 10.1; and Illinois, 3.8 inches. The greatest amount was 17.5 inches, at Meadow Valley, Wis., and the least, a trace, at 14 scattered stations. Measurable precipitation occrured on an aevrage of five days.

SUNSHINE AND CLOUDINESS.

The average number of clear days was 13; partly cloudy, 7; cloudy, 11. The duration of sunshine was slightly above the normal.

WIND.

Northwest winds prevailed. The highest velocity reported was 42 miles per hour from the northwest at St. Paul, Minn., on the 19th.

MISCELLANEOUS.

The conditions were favorable during the early part of the month for finishing the corn harvest and all of the crop was secured in good condition.

The scarcity of water assumed serious proportions in parts of Illinois, Missouri, Iowa, and in the valley of the Red River of the North. Many streams and wells are dry and cisterns empty, and in a few instances, farmers have been obliged to sell their stock because of no facilities for watering it. The coal mines at Enterprise, Iowa, have kept two tank cars busy hauling water from Des Moines, and most of the railroads in Iowa have experienced considerable trouble in obtaining sufficient water for their engines.

The droughty conditions which have prevailed since early in October have also injuriously affected the fall sown wheat in southern Iowa, Missouri, and Illinois. The ice harvest was begun during the latter half of the month as far south as central Iowa, with the ice from 8 to 10 inches in thickness.

RIVERS.

The stage of all rivers in the district remained low. The Red River of the North showed the lowest stage on record for December.

The Mississippi River froze over at Dubuque, Iowa, on the night of the 7th–8th, or several days earlier than the average date. The water fell from 0.9 foot on the 1st to − 0.6 foot on the 6th, or the lowest stage ever recorded at this station. This low stage was not caused by natural conditions, however, but was due to ice gorges above Prairie du Chien, Wis. The low water at Dubuque partially cut off the water supply of the Union Electric Company for several days and it was only with difficulty that their plant could be kept running. The water cut through the gorges on the 6th and by the morning of the 7th, the water at Dubuque had risen to 0.7 foot. Similar conditions existed at Prairie du Chien and other towns on the Mississippi in this district. At the close of the month the ice in the Mississippi River was 10 inches thick, and dealers were beginning to put up their annual supply.—*J. H. Spencer, Local Forecaster.*

Owing to the formation of ice gorges on the Le Claire Rapids, a further fall in the Mississippi River began on the 2d, a stage of − 1.2 feet, the lowest on record at the Davenport station, being observed on the morning of the 5th. The stream became closed on the night of the 11th–12th and at the end of the month the average thickness of the ice was about 11 inches.—*J. M. Sherier, Local Forecaster.*

DRAINAGE AND ENGINEERING NOTES.

The following shows the work done during December by the United States Army Engineers, under the supervision of Mr. A. O. Rowse, assistant engineer, in connection with the survey of the Des Moines River.

The topography and soundings were platted from Ottumwa to the mouth of the Des Moines River, a distance of 90 miles, making a total of 198 miles, and completing this part of the work. An index map on a scale of 1 inch equals 2 miles, was about 65 per cent completed. The excavation was computed for 120 miles of channel, 60 per cent of the total. Sixty miles of profile showing water surface at low water, river bottom, and both banks were platted, making 168 miles of profile platted or 85 per cent of the total. One-foot contours were drawn on 10 miles of map, making a total of 19 miles drawn or 10 per cent of the total.

In order to prevent a water famine at Davenport, Iowa, the Davenport Water Company built a dam 600 feet out into the river to protect the intake at the pumping station from which the water is drawn from the river. The dam is a temporary structure made of over 1,000 bags of sand, and this precaution raised the level of the river at the intake 8 or 10 inches.—*Marshalltown, Iowa, Times-Republican.*

TABLE 1.—*Climatological data for December, 1910. District No. 5, Upper Mississippi Valley.*

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	12	9.2	−3.3	40a	15	−19	30	50d	T.	−0.35	T.	T.	0	11	4	16	nw.	C. E. Wood.
Bottineau	Bottineau	1,638	14	6.4	−1.6	34	15	−28	6	47	0.49	+0.19	0.14	7.8	5	6	8	17	nw.	J. A. Kemp.
Cando	Towner	1,488	8	8.1	+1.7	42	18	−29	6†	45b	0.16	−0.28	0.14		2	19	4	8	w.	G. Bennett.
Crosby	Williams		3	10.4		33	17†	−19	31	39	0.75		0.27	6.0	4	17	9	5	sw.†	H. C. Kaschan.
Devils Lake	Ramsey	1,482	4	9.8	+1.8	40	21	−20	29	42	0.61	+0.22	0.20	7.1	8	5	13	13	nw.	U. S. Weather Bureau.
Donnybrook	Ward	1,760	10	12.4	−2.7	39	20	−16	31	44	0.35	−0.31	0.15	3.5	3	17	4	10	nw.	C. J. De Vore.
Dunseith	Rolette		12	7.4	−2.4	33	14	−27	6	37	0.80	+0.45	0.20	8.0	5	20	3	8	w.	L. H. Trowbridge.
Edmore	Ramsey	1,524	4	6.7		37	13	−27	29	35	0.10		0.10	1.0	1	15	13	3	nw.	H. R. Aslakson.
Forman	Sargent	1,249	15	22.8	+8.6	46	22	− 8	24	36	0.55	+0.18	0.25	6.0	3	6	2	23	nw.	A. Maltby.
Grafton	Walsh	827	12																	H. Lamoure.
Granville	McHenry	1,504	3	9.8		38	21	−25	6	40	0.56		0.19	17.0	9	16	5	10	nw.	W. A. Christiansen.
Hannah	Cavalier	1,568	4	5.4e		34	21	−34	30	40e	0.60		0.30	6.0	3					J. Moffatt.
Hansboro	Towner		2	8.8		34	26	−28	30†	42	0.38		0.28	3.8	4	19	3	9	nw.	Geo. Dale.
Hillsboro	Traill	901	4	11.4		37	13	−20	30	37	0.40		0.20	4.0	6	13	6	12	nw.	M. H. Norman.
Lakota	Nelson	1,519	3																	C. R. Pelles.
Langdon	Cavalier	1,615	14	7.6		35a	21	−34	30	54a	0.67		0.20		4	8	5	18	nw.	J. Woolner.
Larimore	Grand Forks	1,134	14	9.4	−2.1	37a	21	−24	30	55a	1.85	+1.62	0.75	10.5	3	7	4	20	w.	Reuben Gray.
Lisbon	Ransom	1,091	5	12.0		40a	27	−15	30	43a	0.15		0.10	1.5	2	11	5	15	nw.	H. K. Adams.
McKinney	Ward	1,640	15	8.9	−1.7	38	20	−25	6	48	0.35	−0.11	0.15	3.5	3	8	17	6	nw.	N. P. Swensen.
Manfred	Wells	1,605	8	12.2		38	13†	−21	6	35	0.80		0.20	8.0	5	7	15	9	nw.	P. B. Anderson.
Mayville	Traill	975	14																	N. C. McDonald.
Minot	Ward	1,557	11	12.6	+0.5	40	15†	−21	6	40	0.48	+0.15	0.25	4.8	3	16	3	12	w.	W. J. Farris.
Minto	Walsh	820	16	12.0j	+1.3	36	13	−25	30	39j	0.43	+0.05	0.20		4	9	9	13	nw.	S. S. Marsh.
Oriska	Barnes	1,270	4	13.9		46	13	−17	12	36	0.35		0.10	3.5	5	5	17	9	nw.	W. E. Williams.
Park River	Walsh	998	6	9.7		38	21	−26	30	40	0.37		0.14	5.5	4	3	23	5	n.	A. Heyward.
Pembina	Pembina	789	11	4.0	−3.8	32	27	−34	30	37	0.40	−0.24	0.10	4.0	6	10	8	13	w.	C. W. Shumaker.
Power	Richland	1,020	17	11.3	−0.8	44	15	−21	12†	43	0.57	+0.02	0.30	5.7	4				nw.	J. A. Power.
Pratt	McHenry		5																	C. H. Butts.
Towner	do		3	8.4		36	21	−25	6	35	0.30		0.10	3.0	3	15	10	6	nw.	Belle Bagley.
University	Grand Forks	830	18	8.1	−3.3	36	13†	−25	29†	55	0.40	−0.13	0.10	4.0	7	5	6	20	nw.	W. R. Holgate.
Wahpeton	Richland	962	18	10.2	−5.0	46	13	−22	30	47	0.55	+0.18	0.20	5.0	4	11	2	18	nw.	E. G. Burch.
Walhalla	Pembina	966	5								0.80		0.45	8.0	3					C. H. Lee.
Westhope	Bottineau		3																	C. W. Clark.
Willow City	do	1,471	16	7.8	−2.2	34	21	−24	8	44	0.20	−0.21	0.10	2.0	3	11	11	9	nw.	M. A. Ostby.
Minnesota.																				
Albert Lea	Freeborn	1,229	20	18.6	+0.3	50	14	−11	24	34	0.20	−0.80	0.10	4.0	3	10	17	4	nw.	Edward Carey.
Alexandria	Douglas	1,391	16	12.4	+0.5	41	13	−17	24	51	0.48	−0.10	0.23	5.3	7	16	2	13	nw.	P. O. Unumb.
Angus	Polk	870	8	7.0		31	13	−31	30	40	0.36		0.12	3.6	5	1	14	16	nw.	John Nadvornik.
Bagley	Clearwater		4	9.1		38	13	−36	24	43	0.42		0.12	9.7	8	4	9	18	nw.	Jens Nelson.
Baudette	Beltrami	1,084	1																	Franz W. Schmidt.
Beardsley	Bigstone	1,090	17																	Roy A. Smith.
Beaulieu	Mahnomen	1,200	8																	
Bird Island	Renville	1,039	20	17.6	+0.8	46	14	−15	24	36	0.10	−0.51	0.06	1.1	2	6	7	18	nw.	Dr. F. L. Puffer.
Caledonia	Houston	1,179	17	18.8	−0.4	44	14	0	12†	33	0.77	−0.52	0.30	7.9	6	13	0	18	nw.	W. D. Belden.
Campbell	Wilkins	984																		J. T. Neisess.
Cass Lake	Cass	1,300	4								0.42		0.15	6.5	5					C. W. Burns.
Collegeville	Stearns	1,282	17	18.6	+0.4	43	14	−10	23†	29	0.15	−0.35	0.13	4.0	2	17	1	13	nw.	Fridolin Tembreul.
Crookston	Polk	863	20	9.5	−2.2	32	14†	−24	30	40	0.40	−0.11	0.15	4.0	6	7	4	20	s.	A. G. Anderson.
Detroit	Becker	1,364	14	7.6	−2.5	35	21	−34	24	57	0.56	+0.04	0.32	7.5	5	13	4	14	nw.	G. W. Peoples.
Fairmont (near)	Martin	1,240	23	20.6	+0.5	51	14	− 7	12	31	0.10	−0.98	0.10	1.0	1	10	18	3	nw.	W. F. Wherland.
Faribault	Rice	1,003	13	21.8	+3.4	53	14	−17	24	31	0.30	−0.32	0.13	6.5	5				nw.	Dr. A. C. Tanner.
Farmington	Dakota	902	22	18.5	−0.3	48	14	−16	24	40	0.28	−0.96	0.10	3.0	3	13	5	13	nw.	D. F. Akin.
Fergus Falls	Ottertail	1,210	18	14.4	−0.2	40	14	−17	24	27	0.83	+0.14	0.50	8.1	10	10	10	11	nw.	C. E. Kissenger.
Fort Ripley	Crow Wing	1,136	4	13.2		41	14	−24	30	42	0.41	−0.28	0.22	6.5	5	14	0	17	nw.	J. J. Tucker.
Fosston	Polk	1,289	1	9.3		35	22	−31	24	39	0.38		0.15		5	3	11	17	nw.	O. N. Hem.
Fram	Marshall			9.9i		30i	14†	−36	29	55i						0	26	5	nw.	A. W. Clark.
Glencoe	McLeod	1,000	14	18.7	+1.3	45	14	−14	24	36	0.27	−0.29	0.25	2.7	2	14	10	7	nw.	C. G. Selvig.
Grand Meadow	Mower	1,338	23	18.6	+0.1	50	14	−11	24	34	0.40	−0.91	0.18	4.5	4	22	2	7	nw.	C. F. Greening.
Hallock	Kittson	815	11	7.4	−0.8	32	17†	−39	30	47	0.67	+0.10	0.20	6.8	7	21	1	9	n.	D. A. Robertson.
Halstad	Norman	870	4	7.8		36	13	−21	30	54	0.26		0.15	2.5	2	16	8	7	nw.	A. G. Holstrom.
Hinckley	Pine	1,050	5	11.9		40	14	−18	30	38	0.80		0.25	8.5	4	3	8	20	nw.	W. R. Newman.
International Falls	Koochiching	1,112	2	9.2		34	14†	−38	30	42	1.30		0.40	13.0	6	8	13	10	w.	Rees Roe.
Kelliher	Beltrami		3	10.8		38	14	−25	29	55	1.02		0.30	14.2	7	8	14	9	nw.	A. Gilmour.
Lake Crystal	Blue Earth		3	20.2		54	14	−10	24	39	0.20		0.20	2.0	1	11	1	19	nw.	W. P. Cobb.
Leech Lake Dam	Cass	1,301	22	6.5	−5.9	30	13†	−32	30	33	0.71	−0.18	0.22	10.3	8	1	14	16	nw.	Hans Olson.
Little Fork	Koochiching			8.8		38	13	−44	30	48	0.58		0.20	6.5	5	13	7	11		O. C. Olson.
Long Prairie	Todd	1,299	18	15.0	+1.4	40	13†	−23	23	48	0.40	−0.59	0.30	4.0	2	11	2	18	nw.	R. M. Sheets.
Lynd (2)	Lyon	1,175	18	21.2	+1.7	52	14	−10	12	38	0.03	−0.61	0.03	0.5	1	10	6	15	sw.	J. W. Rouse.
Mankato	Blue Earth	747	11								0.32	−0.90	0.25	2.7	3	17	1	13	nw.	Sadie H. Blake.
Mapleplain	Hennepin	1,023	18	17.6	+0.3	44	14	−13	24	36	0.49	−0.65	0.32	5.7	5	10	9	12	nw.	G. W. Richards.
Milaca	Millelacs	1,072	13	16.1	+2.3	44	14	−18	30	39	0.46	−0.07		6.5	2	10b	9b	10b	nw.	C. H. Foss.
Milan	Chippewa	955	16	16.0e	+0.1	46	14	−14	24	33e	0.13	−0.75	0.10	1.2	2	3b	19b	7b	nw.	O. K. Opjorden.
Minneapolis	Hennepin	918	19	19.1	−0.8	45	14	− 8	24	37	0.31	−0.64	0.19	4.2	4	10	12	9	nw.	U. S. Weather Bureau.
Montevideo	Chippewa	900	20	18.2	0.0	48	14	−11	24	37	0.11	−0.65	0.09	1.5	2	12	6	13	nw.	L. G. Moyer.
Moorhead	Clay	935	29	11.8	+1.1	40	13	−18	24	33	0.42	−0.32	0.14	5.8	8	9	5	17	nw.	U. S. Weather Bureau.
Mora	Kanabec		5	14.3		40	14	−19	30	40	0.66		0.30	7.0	6	16	9	6	nw.	Hans Peterson.
Morris	Stevens	1,170	25	15.7	−0.1	44	14	−15	24	34	0.55	−0.07	0.25	6.2	6	14	6	11	nw.	D. T. Wheaton.
New London	Kandiyohi	1,215	16	14.4	+0.1	42	13	−20	24	40	0.17	−0.36	0.17	2.0	1	4	13	14	nw.	H. Swensen.
New Richland	Waseca	1,180	16	19.2	+0.4	51	14	−13	24	32	0.21		0.18	4.5	2	15	12	4	nw.	N. O. Tyrholm.
New Ulm	Brown	791	30	17.0	+1.2	50	14	− 9	25	52	0.20	−0.51	0.10	2.0	3	6	3	22	nw.	A. J. Eckstein.
Osakis	Douglas	1,343	3	14.8		41	13†	−16	24	35	0.37		0.25	4.8	3	9	2	20	nw.	J. B. Johnson.
Park Rapids	Hubbard	1,426	20	9.0	−2.4	35	13†	−27	24†	52	0.65	−0.06	0.15	6.5	10	10	4	17	nw.	Dr. P. A. Walling.
Pine River Dam	Crow Wing	1,251	23	11.6	−1.7	37	14	−27	8	36	0.54	−0.14	0.35	7.5	4	16	7	8	e.	U. S. Engineer Corps.
Pokegama Falls	Itasca	1,280	23	9.8	−0.6	38	13	−39	30	44	1.21	+0.35	0.32	13.9	9	7	9	15	nw.	Do.
Red Lake	Beltrami	1,152	2	9.6		36	14	−39	30	45	0.48		0.24	6.6	4	5	9	17	w.	A. C. Goddard.
Red Wing	Goodhue	680	14								0.57	−0.77	0.30	6.4	6	16	2	13	nw.	L. Bach.
Redwood Falls	Redwood	1,050	3	20.4		48	14	−11	24	35	0.25	−0.83	0.10	2.5	3	14	4	13	nw.	N. B. Anderson.
Reeds Landing	Wabasha	681	15								0.29	−0.39	0.20	6.5	3	11	1	19	nw.	J. Deschneau.
Rochester	Olmsted	991	6	17.2		52	14	− 6	24	44	0.45		0.30	4.5	2	15	1	15	s.	S. R. Case.
Roseau	Roseau	1,040	3	7.2		34	14	−45	30	45	0.88		0.16		10	7	12	12	nw.	A. Waag.
St. Charles	Winona	850	19	17.0	−3.1	51	14	− 7	30	40	0.32	−1.02	0.16	3.5	4	15	7	9	se.	S. W. Gleason.
St. Cloud	Sherburne	1,020	32	16.0	−1.1	45	14	−14	24	36	0.24	−0.29	0.19	4.2	2	13	7	11	nw.	J. H. Capser.
St. Paul	Ramsey	837	39	19.0	−0.3	44	14	− 8	24	35	0.30	−0.76	0.18	3.7	3	10	12	9	nw.	U. S. Weather Bureau.
St. Peter	Nicollet	825	17	23.2	+4.0	52	28	− 4	11	30	0.10	−0.58	0.05	1.0	2	6	4	14	nw.	State Hospital.
Sandy Lake Dam	Aitkin	1,234	17	11.9	−0.8	38	13†	−28	30	42	0.29	−0.57	0.18	4.9	3	7	15	9	nw.	U. S. Engineer Corps.
State Sanitorium	Cass		3	12.1		35	13†	−22	30	31	0.64		0.21	9.0	7	16	4	11	n.	Dr. W. J. Marcley.
Stillwater	Washington	694	5								0.58		0.18	8.9	7	11	7	13	nw.	O. Ostrom.
Taylors Falls	Chisago	759	3	15.8		40	14†	−21	24	33	0.70		0.26	10.5	4	14	5	12	n.	Mpls. Gen. Elec. Co.

TABLE 1.—*Climatological data for December, 1910. 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, .01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Minnesota—Continued.																				
Warroad	Roseau	1,069	1	7.0	.....	34	22	−47	30	44	0.86	.....	0.30	12.0	6	7	2	22	sw.	J. H. Sawyer.
West Concord	Dodge	1,232	1	18.2	.....	49	14	−15	24	35	0.30	.....	0.30	3.0	1	21	7	3	nw.	H. H. Orcutt.
Windom	Cottonwood	1,336	4	21.7	.....	52	14	−11	24	37	0.04	.....	0.04	0.5	1	4	17	10	nw.	T. C. Richmond.
Winnebago	Faribault	1,100	11	19.8	+0.8	48	14	− 9	24	47	0.20	−0.71	0.20	2.0	1	19	4	8	nw.	H. H. Haight.
Winnibigoshish	Itasca	1,300	22	10.4	−2.4	35	13†	−34	30	41	0.91	+0.12	0.22	12.0	9	8	9	14	nw.	U. S. Engineer Corps.
Winona	Winona	700	15	20.6	−0.4	47	14	− 4	9	37	0.43	−0.77	0.18	4.9	7	20	1	10	nw.	P. C. Myers.
Worthington	Nobles	1,593	15	18.9	−0.7	43	14	− 9	24	43	0.05	−0.73	0.05	0.5	1	15	4	12	s.	M. P. Mann.
Zumbrota	Goodhue	917	15	19.0	+0.1	49	14	−11	24	36	0.17	.....	0.10	2.2	2	18	7	6	nw.	W. C. Rowell.
South Dakota.																				
Milbank	.....	.....	.....	16.8	−1.5	51	14	−12	24	53	0.40	−0.38	0.30	2.8	2	12	1	18	nw.	I. T. Patridge.
Wisconsin.																				
Antigo	Langlade	1,489	16	16.5	−2.0	38	14	−11	9	28	0.84	.....	0.30	8.5	7	6	3	22	w.	Elton C. Larzelere.
Barron	Barron	1,115	18	12.4	−3.9	37	14	−19	9†	42	0.75	−0.42	0.30	9.0	4	16	8	7	se.	Wm. A. Kent.
Beloit	Rock	750	23	21.8	−2.2	40	27	− 1	13	27	0.95	−0.94	0.30	9.5	6	17	0	14	w.	Smith Observatory.
Big St. Germain Dam§	Vilas	1,590	1	15.0	.....	39	14	−12	25†	44	0.83	.....	0.16	8.5	10	12	3	16	sw.	Oscar Brehmer.
Brodhead	Green	812	12	20.6	−1.6	40	14†	− 6	13	32	0.78	−1.01	0.20	6.2	6	19	3	9	nw.	Hector D. Kirkpatrick.
Burnett	Dodge	880	6	18.3	.....	36	14	− 8	9	27	0.47	.....	0.18	8.2	7	12	3	16	nw.	George W. Smith.
Darlington	Lafayette	807	5	19.8	.....	40	15	− 9	13	30	.....	.....	.....	.....	.....	17	0	14	nw.	S. P. Nelson.
Deerskin Dam§	Forest	1,625	1	.....	.....	40	29	.....	.....	.....	0.56	.....	0.20	7.8	6	4	11	16	w.	Wm. E. O'Neal.
Delavan	Walworth	920	17	20.4	−3.6	40	27	− 6	9†	33	0.39	−1.25	0.13	5.0	7	13	2	16	nw.	Elwood S. Austin.
Dodgeville	Iowa	1,116	11	17.8	−3.4	39	14	− 5	24	29	0.59	−1.03	0.20	6.0	4	12	1	18	nw.	Geo. H. Butler.
Downing	Dunn	983	8	14.1	.....	40	14	−18	9†	48	1.20	.....	0.40	12.0	4	3	2	26	w.	Eugene F. Stoddard.
Eau Claire	Eau Claire	800	19	16.6	−2.1	41	14	−13	9	38	0.84	−0.64	0.20	10.2	7	8	14	9	nw.	Robert D. Whitford.
Grand Rapids	Wood	1,021	11	15.3	−4.7	39	14	−15	9	42	1.90	+0.53	0.66	16.5	7	10	8	13	w.	Willis B. Raymond.
Grantsburg	Burnett	1,095	19	14.4	−2.3	41	13	−23	22	47	1.50	+0.27	0.40	15.0	6	7	2	22	nw.	Theodore Olsen.
Hancock	Waushara	1,091	18	17.4	−2.5	40	14	−15	9	33	0.80	−0.54	0.30	8.0	4	6	10	15	nw.	Frederick B. Hamilton.
Hatfield	Jackson	973	15	16.1	−2.4	42	14†	−15*	9†	45*	0.99	−0.37	0.22	12.5	6	12	9	10	s.	Walter S. Woods.
Hayward	Sawyer	1,197	19	12.5	−3.6	37	14	−27	8	41	1.00	−0.09	0.40	10.0	4	7	13	11	se.	William E. Swain.
Hillsboro	Vernon	1,000	19	16.0	−4.0	41	14†	−16	9	43	1.15	−0.44	0.30	11.5	7	17	10	4	w.	Emil V. Wernick.
Koepenick	Langlade	1,693	20	13.9	−4.2	40	14†	−13	25	50	0.95	−0.31	0.20	9.5	8	0	16	15	nw.	Edward S. Koepenick.
Lac du Flambeau§	Vilas	.....	1	15.2	.....	38	14†	−13	5	36	1.70	.....	0.40	17.0	9	12	5	14	s.	W. J. Lovett.
La Crosse	La Crosse	714	38	20.2	−2.6	46	14	− 3	9	32	0.67	−0.66	0.30	9.7	10	9	12	10	nw.	U. S. Weather Bureau.
Lake Mills	Jefferson	897	19	19.2	−3.5	37	15	− 5	9	27	0.65	−1.08	0.20	7.0	8	8	9	14	nw.	S. Newton Dexter Smith.
Lancaster	Grant	1,070	20	20.0	−1.3	43	15	− 7	11	31	0.07	−1.21	0.03	6.0	4	12	11	8	w.	Edward Pollock.
Long Lake	Oneida	1,592	2	13.3	.....	38	17	−24	30	46	0.68	.....	0.14	10.5	12	6	5	20	nw.	Louie Frank.
Madison	Dane	974	32	20.6	−2.1	40	14	3	9	25	0.56	−1.21	0.16	5.5	9	9	7	15	nw.	U. S. Weather Bureau.
Mather	Juneau	962	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank Evans.
Mauston	do	882	14	18.8	−0.6	40	14†	−11	9	34	0.53	−0.59	0.25	9.0	3	17	4	10	nw.	Eugene L. Hitchcock.
Meadow Valley	do	974	19	15.7	−3.3	41	14	−20	9	46	0.80	−0.41	0.22	17.5	7	7	14	10	nw.	Charles H. Johnson.
Medford	Taylor	1,420	19	15.8	−2.1	39	14	−14	9	32	0.80	−0.49	0.20	8.0	5	0	14	17	s.	William Zeit.
Merrill	Lincoln	1,267	4	.....	.....	.....	.....	.....	.....	.....	0.51	.....	0.16	.....	4	15	0	16	n.	Wm. T. Hunter.
Minocqua	Oneida	1,604	6	11.9	.....	38	14	−23	30	47	0.64	.....	0.13	12.0	10	2	10	19	w.	Benjamin W. Applebee.
Mondovi	Buffalo	738	2	16.8	.....	44	14	−14	9	49	0.36	.....	0.08	11.5	9	16	5	10	nw.	Dr. Charles Hebard.
Mount Horeb	Dane	1,226	6	19.6	.....	40	27	− 3	12	25	0.95	.....	0.32	9.0	6	9	8	14	nw.	W. M. Lewis.
Muscoda	Grant	666	1	18.4	.....	37	27	−11	13	41	1.29	.....	0.30	4.6	7	11	11	9	nw.	Henry Eckstein.
Neillsville	Clark	996	21	16.8	−2.3	40	14	−18	9	45	0.65	−0.98	0.40	15.0	5	10	0	21	nw.	William Heaslett.
New Richmond	St. Croix	990	5	16.0	.....	48	14	−19	24	40	1.21	.....	0.40	10.0	5	0	21	10	nw.	Franc A. R. Van Meter.
Osceola	Polk	806	19	15.0	−1.3	41	13	−18	24	57	0.39	−0.78	0.19	6.0	4	13	5	13	s.	Charles W. Staples.
Park Falls	Price	1,492	18	15.1	.....	38	13	−16	30	38	0.13	.....	0.04	4.0	4	13	5	13	w.	Flambeau Paper Co.
Portage	Columbia	809	14	19.0	−2.2	42	14	−10	9	37	0.33	−1.23	0.10	8.0	5	15	4	12	nw.	Jeremyah Hanifan.
Prairie du Chien	Crawford	690	23	20.2	−3.4	45	14	− 5	24	40	0.34	−1.11	0.08	5.8	7	9	7	15	nw.	Jas. A. Gillis.
Prentiee	Price	1,551	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Joseph G. Lash.
Rhinelander	Oneida	1,550	4	15.9	.....	40	14	−10	9	32	0.52	.....	0.13	10.0	7	3	10	18	nw.	John Lind.
Sauk City	Sauk	758	2	18.8	.....	40	14†	−10	9	36	0.45	.....	0.20	2.5	3	11	5	15	.....	Killen Derleth.
Shullsburg	Lafayette	1,019	4	19.6	.....	40	15	− 6	24	25	0.46	.....	0.18	4.5	5	15	5	11	nw.	Harrison B. Chamberlin.
Solon Springs	Douglas	1,083	4	13.0*	.....	35	14	−24	8	42*	0.85	.....	0.30	8.5	5	6*	7*	11*	nw.	John M. Sayles.
Spooner	Washburn	1,104	15	13.6	− 2.5	38	14	− 22	30	33	0.73	− 0.04	0.32	9.0	5	15	4	12	w.	Horace A. Bresee.
Stanley	Chippewa	1,082	6	14.4	.....	39	14	− 13	9†	40	0.77	.....	0.25	9.0	8	11	6	14	nw.	W. Humphrey Scott.
Stevens Point	Portage	1,113	17	16.2	− 2.8	39	14	− 19	9	41	1.50	+ 0.24	0.50	15.0	7	12	8	11	nw.	Garry E. Culver.
Sugar Camp Dam§	Oneida	1,582	1	.....	.....	.....	.....	.....	.....	.....	0.54	.....	0.10	8.5	9	.....	.....	.....	nw.	Robert Hayes.
Twin Lakes Dam§	Vilas	1,625	1	.....	.....	.....	.....	.....	.....	.....	0.60	.....	0.15	8.5	7	7	10	14	n.	Albert D. Hansen.
Valley Junction	Monroe	930	18	15.8	− 3.4	40	14	− 20	9	44	1.64	+ 0.37	0.40	15.6	9	11	7	13	nw.	Frederick Muermann.
Viroqua	Vernon	1,412	19	18.8	− 2.1	42	27	− 4	24	25	0.83	− 0.74	0.40	10.5	7	13	7	11	nw.	Henry E. Rogers.
Vudesare	Vilas	1,600	2	12.4	.....	33	14	− 14	25	39	1.57	.....	0.40	16.4	12	6	10	15	w.	Louis L. Thomas.
Watertown	Jefferson	824	19	20.2	− 1.0	37	14	− 5	13	30	1.05	− 0.77	0.40	10.5	7	12	6	13	nw.	Charles J. Salick.
Waukesha	Waukesha	864	14	20.5	− 2.4	40	27	− 3	9†	29	0.84	− 0.56	0.35	8.4	9	8	15	8	nw.	Carroll College.
Wausau	Marathon	1,212	17	16.5	− 1.8	39	15	− 11	9	40	0.98	− 0.28	0.25	9.9	7	14	6	11	nw.	George H. Halder.
Weyerhaeuser	Rusk	1,297	3	15.0	.....	37	14	− 20	9	43	0.95	.....	0.33	13.4	7	14	5	12	nw.	Miss Etta Stiles.
Whitehall	Trempealeau	675	18	16.7	− 2.1	44	14	− 27	9†	51	1.40	+ 0.06	0.40	14.0	5	18	0	13	nw.	Hans J. Haugh.
Iowa.																				
Albia§	Monroe	959	12	24.2	− 0.8	53	14	0	24†	42	0.30	− 0.84	0.15	2.0	2	12	6	13	nw.	J. I. Chenoweth.
Algona§	Kossuth	1,213	36	21.4	+ 1.3	51	14	− 10	24	34	0.27	− 0.76	0.25	5.2	2	14	8	9	nw.	Dr. F. T. Seeley.
Alta	Buena Vista	1,513	19	21.0	− 0.4	44	14†	− 5	24	41	0.18	− 0.75	0.13	1.9	5	13	8	10	nw.	David E. Hadden.
Amana	Iowa	721	34	23.6	+ 1.0	50	14	− 4	24	33	0.21	− 1.24	0.09	2.1	7	15	9	7	nw.	C. Schadt.
Ames	Story	926	34	24.4	+ 1.8	54	14	− 8	24	38	0.27	− 0.75	0.25	2.7	2	.....	.....	.....	.....	Iowa State College.
Baxter§	Jasper	998	10	24.2	0.0	57	26	− 9	24	47	0.27	− 0.62	0.15	4.8	5	16	5	10	nw.	W. R. Vandike.
Belle Plaine	Benton	828	20	22.5	− 1.2	54	14	− 7	23	35	0.07	− 1.46	0.03	0.7	4	17	6	8	nw.	S. P. Van Dike.
Belmond	Wright	.....	.....	21.3	.....	51	14	− 11	24	37	0.38	.....	0.22	4.1	6	10	13	8	nw.	Geo. P. Hardwick.
Bloomfield§	Davis	.....	3	26.1b	.....	50	14	1	24	38b	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. R. Davis.
Bonaparte§	Van Buren	.....	19	26.2	− 1.7	51	14	0	13†	36	0.78	− 1.25	0.60	1.0	4	.....	.....	.....	.....	B. R. Vale.
Boone	Boone	1,134	5	23.3	.....	52	14	− 4	24†	43	0.21	.....	0.16	3.0	2	16	3	12	n.	Carl Fritz Henning.
Britt§	Hancock	1,236	13	20.8	+ 1.7	52	14	− 14	24	36	0.25	− 0.51	0.20	2.5	2	19	7	5	nw.	L. M. Goodman.
Buckingham	Tama	.....	10	.....	.....	.....	.....	.....	.....	.....	0.22	− 0.75	0.11	.....	3	.....	.....	.....	.....	J. S. Guynn.
Burlington	Des Moines	544	14	25.5	− 1.6	51	3†	1	24	43	1.39	− 0.16	1.12	1.5	5	21	0	10	w.	Max E. Poppe, jr.
Carroll	Carroll	1,265	20	23.6	+ 0.2	50	13	− 6	23	38	0.10	− 0.89	0.10	1.0	1	10	9	12	nw.	Mrs. Jos. J. Wolfe.
Cedar Rapids	Linn	733	28	21.9	− 3.1	50	14	− 5	25	48	0.33	− 1.17	0.22	2.5	2	21	2	8	w.	W. J. Greene.
Charles City	Floyd	1,015	19	19.4	+ 0.4	50	14	− 12	24	33	0.53	− 0.75	0.20	7.3	6	12	5	14	nw.	U. S. Weather Bureau.
Clear Lake§	Cerro Gordo	1,241	12	21.4	+ 1.0	44	14†	− 10	24	32	0.35	− 0.28	0.20	3.5	3	14	0	17	nw.	Oscar Stevens.
Clinton	Clinton	593	43	23.5	− 1.8	45	14	− 3	12†	31	1.24	− 0.61	0.45	7.2	6	9	11	11	w.	Luke Roberts.
Columbus Junction§	Louisa	595	9	24.8	− 1.8	45	17	0	24	32	0.56	− 0.90	0.45	1.2	3	20	3	8	nw.	J. B. Johnston.
Davenport	Scott	580	39	25.1	− 2.1	48	14	− 1	24	28	0.85	− 0.84	0.46	3.0	5	13	7	11	nw.	U. S. Weather Bureau.
Decorah	Winneshiek	875	17	20.1	− 0.9	44	14	− 8	30	28	0.63	− 0.73	0.35	7.0	4	.....	.....	.....	.....	F. H. Baker.
Delaware	Delaware	1,083	19	20.8	− 0.6	42	14	− 10	24	28	0.45	− 0.93	0.17	6.2	7	18	7	6	nw.	William Ball.
Des Moines	Polk	861	32	26.0	+ 0.3	53	14	0	24	32	0.20	− 1.11	0.16	2.6	5	11	5	15	nw.	U. S. Weather Bureau.
De Soto§	Dallas	866	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. D. Minard.
Dubuque	Dubuque	639	37	23.2	− 1.3	46	14	− 2	24	28	0.57	− 1.15	0.24	5.1	6	12	6	13	nw.	U. S. Weather Buerau.
Earlham	Madison	.....	8	26.8	.....	51	14	− 2	24	39	0.20	.....	0.20	2.0	1	14	7	10	nw.	George Phillips.
Elkader	Clayton	727	31	21.6	0.0	49	14	− 9	24	36	0.49	− 1.34	0.17	8.0	5	17	5	9	nw.	Chas. Reinecke.

TABLE 1.—*Climatological data for December, 1910. 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, .01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days	Prevailing wind direction.	Observers.
Iowa—Continued.																				
Elma	Howard		1	18.2		48	14	− 13	24	31	0.53		0.27	7.3	4	17	8	6	nw.	H. A. Moore.
Estherville	Emmet	1,298	15	19.6	+ 1.4	50	14	− 10	24	47	0.10	− 0.52	0.10	1.0	1	20	0	11	n.	A. O. Peterson.
Fairfield	Jefferson		26	25.2	+ 0.1	50	14	− 1	13	32	0.55	− 1.23	0.37	0.9	5	18	2	11	nw.	R. Monroe McKenzie.
Fayette§	Fayette	1,003	20	19.4	− 2.2	45	14	− 11	24	35	0.71	− 0.78	0.28	7.6	5	20	5	6	nw.	R. Z. Latimer.
Forest City§	Winnebago	1,226	16	18.2	− 1.6	49	15	− 11	24	44	0.45	− 0.40	0.40	5.0	2	17	6	8	w.	J. A. Peters.
Fort Dodge	Webster	1,126	10	22.2	− 0.3	52	14	− 8	25	48	0.25	− 0.21	0.10	2.5	3	18	1	12	nw.	J. F. Monk.
Fort Madison	Lee	516	61								1.04	− 0.89	0.94	T.	2	15	2	14	s.	Miss L. A. McCready.
Gilman	Marshall	1,052	11																	J. L. Wylie.
Grand Meadow	Clayton	1,180	19	19.2	− 2.3	43	14	− 9	24	27	0.70	− 0.76	0.20	7.0	7	12	11	8	nw.	F. L. Williams.
Greene	Butler		12	20.6	+ 1.6	49	14	− 9	24	34	0.38	− 0.65	0.12	4.5	6	7	11	13	w.	J. L. Cole.
Grinnell	Poweshiek	1,023	18	25.2	+ 0.8	53	14	− 6	24	35	0.24	− 0.93	0.20	2.4	3	16	9	6	w.	D. W. Brainard.
Grundy Center§	Grundy	976	19	22.0	− 0.6	53	14	− 9	24	39	0.56	− 0.62	0.20	5.6	5	18	0	13	nw.	J. B. Calderwood.
Guthrie Center§	Guthrie	1,077	15	25.5	+ 1.7	49	14†	− 4	24	34	0.13	− 0.97	0.13	2.0	1	19	2	10	nw.	D. G. Beardsley.
Hampton	Franklin	1,155	20	22.0	+ 0.5	50	14†	− 9	24	35	0.41	− 0.84	0.15	4.2	5	12	13	6	nw.	E. C. Grenelle.
Humboldt	Humboldt	1,095	22	23.8	+ 0.5	51	14	− 11	24	39	0.26	− 0.43	0.16	1.0	2	15	7	9	nw.	Henry S. Wells.
Independence§	Buchanan	921	46	21.2	− 0.4	48	14	− 9	24	34	0.30	− 1.06	0.20	3.0	3	20	4	7	nw.	R. E. Dudley.
Indianola	Warren	969	19	26.4	+ 0.6	51	14	− 1	24	30	0.36	− 0.97	0.15	2.0	4					John L. Tilton.
Iowa City	Johnson	683	50	21.7	− 2.5	53	14	− 7	24	54	0.46	− 1.19	0.20	3.0	4	19	0	12	nw.	Prof. A. G. Smith.
Iowa Falls	Hardin	1,170	17	19.7	− 1.4	51	14	− 11	24	46	0.66	− 0.45	0.35	6.6	8	20	0	11	nw.	J. B. Parmelee.
Jefferson §	Greene		11	24.8		54	14	− 1	12	37	0.22	− 0.53	0.22	2.7	1				nw.	M. E. Hall.
Keokuk	Lee	547	39	28.8	− 0.6	49	14†	4	24	29	0.79	− 1.08	0.66	0.1	5	19	6	6	nw.	U. S. Weather Bureau.
Keosauqua	Van Buren	644	18	24.4	− 3.0	52	14	− 2	13†	54	0.70	− 0.80	0.67	0.3	2	8	16	7		J. H. Landes.
Knoxville§	Marion	920	15	27.0	+ 0.5	52	14	0	24	31	0.40	− 0.98	0.15	4.0	5	16	5	10		Casey & Belville.
Lacona	Warren		11								0.49	− 1.18	0.20	6.6	7	4	21	6		J. B. Alter.
Le Claire	Scott	576	10								0.93	− 0.19	0.46	4.9	6					Miss M. T. Disney.
Marshalltown	Marshall	947	18	22.6	− 0.9	55	14	− 6	24†	44	0.43	− 0.73	0.14	2.0	5	11	8	12	nw.	Ralph B. Reasoner.
Mason City§	Cerro Gordo	1,132	13	19.9	− 1.8	48	14	− 11	24	32	0.22	− 0.59	0.10	2.2	4	18	7	6	nw.	J. S. Mills.
Mount Pleasant§	Henry	729	29	26.3	− 0.5	49	14	1	24	29	1.06	− 0.31	0.80	1.0	4	17	9	5	nw.	J. W. Edwards.
Muscatine	Muscatine		50								0.96	− 1.32	0.44	1.2	5					William Molls.
New Hampton§	Chickasaw	1,169	13	18.5	− 1.0	46	14	− 11	24	29	0.40	− 0.53	0.20	3.5	3	21	2	8	nw.	A. F. Kemman.
Newton§	Jasper	944	22	25.2	+ 2.8	52	14	− 4	24	29	0.22	− 1.14	0.22	3.0	1	16	7	8	s.	J. P. Beatty.
Northwood§	Worth	1,222	14	20.0	0.0	50	14	− 10	24	36	0.75	− 0.35	0.40	7.5	4	19	5	7	nw.	Chas. H. Dwelle.
Olin§	Jones	760	12	23.6	− 0.2	54	14	− 9	13	43	0.38	− 1.06	0.28	3.8	2	15	10	6		M. H. Crissman.
Osage	Mitchell	1,184	23	20.1	+ 0.5	49	14	− 11	24	32	0.50	− 0.85	0.25	4.7	2	18	2	11	nw.	A. D. Bundy.
Oskaloosa§	Mahaska	843	34	25.6	− 0.3	52	14	− 1	24	34	0.20	− 1.06	0.07	2.0	4	18	0	13	nw.	Joseph Boyd.
Ottumwa	Wapello	649	15	26.2	− 1.6	50	14	0	24	34	0.47	− 0.84	0.31	1.0	5	12	10	9	nw.	Chester Potter.
Pella	Marion	877	8	26.0		54	14	− 1	13†	37	0.16		0.08	4.5	4	22	0	9	nw.	John H. Ver Steeg.
Perry§	Dallas	975	9	25.4		54	14	− 8	24	46	0.20		0.20	2.0	1	13	9	9	nw.	Ed. S. Gray.
Plover	Pocahontas	1,426	14	20.8	− 0.5	49	14	− 12	24	43	0.15	− 0.61	0.15	1.5	1	19	5	7	nw.	J. S. Smith.
Pocahontas§	do	1,248	6	21.7		50	14	− 9	24	40	0.22		0.18	2.4	2	12	8	11	nw.	F. F. Hronek.
Ridgeway§	Winneshiek	1,215	12	21.2	− 1.1	49	14	− 9	24	31	0.71	− 1.53	0.40	4.7	7	16	8	7	s.	Arthur Betts.
Rockwell City§	Calhoun		14	22.9	+ 0.3	50	16	− 8	24	43	0.30	− 0.72	0.30	3.0	1	16	3	12		C. M. Randall.
Sac City	Sac	1,278	34	22.8	+ 0.1	48	14	− 5	25	41	0.20	− 0.96	0.20	2.0	1	14	3	14	nw.	E. N. Baily.
St. Charles§	Madison	1,070	9	27.1		53	14	− 1	24	37	0.27		0.12	2.8	5	14	10	7	nw.	R. D. Minard.
Sigourney§	Keokuk	877	14	25.5	− 0.8	52	14	− 2	24	33	0.27	− 1.14	0.10	2.5	4	6	20	5	nw.	J. T. Parker.
Stockport§	Van Buren		8	25.4		52	14	− 3	13	37	0.82	− 0.57	0.64	1.0	5	18	6	7	s.	C. L. Beswick.
Storm Lake	Buena Vista	1,440	21	21.7[e]	− 0.3	42[e]	26	− 5[b]	24	32[e]	0.20	− 0.63	0.20	3.5	1					Prof. Warren Ingold.
Stuart	Guthrie	1,216	11																	J. P. Fox.
Tipton§	Cedar	807	11	24.6	− 0.8	48	14	− 1	24	27	0.78	− 0.88	0.22	5.7	4	16	9	6	nw.	F. K. Gregg.
Toledo§	Tama	856	16	23.0	− 0.7	52	14	− 8	24	36	0.50	− 0.52	0.30	5.0	4	18	5	8	nw.	I. F. Giger.
Wapello§	Louisa	588	12	27.4	− 0.5	49	13	3	12†	32	0.52	− 0.79	0.52	T.	1	19	8	4	se.	G. W. Schofield.
Washington[e]	Washington	769	28	24.8	+ 9.2	52	14	− 2	24	32										Wm. A. Cook.
Waterloo	Black Hawk	862	27	22.4	+ 0.4	54	14	− 8	24	38	0.47	− 0.84	0.17	4.9	4	16	9	6	nw.	M. L. Newton.
Waukee	Dallas	1,039	7	24.6		52	14	− 4	24	34	0.27		0.25	2.3	2	15	7	9	nw.	Samuel F. Foft.
Waverly§	Bremer	948	14	20.7	− 0.9	52	14	− 10	24	40	0.34	− 0.84	0.14	5.5	3	19	2	10	nw.	Earl C. Moore.
Webster City§	Hamilton		5	23.2		53	14	− 9	24	35	0.20		0.20	2.0	1	16	6	9	nw.	C. D. Carpenter.
West Bend§	Palo Alto	1,197	17	21.4	+ 0.8	49	14	− 12	24	32	0.36	− 0.53	0.30	3.6	4	13	7	11	nw.	Phil. Dorweiler.
Whitten§	Hardin	1,036	13	21.4	− 0.2	52	14	− 9	24	40	0.10	− 1.02	0.10	1.0	1	16	9	6	nw.	F. P. Butler.
Winterset§	Madison	1,129	19	25.6	− 0.4	49	14	− 2	24	32	0.20	− 1.19	0.20	2.0	1	10	9	12	nw.	Robert S. Cooper.
Missouri.																				
Gorin	Scotland	700	24								0.82	− 1.25	0.79	T.	3	8	12	11	nw.	J. W. Pulliam.
Hannibal	Marion	534	18	29.1	− 2.2	52	17	6	24	31	0.75	− 0.90	0.64	0.2	4	15	8	8	nw.	U. S. Weather Bureau.
Louisiana	Pike	500	32	28.6	− 1.8	47	14	3	13†,	38	0.84	− 1.08	0.50	0.2	4	15	7	9	n.	J. T. Farell.
Mexico	Mexico	797	32	28.0	− 4.4	51	17	6	13	42	0.43	− 1.67	0.35	T.	6	19	1	11	nw.	J. F. Llewellyn.
Steffenville	Lewis	576	17	28.9	− 0.6	49	17	2	13	34	0.90	− 0.87	0.85	T.	2	14	11	6	w.	Frank Hall.
Sublet	Adair	1,000	30	29.2	+ 0.6	51	15	0	12	36	0.50	− 1.20	0.50	T.	1	15	8	8	sw.	Lewis Spriggs.
Warrenton	Warren	865	20	28.9	− 3.4	56	17	6	24	38	0.73	− 1.61	0.57	0.5	5	15	3	13	nw.	Dr. J. R. Frick.
Indiana.																				
Collegeville	Jasper	662	11	25.2	− 1.8	43	27	− 2	21	32	1.75	− 0.63	1.00	7.5	6	12	5	14	w.	Prof. L. C. Klosterman.
Knox	Starke	716	5	24.0		40	27†	3	21†	27	1.40		0.76	9.9	8	7	7	17	w.	W. R. R. Tatman.
Laporte	Laporte	810	14	24.4[c]	− 1.9	40	26	5	24†	30[c]	2.09	− 0.39	0.75	12.7	10	8[b]	9[b]	12[b]	nw.	Wm. M. Walton, Jr.
Plymouth	Marshall	790	7	23.8		40	27†	5	25	23	1.99		0.89	10.4	12	5	11	15	w.	J. W. Siders.
Illinois.																				
Aledo	Mercer	738	10	25.4	− 0.9	50	14	− 1	24	31	0.95	− 0.36	0.61	1.0	6	15	11	5	nw.	Wm. B. Frew.
Alexander	Morgan	670	17	28.0	− 2.3	52	17	3	13†	32	0.80	− 1.14	0.72	0.5	4	13	6	12	nw.	George H. Hall.
Antioch	Lake	861	9																	J. C. James, Jr.
Astoria	Fulton	650	11	27.3	− 1.0	50	17	4	13	31	1.16	− 0.64	0.72	1.2	5	15	6	10	nw.	Ed. V. Bohl.
Aurora	Kane	687	31	22.4	− 3.6	40	14†	− 4	13	33	1.11	− 0.87	0.51	6.5	5	9	3	19	sw.	W. Holden.
Bement	Piatt	700	3	27.3		49	17	5	21	31	2.58		1.50	2.3	5	15	6	10	s.	Rev. C. S. Adams.
Benton	Franklin	598	8																	F. H. Stamper.
Bloomington	McLean	840	19	26.4[b]	− 2.3	45	14	5	24	27[b]	1.29	− 0.93	1.00	1.5	5	13	6	12	nw.	Prof. H. N. Pearce.
Cairo	Alexander	359	33	35.2	− 3.3	61	28	18	24	27	3.39	+ 0.06	1.72	4.1	7	14	6	11	n.	U. S. Weather Bureau.
Carbondale	Jackson	412		32.7		58	28	8	9	38	2.24	− 0.02	1.04	5.0	7	13	7	11	sw.	State Normal University.
Carlinville	Macaupin	663	20	29.3	− 2.6	54	17	6	13†	31	1.66	− 0.71	1.40	0.5	3	17	5	9	nw.	R. O. Purviance.
Clinton	Dewitt	727		26.9		48	17	5	13	30	1.47		1.00	1.5	5	15	5	11	nw.	J. F. Ziegler.
Coatsburg	Adams	763	18	27.6	− 0.6	49	17	4	24	29	0.72	− 1.00	0.65	T.	2	18	5	8	s.	Dr. J. R. Lambert.
Cobden	Union	656	27	34.0	− 2.3	63	28	12	7	28	2.60	− 1.03	0.95	10.0	4	14	5	12	s.	John Buck.
Dakota	Stephenson	929	5	20.0		40	16	− 6	24	39	0.48		0.20	5.3	4	8	12	11	nw.	Rev. G. W. Kerstetter.
Decatur	Macon	685	19	25.7	− 4.2	48	17	7	21†	37	1.98	− 0.25	1.50	1.0	5	18	2	11	nw.	Prof. J. H. Coonradt.
Dixon	Lee	725	20	20.8	− 4.2	42	14	− 6	13	47	0.89	− 0.77	0.32	11.8	6	14	12	5		H. V. Bardwell.
Duquoin	Perry	459	22	32.7	− 2.7	57	28	12	13†	33	2.01	− 0.68	0.78	3.0	4	18	11	2	nw.	G. H. Knetzger.
Dwight	Livingston	600	17	25.1	− 3.1	45	27	− 2	12	32	1.24	− 0.47	0.79	5.3	7	11	6	14	nw.	Ed. O. Welch.
Elgin §	Kane	716	3	23.1		39	14	− 1	25	27	0.83		0.30	8.3	7	4	14	13	nw.	Elgin Observatory.
Galva	Henry	842	18	23.4	− 1.9	48	14	0	24†	42	0.89	− 0.63	0.58	3.0	7	17	2	12	nw.	Prof. F. U. White.
Greenville	Bond	635	32	29.2	− 3.3	50	17	10	24	26	0.94	− 1.82	0.32	T.	4	14	5	12	sw.	M. S. Oudyn.
Griggsville	Pike	650	25	29.2	− 1.9	54	17	6	24	29[a]	0.78	− 0.87	0.61	0.2	3	18	5	8	nw.	Geo. F. Kneeland.
Halfway	Williamson	569	14																	E. L. Hearn.
Havana	Mason	475	18	28.6	− 2.1	49	17	6	24	27	0.98	− 1.04	0.69	1.0	4	13	13	5	w.	F. and C. Borlget.

TABLE 1.—*Climatological data for December, 1910. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	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.		
Illinois—Continued.																				
Henry	Marshall	500	22	25.7	− 2.3	47	14	− 2	13	36	1.25	− 0.58	0.71	7.0	6	13	10	8	nw.	Dr. F. A. Powell.
Hillsboro	Montgomery	675	16	29.8	− 1.9	52	17	8	13†	30	1.45	− 1.05	0.75	T.	4	17	0	14	nw.	Ira L. Woodward.
Joliet	Will	541	19	22.5	− 4.4	40	27	− 2	12	31	1.12	− 1.00	0.67	5.2	9	10	9	12	nw.	F. M. Muhlig.
Kishwaukee	Winnebago	730	22	21.0	− 4.4	43	27	− 5	13	30	0.57	− 1.33	0.22	11.5	7	12	7	12	nw.	Geo. Stevens.
La Grange	Cook	657	18	23.6	− 2.6	42	27	0	12	30	1.28	− 0.50	0.92	8.5	4	7	6	18	nw.	Prof. F. E. Sanford.
La Harpe	Hancock	698	31	26.4	− 1.4	48	14†	− 2	13	36	0.82	− 1.49	0.60	0.9	4	21	4	6	nw.	Jno. S. Campbell.
Lanark	Carroll	883	21	20.2	− 4.4	42	14	−10	13	33	0.40	− 1.23	0.10	4.2	6	17	3	11	nw.	M. N. Wertz.
La Salle	La Salle	536	33	24.2	− 3.3	45	14	0	12	30	1.11	− 1.17	0.52	7.3	8	10	9	12	w.	U. S. Weather Bureau.
Lincoln	Logan	482	22	27.4	− 3.5	49	17	3	21	29	1.18	− 0.89	0.96	1.7	4	18	6	7	nw.	Prof. C. S. Oglevee.
Martinton	Iroquois	633	23	24.2	− 3.9	43	27	− 2[b]	12	34[b]	1.16	− 1.27	0.90	4.0	7	8	7	16	sw.	Jos. H. Peltier.
Mascoutah	St. Clair	425	20	31.3	− 2.8	55	17	10	13†	33	1.51	− 0.99	0.63	1.2	6	11	6	14	nw.	Geo. Henrich.
Minonk	Woodford	745	17	25.6	− 0.9	46	17	2	12†	32	1.16	− 0.57	0.57	5.5	6	12	11	8	nw.	O. M. Davison.
Monmouth	Warren	784	18	25.8	− 1.1	49	14	10	24	30	1.13	− 0.44	0.72	1.7	6	15	13	3	nw.	Hugh R. Moffet.
Morrison	Whiteside	685	16	22.7	− 1.6	44	16	− 6	12†	35	0.86	− 0.59	0.24	8.3	6	19	5	7	nw.	S. A. Maxwell.
Morrisonville	Christian	638	11	28.4	− 1.5	51	17	5	21	30	1.49	− 0.59	1.13	0.2	4	17	5	9	nw.	J. D. Lowis.
Mount Vernon	Jefferson	511	16	30.0	− 2.8	53	27	11	21	34	1.70	− 0.97	0.70	1.8	5	18	4	9	n.	Theo. P. Stelle.
Oregon	Ogle	702	1	21.2	.....	42	14†	− 4	24	29	1.40	.....	0.60	14.0	5	12	3	16	w.	Samuel Ray.
Ottawa	La Salle	500	24	25.0	− 3.6	45	27	− 2	13	33	0.98	− 1.00	0.50	T.	5	8	0	23	nw.	Miss M. M. Harris.
Pana	Christian	692	24	28.5	− 3.2	50	17	7	21†	26	1.05	− 1.62	0.70	T.	5	22	1	8	nw.	C. W. Sibley.
Peoria	Peoria	609	33	25.4	− 2.7	48	14	3	24	31	1.25	− 1.12	0.85	1.6	8	11	11	9	nw.	U. S. Weather Bureau.
Pontiac	Livingston	546	8	26.4	.....	44	17	0	12	30	1.73	.....	0.97	6.0	6	11	8	12	w.	Geo. Butterworth.
Riley	McHenry	956	51	21.8	− 1.3	40	27	− 2	12	25	0.80	− 1.01	0.37	5.9	6	9	5	17	nw.	John West James.
Rockford	Winnebago	763	18	21.4	− 5.7	41	14	− 1	24	36	0.60	− 1.33	0.19	.....	9	14	5	12	.....	Hosmer C. Porter.
Rushville	Schuyler	670	19	28.0	− 3.0	51	17	5	24	31	1.16	− 0.57	1.02	T.	3	9	4	18	se.	H. F. Dyson.
St. Charles	Kane	700	15	22.8	− 2.5	40	14†	− 2	25	28	1.01	− 1.00	0.37	11.5	6	11	7	13	nw.	Dr. Wm. H. Bishop.
St. Peter	Fayette	500	.....	29.0[d]	.....	52	17†	6	21	30[d]	1.30	.....	0.65	1.0	3	20	5	6	nw.	M. L. Lansford.
Sparta	Randolph	538	24	31.6	− 3.8	54	28	11	13†	28	1.58	− 0.87	0.65	4.0	9	16	3	12	nw.	Jas. A. Caldwell.
Springfield	Sangamon	644	33	28.4	− 2.9	50	17	8	24	26	0.86	− 1.57	0.70	0.2	6	13	8	10	nw.	U. S. Weather Bureau.
Streator	La Salle	626	17	23.2	− 3.9	47	27	0	11†	36[b]	1.81	+ 0.03	0.80	6.5	6	4	5	22	sw.	Edw. F. Sweetser.
Sullivan	Moultrie	530	10	27.6	− 2.0	48	17	6	21	30	1.39	− 0.85	0.91	1.0	4	13	8	10	nw.	C. A. Corbin.
Sycamore	De Kalb	855	30	21.4	− 3.7	44	14	− 3	12	34	0.63	− 1.36	0.45	5.5	3	14	3	14	sw.	Miss E. J. Davis.
Tiskilwa	Bureau	798	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. I. Smucker.
Walnut	do	717	19	24.7	− 1.9	48	16	− 1	12†	31	1.16	− 0.42	0.56	5.9	6	13	9	9	s.	O. C. Nussle.
White Hall	Greene	573	2	28.2	.....	54	17	4	13	38	0.83	.....	0.66	T.	4	18	4	9	w.	Dr. R. A. Pritchett.
Windsor	Shelby	681	11	28.2	− 2.2	48	28	5	21	32	1.82	− 0.67	0.90	1.4	6	15	4	12	nw.	Herbert Rose.
Winnebago	Winnebago	900	23	21.6	− 3.3	41	27	− 3	12†	30	0.91	− 0.94	0.25	12.0	6	15	5	11	nw.	Frank Osborn.
Yorkville	Kendall	584	23	22.0	− 4.0	41	27	− 4	12	31	0.80	− 0.93	0.30	6.1	6	14	3	14	w.	Herman A. Grimwood.
Zion	Carroll	938	16	21.2	− 3.2	43	14	− 5	13	37	1.30	− 0.21	0.40	13.0	5	22	2	7	w.	Robt. F. Gillogly.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* 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 falls 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.

TABLE 2.—*Daily precipitation for December, 1910. 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.	T.														T.					T.	T.		T.	T.			T.
Bottineau	Mouse				T.	.11	T.	T.		T.									.14					.04		.06	T.	.08	.06	T.	T.		0.49
Cando	Sheyenne					.14																									.02		0.16
Crosby	Mouse				T.		.19											T.					T.		.27	T.	T.	.10		T.	.19	T.	0.75
Devils Lake	Sheyenne		T.	.01	T.	.20	.10		T.	T.	T.							T.					.01		.11	.04	T.	T.	.13	.01			0.61
Donnybrook	Mouse																	T.					.10		.15		T.	.10			T.		0.35
Dunseith	do				T.	.10																			.20					.20	.20	.10	0.80
Edmore	Sheyenne		T.			.10	T.																T.		T.			T.	T.				0.10
Forman	do																	T.					.25			.20			.10	T.			0.55
Grafton	Red																																
Granville	Mouse				*	*	.12																	.01	.04	.01			*		.38	*	0.56
Hannah	Pembina						.30																						.20		.10		0.60
Hansboro	Red						.28																T.			.03			.04	.03			0.38
Hillsboro	do				T.		.20												.02				.02			.09			.05	.02			0.40
Lakota	Sheyenne																																
Langdon	Pembina			T.	.17											T.				.11						T.	.20				.19		0.67
Larimore	Red				.50	T.	.75																			.60							1.85
Lisbon	Sheyenne				T.	T.												T.						.10		.05					T.	T.	0.15
McKinney	Mouse				T.		.10																					.15		.10			0.35
Manfred	Sheyenne				T.	.20	.20											T.						T.	.20	.10		.10		T.			0.80
Mayville	Red																																
Minot	Mouse				T.	.25	T.	T.			T.							T.	T.					T.		.20		T.	.03		T.		0.48
Minto	Red		T.	T.	T.		T.								.20											.11	.07					.05	0.43
Oriska	Sheyenne					.10									T.						T.					.10			.05	.05	.05		0.35
Park River	Red			T.	.13	T.	.04			T.						T.									T.	.14			.06		T.		0.37
Pembina	do		.05	.10													.05								.05	.10		.05					0.40
Power	Sheyenne				.05	.02											T.						.20			.30					T.		0.57
Pratt	Mouse																																
Towner	do						.10																		.10			T.	.10				0.30
University	Red		.05	.02	.03	.05	.10														.05	.10											0.40
Wahpeton	do			.05			T.										T.		.10				.20			.20							0.55
Walhalla	Pembina		T.	.45	T.		.05																		.30								0.80
Westhope	Mouse																																
Willow City	do		T.		T.		.10		T.														T.		.05				.05		T.		0.20
Minnesota.																																	
Albert Lea	Mississippi				T.													.05					.10	.05		T.				T.			0.20
Alexandria‖	do					T.	.05	.03			T.									T.	T.		.03	.06		.23	.02			.06			0.48
Angus	Red		T.	.02		.12	.05												T.				T.			T.	.05		.12				0.36
Bagley	do		.05			.04	.02				.05									.02			.12			.08			.04				0.42
Baudette	Rainy																																
Beardsley	Minnesota																																
Beaulieu	Red																																
Bird Island	Minnesota			T.		T.													T.				.06			.04					T.		0.10
Caledonia‖	Mississippi			.05	T.	T.		T.	T.		.07									.07				.08		.30	.20			T.			0.77
Campbell‖	Red																																
Cass Lake‖	Mississippi			.15	T.	T.		.05															.05	.07			.10					T.	0.42
Collegeville	do					T.												T.		T.			.02			.13							0.15
Crookston‖	Red			.15		.05	T.	.05			T.														T.	.05	.05	.05	T.	T.		T.	0.40
Detroit‖	do	T.	T.	T.	T.	T.	T.	.08		T.	T.	T.			T.			T.	T.		*		.32	T.		.09			T.	.07	T.	T	0.56
Fairmont (near)	Minnesota					T.													T.		T.		.10		T.								0.10
Faribault	Mississippi							.01												.02			.13	.01		.13							0.30
Farmington	do				T.			T												T.			.10	.10		.08			T.		T.		0.28
Fergus Falls	Red				T.	.02	.02				T.								.02		.01		.50	.06	.02	.06			.10	.02			0.83
Fort Ripley‖	Mississippi			T.	T.	T.	T.	.02				T.									T.			.01		.22	.12			.04			0.41
Fosston	Red		.05	T.		.06	.05				T.								.07				.15			T.	T.		T.				0.38
Fram	do																																
Glencoe	Mississippi					T.													T.				.02			.25							0.27
Grand Meadow	do			T.			T.			T.									.04				.13	.05		.18							0.40
Hallock	Red		.05	.20	T.	.05	.05				.07								T.							.20	.05						0.67
Halstad	do					.11		.15											T.				T.										0.26
Hinckley	St. Croix			.25				.20															.10			.25							0.80
International Falls	Rainy			.40	T.	.20		T.			T.						T.		T.	T.			.20			.20	T.		.20	.10	T.	T.	1.30
Kelliher	Red	T.	.10	.20	T.	.05	T.		T.		T.					T.	T.	.08					.30		T.	.04	T.	T.	.25	T.			1.02
Lake Crystal	Minnesota																		T.				.20										0.20
Leech Lake Dam	Mississippi	T.	.06	.08		.03		.06	T.	T.	T.								.01		T.		.14			.22			.11	T.			0.71
Littlefork	Rainy			.12		.20											.09						.08						.09				0.58
Long Prairie	Mississippi				T.																		.10			.30			T.				0.40
Lynd (2)	Minnesota																		T.				.03			T.					T.		0.03
Mankato‖	do																		.02	T.			T.	.25		.05							0.32
Maple Plain	Mississippi			T.	T.	T.		.01											.01				.14	T.		.32			T.	T.	.01		0.49
Milaca	do					T.	T.																*			.46							0.46
Milan	Minnesota					T.		T.													.03		.10								T.		0.13
Minneapolis	Mississippi			T.	T.	T.	.01	T.											T.				.10			.19			T.	.01			0.31
Montevideo‖	Minnesota																	T.	.02		T.		T.	.09									0.11
Moorhead	Red				T.	.02	.04				T.							.06					.14		.06	.02			.06	.02			0.42
Mora	St. Croix			.04	.02	T.		.14											T.				.08			.30			.08				0.66
Morris	Minnesota					.01													.03			.25				.20			.05			.01	0.55
New London	Mississippi					T.																	.17			T.							0.17
New Richland	Minnesota				T.	T.													T.				.18			.03							0.21
New Ulm‖	do					T.													T.				.05	T.		.10	.05				T.		0.20
Osakis	Mississippi					T.		T.											T.		T.		.09			.25			.03				0.37
Park Rapids‖	do			.05	T.	T.		.07			.01								T.		.01		.10	.15		.11	.05		.02	.08		T.	0.65
Pine River Dam	do			T.				.08											T.				.06			.35			.05				0.54
Pokegama Falls	do		.09	.32	.13	.02	.02	.07		T.	T.						T.		T.				.03	T.		.28			.25		T.		1.21
Red Lake	Red			.09		.03	T.												T.				.24			T.			.12				0.48
Red Wing‖	Mississippi				T.	T.	T.	.04											T.					.30		.12	.07			.02	.02		0.57
Redwood Falls	Minnesota					T.													.05				.10			.10							0.25
Reeds Landing‖	Mississippi			T.	T.		T.	.01	T.										T.					.20		.08							0.29
Rochester‖	do					T.	T.	T.											T.					.15		.30							0.45
Roseau	Red		.16	.14	T.	.13	.03	.03												.03						.08	.12	.01	.15				0.88
St. Charles‖	Mississippi			.02	T.	T.		.02			T.								T.					.16		.12							0.32
St. Cloud	do																						.05			.19			T.				0.24
St. Paul	do			T.	T.	T.	.02												T.				.10	T.		.18			T.	T.	T.		0.30
St. Peter (g)	Minnesota					T.		T.										.05												T.	.05		0.10
Sandy Lake Dam	Mississippi			.18																						.09			.02				0.29
State Sanatorium	do		.06	.05		.02					.08												.15			.21			.07				0.64
Stillwater‖	St. Croix				.11			.03															.03	.18		.15	.07				.01		0.58
Taylors Falls	do		.10																				.15	.19		.26							0.70
Warroad	Rainy		.20	.20		.10	.03																T.			.03	T.			.30			0.80
West Concord	Mississippi				T.		T.												T.				T.			.30							0.30
Willow River	St. Croix																																
Windom	Des Moines					T.													T.		T.		.04										0.04
Winnebago‖	Minnesota						T.													T.			T.	.20									0.20

TABLE 2.—*Daily precipitation for December, 1910. 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—Continued.																																	
Winnibigoshish	Mississippi		.08	.22	.03	T.	.05	.05			T.								T.				.12	.02		.18			.16				0.91
Winona	do			.04	T.		.01	T.			.08								.02				.05	.05		.18							0.43
Worthington‖	Des Moines						T.			T.							T.	T.	T.		T.		T.	.05					T.		T.		0.05
Zumbrota	Mississippi						T.	T.											T.				.10			.07							0.17
South Dakota.																																	
Milbank‖	Minnesota																					.30							.10				0.40
Wisconsin.																																	
Antigo	Wisconsin			.05	.02		T.	.10			.20	T.								T.			T.	.15		.30	T.			.02			0.84
Barron	Chippewa			.30			T.				T.												.28			*	.17	T.					0.75
Beloit	Rock			.30						.20									.10				.10			.10			.15	T.			0.95
Big St. Germain Dam	Wisconsin		.10	.04			.05		.00		.11	T.								.11			T.	.10	T.	.16	.03			.04	T.		0.83
Brodhead	Rock	.15	.20					T.			.20								.05	T.			.08			.10			T.	T.			0.78
Burnett	do		T.	.05	.04	T.		.03			.18								.02	T.			*	.05	T.	.10				T.			0.47
Darlington	do																																
Deerskin Dam	Wisconsin	T.	.07	T.	T.		T.	.08			.06	T.	T.						T.		.07		T.	.15		.13	T.					T.	0.56
Delavan	Rock		T.	.09		T.		T.		.13									.06	T.			.02	T.	T.	.01			.07	.01			0.39
Dodgeville‖	do			.20	T.						.20													T.	T.	.14	.05						0.59
Downing	Chippewa			.40	T.		T.	T.												T.			.40	.20		.20							1.20
Eau Claire	do			.20	T.		T.	.08			.05												.14	.14	T.	.17	T.			.06			0.84
Grand Rapids‖	Wisconsin			.06	.17			.28			.43										T.			.14			.66			.16			1.90
Grantsburg	St. Croix			.30	T.		T.	.20			T.							T.			.20	.20		.40			.20	T.					1.50
Hancock	Wisconsin	T.		.20	.10			.20			.30									T.			T.	T.	T.	T.	T.			T.			0.80
Hatfield	Black			.20				.13			.22												.09	.13		.22							0.99
Hayward	St. Croix			.40			.10										T.						.30			.20							1.00
Hillsboro	Wisconsin	T.	T.	.30	.10			.10			.20								T.	T.			.05	.10		.30							1.15
Koepenick	do	T.		.10					T.		.10	T.				.10				.10			.10	.20	.05	.20	T.			T.			0.95
Lac du Flambeau	Chippewa	.20	.10	.20							.30									.10			.30			.40				.05	.05		1.70
La Crosse	Mississippi			.15	T.	T.	.01	.01		.05	.03								.01	T.			.08	.02	T.	.30			.01	T.			0.67
Lakemills	Rock			.10	.02	T.		.02			.15								.05	T.			.08	T.	T.	.20	T.		T.	.03			0.65
Lancaster	Mississippi			.03															.02						.01	.01							0.07
Long Lake	Wisconsin	T.	.04	.05			.02	.08	T.		.14	.02	T.			.02				.04	T.		T.	.09	.01	.13	.04			T.	T.		0.68
Madison	Rock	T.	T.	.13	.01	T.		T.		.13	.01								.02	T.			.05	.01	T.	.16			T.	.04			0.56
Mather‖	Wisconsin																																
Mauston	do			.08							.20															.25							0.53
Meadow Valley	do	T.		.19	.02		T.	.05			.20									T.			T.	.02		.22				T.		.10	0.80
Medford	Black			.20	.10						.20													.20		.10							0.80
Merrill	Wisconsin			.15				.16			.14													.06									0.51
Minocqua	do	T.	T.	.05			.04	.06			.13					T.			.03	T.			.03	.10	T.	.12	.05			.03			0.64
Mondovi	Mississippi			.03	T.		T.	.03			.03												.07	.08		.04	.02			.05	.01		0.36
Mount Horeb	Rock	T.	T.	.12	T.	T.					.22								.10	T.			.11		T.	.32				.08			0.95
Muscoda‖	Wisconsin			.30		T.					.25									.12				.14	T.	.22	.10			.16			1.29
Neillsville	Black			.10				.05			.05						.05									.40							0.65
New Richmond	St. Croix			.20	T.	T.	T.	T.															.40	.30		.20	.11		T.				1.21
Osceola‖	do		.02	T.			T.											T.					.19	.16		T.			.02				0.39
Park Falls	Chippewa			.04			T.	T.			.02						T.			T.			T.	.03		.04				T.			0.13
Portage	Wisconsin			.10							.08												.05			.05	.05			T.			0.33
Prairie du Chien‖	Mississippi			.02		T.					.08									.06				.05		.06	.05			.02			0.34
Prentice	Chippewa																																
Rhinelander	Wisconsin	T.		.04				.09			.13	T.	T.							.03			T.	.11		.08	.04			T.			0.52
Sauk City	do			.20																						.20			.05				0.45
Shullsburg	Mississippi			.06						.18									.03				T.	.03		.16							0.46
Solon Springs	St. Croix			.30			.10										.10						.05			.30							0.85
Spooner	do			.32	T.			.08			T.												.09	.08		.16							0.73
Stanley	Chippewa			.25	.03		T.	.08			.12								T.				.05	.11		.08	.05						0.77
Stevens Point	Wisconsin	.10		.10				.20			.40					T.				T.			.10			.50				.10			1.50
Sugar Camp Dam	do	T.	.03	.04			.05	.07			.08	T.	.03			T.				.04				.10	T.	.10				T.			0.54
Twin Lakes Dam	do	T.		T.	T.	T.	.07	.04			.14	T.				T.					.05		T.	.10	T.	.15				.05	T.		0.60
Valley Junction	do	T.		.40	.12		.08	.15			.34								T.	T.			.12	.05		.35				.03			1.64
Viroqua	Mississippi	T.		.18	T.	T.	T.				.07								.03				.05	.08		.40				.02			0.83
Vudesare	Wisconsin	T.	.08	.19		T.	.03	T.			.05		.05			T.			T.	.15			T.	.20	.12	.40	.15			.05	.10		1.57
Watertown‖	Rock	T.		T.	.10	.10		T.			.40									.05	T.			.20		.05	.15			T.			1.05
Waukesha	Fox			*	.11		.08				.35								.05	.02			.08			.10			.05				0.84
Wausau	Wisconsin	T.	T.	.09	.20		T.				.18						T.			T.				.16		.25	.04			.06			0.98
Weyerhaeuser	Chippewa			.33	T.		T.		.06		.03								T.	*	.02		.23			.25				.03			0.95
Whitehall	Mississippi			.30	T.		T.				.30								T.				.20	.20		.40				T.			1.40
Iowa.																																	
Albia‖	Des Moines										.15									T.			T.						.15				0.30
Algona	do					T.	T.			T.									.02		T.		.25	T.									0.27
Alta‖	Raccoon					.01	T.			.02									.02		T.		.10	.03									0.18
Amana	Iowa					T.	T.			.07	.01								.01				.09	T.		.01			.01	.01			0.21
Ames	Skunk					T.	T.		T.	.02									T.			.25				T.							0.27
Baxter	do					T.	T.			.05									.02		T.		.15	T.		.03				.02			0.27
Belle Plaine	Iowa						.03			.01									.01				.02			T.							0.07
Belmond	do				T.	.03	.01			.08									.02				.22			.02							0.38
Bloomfield	Mississippi																																
Bonaparte	Des Moines										.05								.05				.08						.60				0.78
Boone‖	do						T.	T.			T.								T.	T.		T.	.16	.05			T.						0.21
Britt	Iowa					T.				T.									.05				.20			T.							0.25
Buckingham	Cedar					T.				.11									.05				.06			T.							0.22
Burlington‖	Mississippi						T.				.05									.06				.10	T.				1.12	T.	.06		1.39
Carroll‖	Raccoon						T.											T.				.10											0.10
Cedar Rapids‖	Cedar			T.			T.	T.			.23					T.				T.	T.	T.		.11	T.	T.	T.		T.	T.	T.		0.33
Charles City	do			.01		.04				.08									.01				.20			.19							0.53
Clear Lake	do					.10				.05													.20										0.35
Clinton	Mississippi			.25						.27									.12				.12			.03			.45				1.24
Columbus Junction	Iowa			T.		T.				T.	.06								T.				.05	T.					.45	T.			0.56
Davenport	Mississippi	T.		T.		T.		T.		.20									.04				.15	T.				.20	.26	T.			0.85
Decorah	do									.07									.05				.16			.35							0.63
Delaware	do			.01		.01					.17								.04				.06			.13			.03				0.45
Des Moines	Des Moines					T.	T.		T.	.01								T.	T.		T.	.01	.15	T.		.01				.02			0.20
De Soto	Raccoon																																
Dubuque	Mississippi	T.	T.	.07	T.	T.	T.	T.		.24									.04				.08	T.	T.	.13			T.	.01			0.57
Earlham	Raccoon					T.	T.		T.	T.									T.				.20	T.		T.							0.20
Elkader	Mississippi			.10			T.				.08								.03				.11			.17							0.49
Elma	Wapsipinicon		T.			T.	T.			T.	T.								.06				.07	.13		.27				T.			0.53
Estherville‖	Des Moines					T.													T.					.10									0.10
Fairfield	Skunk					T.	T.			T.	.06								.02				.09	T.					.37	.01			0.55
Fayette	Mississippi			.07		T.	T.	T.		.14													.15	.07		.28							0.71
Forest City‖	Cedar					T.				T.									T.				.40			.05							0.45
Fort Dodge‖	Des Moines						T.				T.								.05		T.		.10	.10									0.25
Fort Madison	Mississippi									T.									T.				.10	T.				.94					1.04
Gilman	Iowa																																
Grand Meadow	Mississippi			T.		T.	.02				.10								.05				.20	.10		.20				.03			0.70
Greene	Cedar					.03	.02				.08								.04				.12			.09							0.38

TABLE 2.—*Daily precipitation for December, 1910. 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	
Iowa—Continued.																																	
Grinnell	Iowa						T.			.02									.02				.20	T.	T.	T.			T.	T.			0.24
Grundy Center	Cedar					T.	T.				.01								.05				.20	.10		.20							0.56
Guthrie Center	Raccoon					T.	T.		T.	T.									T.				.13	T.		T.							0.13
Hampton	Cedar					.01	T.			.10								T.				.05	.15			.10							0.41
Humboldt	Des Moines					T.				T.									T.				.16			.10							0.26
Independence	Wapsipinicon						T.			.05									T.				.20			.05							0.30
Indianola	Des Moines					T.	T.			T.	.03								.15		T.		.13	T.			T.			.05			0.36
Iowa City‖	Iowa						T.				.09									.05				.12		T.			.20	T.			0.46
Iowa Falls‖	....do			T.		T.	.05	.03			.15									.03	.02		.05	.30		T.	.03						0.66
Jefferson	Raccoon					T.																	.22										0.22
Keokuk	Mississippi									T.									.01				.11	T.				.56	.10	.01			0.79
Keosauqua‖	Des Moines										.03												T.	T.				.67	T.	T.	T.		0.70
Knoxville	....do					T.	T.			.05	.10								.05				.15	T.					.05				0.40
Lacona	....do					.01	.01			.10									.15	T.			.20						.01		.01		0.49
Le Claire‖	Mississippi		T.	.10			T.	T.	T.		.20									.05				.10	T.	T.			.46	T.	.02		0.93
Marshalltown‖	Iowa						T.				.10								T.	.04	T.		.14	.09	.06		T.			T.			0.43
Mason City	Cedar					T.	T.			.05									.05				.10			.02							0.22
Mount Pleasant	Skunk						T.			T.	.05								.05				.16	T.					.80	T.			1.06
Muscatine‖	Mississippi			T.							.07									.37				.06	T.				.44	.02	T.		0.96
New Hampton	Wapsipinicon					T.	T.			T.									.05				.20			.15							0.40
Newton	Skunk																						.22										0.22
Northwood	Cedar					.05				T.									.10				.40			.20							0.75
Olin	Wapsipinicon										.28								T.				.10							T.			0.38
Osage	Cedar					T.				T.									T.			T.	.25		T.	.25							0.50
Oskaloosa	Des Moines									.07									.04			.04	T.						.05				0.20
Ottumwa	....do					T.	T.			.07									.02		T.		.07	T.					.18	.13			0.47
Pella	....do					T.	T.			T.	.01								.03		T.		.08			T.			.04	T.			0.16
Perry	Raccoon																		T.				.20			T.							0.20
Plover	Des Moines					T.				T.									T.		T.		.15										0.15
Pocahontas	....do					T.	T.												.04		T.		.18	T.									0.22
Ridgeway	Mississippi			T.		.07	.03	T.		.03									.04				.10	.04		.40							0.71
Rockwell City	Raccoon																		T.				.30										0.30
Sac City	....do																		.20							T.							0.20
St. Charles	Des Moines					T.	T.			.05	.02								.03				.12	T.						.05			0.27
Sigourney	Skunk					T.					.04								.06				.07	T.					.10	T.			0.27
Stockport	....do					T.	T.				.03								.05				.08	T.					.64	.02			0.82
Storm Lake	Raccoon																					T.	.20										0.20
Stuart	....do																																
Tipton	Cedar									T.	.22								.19				.16			T.			.21				0.78
Toledo	Iowa					T.	T.			*	.10								.05				.30							.05			0.50
Wapello	....do			T.						T.									T.			T.	T.					.52	T.				0.52
Washington	Skunk																																
Waterloo‖	Cedar			T.	T.	T.	T.			.17									.03			T.	.15			.12				T.			0.47
Waukee	Raccoon					T.	T.		T.	T.							T.	T.	.02		T.		.25	T.		T.				T.			0.27
Waverly	Cedar					T.	T.		.13										.07			T.	T.		.14	T.							0.34
Webster City	Des Moines			T.		T.	T.			T.									T.				.20			T.							0.20
West Bend	....do					.01	T.		T.										.03		.02		.30										0.36
Whitten	Iowa					T.	T.			T.									T.		T.		.10			T.							0.10
Winterset	Des Moines					T.	T.		T.	T.									T.		T.		.20	T.						T.			0.20
Missouri.																																	
Gorin	Mississippi								.01														.02						.79				0.82
Hannibal	....do	T.					T.			T.									T.	T.			.07	T.				.64	T.	.03		.01	0.75
Louisiana	....do																						.09					.10	.50	.15			0.84
Mexico	....do										.01											T.	.01	.03					.35	.01	.02		0.43
Steffensville	....do					T.					T.												.05						.85	T.			0.90
Sublett	....do					T.													T.		T.							.50	T.				0.50
Warrenton	....do					.01					.02												T.	T.					.57	.11	.02		0.73
Indiana.																																	
Collegeville	Iroquois	.10	T.	.20						.25									.10										1.00	.10			1.75
Knox	Kankakee	.08		.08				T.			.17		.02			T.	T.		T.	.09	.08		T.			T.			.76	.12			1.40
Laporte	....do	.20		.10							.37	.12				T.			.05	.10	.30		T.	.03	T.	T.			.75	.07			2.09
Plymouth	....do	.21	T.	.03	T.			.02			.24		.06			T.			.12	.06	.15		T.	.04		.05			.89	.12	T.		1.99
Illinois.																																	
Aledo	Mississippi			.10							.02								.02				.16						.61	.04			0.95
Alexander	Illinois	T.					T.			T.									T.	T.			.01	T.				.04	.68	.07			0.80
Antioch	....do																																
Astoria	....do	T.		.02		T.	T.			T.									.02				.30	T.				T.	.72	.10			1.16
Aurora	....do			.18							.25								.09				.08	T.		T.			.51	T.			1.11
Bement	Mississippi	T.		.15										.70					T.				.03						1.50	.20			2.58
Bloomington	Illinois		T.	.07							.03								T.		T.		.09	T.				T.	1.00	.10			1.29
Cairo	Mississippi	T.			.23	.43	T.														T.		.34	.43				.03	.46	1.47			3.39
Carbondale	....do					.41	.11													T.			T.	.30				.18	.15	1.04	.05		2.24
Carlinville	Illinois																						.08						1.40	.18			1.66
Carlyle	Mississippi																						.20	.05					.70	.55	.02		1.52
Chester‖	....do					.08	.70														T.	T.		.04					.16	.40	.18		1.56
Clinton	Illinois	T.		.13							T.								T.				.05	T.				.15	1.00	.14			1.47
Coatsburg	Mississippi																						.07					T.	.65	T.			0.72
Cobden	....do						1.00																T.	.20				T.	.45	.95			2.60
Dakota	....do			.20	T.	T.					.15								T.				.10	T.					.03			T.	0.48
Decatur‖	Illinois	T.		.10			T.				T.								T.		T.			.20	T.				1.50	.10	.08		1.98
Dixon‖	Mississippi	T.	T.	.18							.17									.05				.14					.32	.03			0.89
Du Quoin	....do	T.				.50																	.20					.53		.78		T.	2.01
Dwight	Illinois	.03		.08							.16								.06		T.		.03						.79	.09			1.24
E. St. Louis‖	Mississippi					.22				.02													T.	.07					.60	.31	.02		1.24
Edwardsville	....do				.05						.02																		.62	.31			1.00
Elgin	Illinois	.05		.05							.23								.05				.10	T.		.05			.30	T.			0.83
Galva‖	....do	T.		.04		T.					.08								.01					.11	T.				.58	.03	.04		0.89
Grafton‖	Mississippi																							.12						1.28	.22	.08	1.70
Greenville	....do	T.				T.																	.30					.30	.02	.32			0.94
Griggsville	Illinois	T.								T.	T.								T.				.15					T.	.61	.02			0.78
Havana	....do	T.		.03															T.				.19	T.					.69	.07			0.98
Henry	....do			.13		T.					.20								.03				.13						.71	.05			1.25
Hillsboro	Mississippi																			T.			*	.25				.75	.40	.05			1.45
Joliet	Illinois	T.	T.	.05		.01	T.	T.		.01	.18								.06	T.			.06	T.		.01			.67	.07			1.12
Kishwaukee	Mississippi	T.	T.	.10	T.	T.					.13								.02				.06	.01		.03			.22	T.			0.57
La Grange	Illinois			.10	T.	T.	T.				.21								.05	T.				T.	T.	T.			.92				1.28
La Harpe	....do										.07								.05				.10	T.					.60	T.			0.82
Lanark	Mississippi	T.		.06							.08								.05				.06		T.				.10	.05			0.40
La Salle	Illinois	T.	T.	.13		T.	T.	T.		.16	.09								.06	T.			.13	T.				.23	.29	.02			1.11
Lincoln	....do	T.		.10	T.	T.	T.				T.								.02				T.	T.					.96	.10			1.18
Loami	....do	T.				T.	T.				T.									T.			T.	T.				T.	.75	T.			0.75
Martinton‖	....do			.03						14									.04				.01			T.		.90	.01			.03	1.16
Mascoutah	Mississippi	T.				.10															T.		.09			T.		.63	.58	.09	.02		1.51
Minonk	Illinois	T.		.08		T.					.25								.04				.10	T.					.57	.12			1.16

TABLE 2.—*Daily precipitation for December, 1910. 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—Continued.																																	
Monmouth	Mississippi			.04							.04								.03				.23						.72	.07			1.13
Morrison	do	T.		.15							.20								.09				.15			.03			.24	T.			0.86
Morrisonville	Illinois	T.																					.12	T.	T.				1.13	.22	.02		1.49
Mount Vernon‖	Mississippi					.06	.08																	.31					.70	.55			1.70
Oregon	do			.40							.20								.05				.15						.60	T.			1.40
Ottawa	Illinois			T.						T.	.20								.09				.09					.50	.10				0.98
Pana	Mississippi																						.03	.03					.70	.25	.04		1.05
Peoria	Illinois	T.		.06		T.	T.	T.		.02									.01				.20	T.				.49	.36	.10		.01	1.25
Pontiac	do	T.		.20							.30								.10		T.		.05	T.	T.				.97	.11			1.73
Riley	Mississippi			.07				T.			.20								.06	T.			.05	T.		.05			.37				0.80
Rockford‖	do	T.	T.	.05			T.	T.	T.		.18									.05	.01			.04	.01	.05			.19		.02		0.60
Rushville	Illinois					T.				T.		T.							T.				.08	T.	T.			1.02		.06			0.16
St. Charles	do	T.	T.	.08		T.	T.	T.			.30								.07	T.			.12	T.	T.	.07	T.		.37	T.			1.01
St. Peter	Mississippi	T.																					T.					T.	.55	.65	.10		1.30
Sparta	do	T.				.20	.08				.03												.08	.04				.05	.42	.65	.03		1.58
Springfield	Illinois	T.		.01		T.	T.			T.	T.								T.	T.			.04	T.				.50	.20	.07		.04	0.86
Streator‖	do	.03		T.	.12						.18									.08									.80	.60			1.81
Sullivan	Mississippi	T.		.10																			.05					T.	.91	.33			1.39
Sycamore‖	do	T.		T.	.06						.12																		.45				0.63
Walnut	do	T.		.16		T.					.22								.05				.12						.56	.05			1.16
Warsaw‖	do									.01									.01				.02	.01				.75		.01			0.81
White Hall	Illinois					T.	T.				T.												.04	T.				.08	.66	.05	T.		0.83
Windsor	Mississippi	T.		.10																T.	T.		.20	.25	T.			T.	.90	.35	.02		1.82
Winnebago	do			.20							.20								.06				.15			.05			.25	T.			0.91
Yorkville	Illinois	T.		.20		T.	T.	T.			.22								.02				.03			T.			.30	.03			0.30
Zion	Mississippi	T.		.40						.40									.20				.10	T.				.20					1.30

TABLE 3.—*Maximum and minimum temperatures at selected stations, December, 1910. 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....	18	−12	16	− 9	24	2	19	− 7	18	−10	23	5	15	− 3	22	5	21	0	15	− 2	23	3	13	1	25	7	13	0
2....	21	− 8	23	16	25	− 2	28	2	22	12	25	9	24	5	27	5	28	12	26	12	27	3	20	− 1	25	9	17	3
3....	12	1	17	8	30	− 2	15	4	18	12	26	20	20	15	30	17	29	15	23	10	30	12	24	17	28	23	24	14
4....	12	− 2	12	4	24	6	16	0	12	8	27	17	20	2	27	18	25	14	21	10	29	16	25	13	28	22	29	6
5....	10	6	15	−18	27	18	11	10	8	0	29	19	20	12	29	14	28	20	22	− 5	26	7	25	13	27	21	24	6
6....	3	−28	8	−18	19	−14	15	−21	0	− 8	24	− 1	8	−13	22	10	23	− 5	11	−12	23	3	22	− 2	25	11	14	− 3
7....	− 4	−16	0	−15	21	− 6	15	− 8	− 8	−18	24	− 1	3	−12	19	8	15	− 3	6	−10	16	1	8	− 6	18	7	6	−11
8....	19	−21	13	−13	24	2	26	− 9	− 2	−10	18	− 2	12	−14	24	0	21	− 2	6	−10	21	0	5	−27	13	2	4	−21
9....	27	−20	34	−12	18	4	24	4	− 8	−20	26	1	26	− 8	28	7	30	10	30	5	29	0	19	−10	25	0	19	− 8
10....	8	7	22	− 8	23	− 1	16	8	− 4	−10	29	15	20	12	32	16	22	21	28	0	24	18	24	7	30	11	24	1
11....	4	−12	− 1	−16	27	− 1	13	−14	− 8	−12	19	0	− 3	− 7	21	2	9	− 2	1	−12	21	0	17	0	17	4	10	− 2
12....	22	−16	26	−16	28	5	26	−14	16	−20	19	− 8	15	−18	22	− 7	23	−10	18	−16	16	− 6	17	−19	17	− 3	12	−17
13....	29	1	36	16	24	7	38	11	30	− 5	41	12	30	−10	39	5	45	9	40	12	45	− 7	31	5	43	8	35	− 1
14....	34	8	31	23	20	4	40	28	22	12	43	27	32	12	50	22	48	25	36	18	50	16	37	16	44	27	34	17
15....	23	11	25	14	18	− 1	30	8	26	10	38	18	22	13	38	19	29	22	25	17	32	21	29	11	31	20	29	8
16....	20	15	23	17	20	− 4	21	9	30	8	30	17	26	14	40	17	28	24	26	21	27	21	23	12	33	19	26	9
17....	28	12	30	17	24	− 6	34	4	18	12	32	24	32	21	39	15	34	23	33	23	29	16	24	0	32	19	23	2
18....	26	10	28	21	26	2	31	21	12	− 8	31	17	32	23	31	19	34	19	34	23	31	17	30	20	34	24	30	20
19....	20	8	23	10	29	8	31	20	− 2	−10	22	8	17	14	29	18	25	24	24	15	24	19	26	11	28	13	24	8
20....	28	9	27	14	32	10	38	8	5	−16	38	13	23	7	22	4	20	10	20	10	21	9	16	− 4	20	6	14	− 6
21....	31	10	40	24	26	12	40	21	18	− 8	37	25	30	9	32	4	44	15	33	15	40	10	35	3	36	9	33	0
22....	22	15	29	4	24	− 2	26	19	22	0	28	2	30	20	29	20	33	20	34	10	23	16	32	25	30	26	35	24
23....	2	−16	5	− 7	18	− 4	8	− 8	30	2	12	−10	0	− 2	28	2	5	3	10	−10	16	6	26	− 2	27	− 1	24	− 7
24....	8	−12	7	−11	18	−16	17	− 9	28	− 5	20	3	11	−20	9	−11	15	−11	10	−18	17	− 8	8	−23	8	− 8	2	−25
25....	20	− 8	17	0	21	−15	29	− 3	30	− 2	32	8	14	−15	25	2	25	5	16	1	21	− 9	16	− 1	21	8	14	− 5
26....	28	− 5	32	8	40	− 2	35	5	32	− 5	34	20	30	− 2	27	5	26	5	32	0	41	5	21	− 6	27	7	23	− 2
27....	14	− 6	16	3	23	8	19	− 3	30	8	28	18	18	4	35	11	28	10	32	7	40	8	21	15	28	18	28	11
28....	10	− 3	9	− 4	28	8	13	3	8	− 8	30	3	17	3	27	15	28	20	22	− 3	16	16	22	12	26	22	23	9
29....	8	− 4	7	−20	23	− 6	7	1	− 8	−10	15	−10	1	− 5	29	3	14	− 4	4	−15	11	1	20	− 3	24	4	20	− 2
30....	10	−20	5	−20	28	−15	23	−11	− 2	−34	30	14	12	−24	21	−10	37	0	20	−15	21	1	6	−24	29	− 3	7	−34
31....	− 6	−15	17	−19	.....	− 7	7	−10	− 5	− 5	30	11	10	−12	29	18	26	20	15	−12	42	5	23	2	36	16	22	6
Mns..	16.4	−3.6	19.1	0.5	24.4*	−0.3	22.9	2.3	12.5	−4.5	27.7	9.5	18.3	0.7	28.5	8.8	26.4	10.0	21.4	2.2	26.8	7.1	21.5	1.8	26.9	11.2	20.7	0.0

Date.	Wisconsin.														Iowa.													
	Delavan.		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....	22	16	22	11	23	14	23	18	20	16	20	6	33	11	24	4	28	12	25	7	27	16	29	9	26	16	30	12
2....	28	20	32	10	24	16	24	20	34	16	21	5	24	18	30	11	27	11	27	8	29	13	30	11	26	15	32	12
3....	27	14	26	19	29	22	27	19	28	15	26	18	25	18	28	15	32	12	34	18	35	25	35	23	31	22	42	28
4....	31	15	28	20	27	22	27	21	26	17	26	11	27	17	25	15	29	24	28	18	29	21	30	17	29	19	30	23
5....	28	20	26	10	28	12	25	20	24	16	24	− 5	28	− 4	27	24	32	24	28	13	32	21	33	26	28	20	32	26
6....	28	12	23	2	24	7	25	14	25	2	18	9	23	− 3	25	12	26	11	22	7	29	17	28	22	30	14	32	15
7....	28	12	19	5	23	8	23	10	22	10	13	0	32	12	27	4	22	11	19	5	26	17	27	14	25	14	30	20
8....	20	3	11	− 8	17	2	14	6	15	− 7	7	−14	18	− 6	24	4	26	10	25	1	28	12	26	9	24	10	33	11
9....	27	− 6	17	−13	23	− 3	23	3	20	−11	17	−14	17	−11	26	13	30	9	26	6	32	14	30	20	25	8	38	18
10....	27	21	27	14	29	18	29	22	28	11	26	11	33	− 9	37	15	32	15	32	10	33	26	42	17	33	25	41	21
11....	23	4	27	2	18	4	22	5	27	5	12	0	24	− 2	26	3	17	12	21	5	26	9	29	15	25	11	33	20
12....	20	− 1	13	− 2	17	1	18	3	20	− 4	13	− 3	25	− 6	20	− 5	17	1	22	− 3	17	2	22	6	20	4	24	8
13....	27	− 6	33	− 5	32	0	25	6	28	− 6	34	2	29	− 3	42	8	31	2	33	0	31	6	36	7	28	0	37	8
14....	37	19	41	24	46	27	40	23	40	25	38	12	38	23	51	23	50	2	50	23	48	23	53	28	46	25	49	24
15....	38	21	35	18	31	24	38	21	40	22	32	12	39	15	40	22	35	25	34	21	38	26	39	27	39	24	41	29
16....	27	12	23	16	32	21	28	17	26	15	25	11	32	− 8	32	25	40	21	40	19	41	22	45	20	38	23	47	19
17....	37	21	32	12	36	19	35	20	35	8	32	11	33	10	29	21	38	22	38	16	46	28	33	19	39	25	49	30
18....	34	27	34	10	34	18	31	20	31	12	32	11	34	12	33	22	33	25	33	22	33	26	35	25	33	24	39	26
19....	30	19	32	17	31	15	30	12	31	18	26	9	33	15	33	24	31	25	30	17	33	22	37	28	32	18	42	30
20....	20	5	18	0	20	6	15	8	19	7	14	− 7	18	7	26	11	23	13	22	8	22	11	28	17	22	10	32	17
21....	19	− 6	26	− 4	32	3	24	6	28	− 2	26	− 2	22	− 6	38	7	34	7	34	4	33	9	38	10	29	5	37	12
22....	32	12	30	18	32	21	33	19	31	18	27	19	28	13	33	25	36	7	31	25	38	27	39	27	35	25	44	20
23....	34	19	33	12	29	4	33	8	31	16	26	5	27	13	28	2	24	19	25	− 4	33	8	27	6	30	7	40	14
24....	20	4	14	3	12	1	15	4	16	5	10	− 4	21	10	11	−10	17	− 4	7	−12	11	− 1	18	0	15	− 2	22	4
25....	26	1	20	5	28	10	30	8	25	8	18	5	17	− 2	34	8	36	− 5	32	7	27	9	43	18	34	8	42	16
26....	30	19	25	5	31	15	29	19	28	18	23	2	21	11	40	8	39	12	33	8	39	23	48	16	36	19	44	26
27....	40	19	25	8	34	17	38	24	38	20	30	17	28	14	36	11	38	18	35	8	42	28	42	24	38	24	43	28
28....	36	29	29	16	29	23	34	23	30	13	28	13	31	10	27	13	36	18	30	20	37	32	36	30	34	28	40	35
29....	33	17	28	10	29	9	31	9	29	16	25	− 1	30	19	27	4	31	28	28	8	35	14	30	14	33	12	37	23
30....	21	3	16	− 8	29	3	23	4	18	14	11	−22	21	− 4	36	8	32	12	28	− 3	31	10	39	10	29	6	37	16
31....	36	14	37	8	36	28	34	22	37	12	33	10	33	− 5	39	25	.....	8	36	17	40	29	41	31	38	29	47	28
Mns..	28.6	12.2	25.5	7.6	27.9	12.5	27.3	14.0	27.1	10.5	23.0	4.1	27.2	5.8	30.8	12.0	30.7	13.1	29.3	9.6	32.6	17.6	34.5	17.6	30.6	15.7	37.6	20.0

TABLE 3.—*Maximum and minimum temperatures at selected stations, December, 1910. District No. 5*—Continued.

Date.	Hannibal, Mo.		Laporte, Ind.		Illinois. Cairo.		Greenville.		La Salle.		Monmouth.		Mt. 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	30	13	32	23	28	21	25	18	27	20	27	14	25	18	24	18	24	18	25	18
2	34	15	30	20	35	21	32	14	25	20	29	11	30	15	31	16	30	17	24	17
3	46	25	28	15	43	28	39	25	33	23	36	19	35	20	34	18	39	26	29	19
4	32	20	30	17	38	30	29	20	30	21	30	20	44	25	33	16	29	20	30	11
5	32	24	25	15	33	29	32	27	31	23	32	23	34	30	31	24	33	27	29	22
6	30	17	26	12	29	21	32	26	27	19	29	18	30	22	27	18	29	21	25	15
7	34	15	.....	.....	37	18	37	18	26	15	29	19	33	16	30	14	33	21	24	14
8	37	11	.....	.....	39	24	35	16	26	11	31	8	40	14	31	9	34	17	19	3
9	41	14	.....	.....	45	24	41	21	32	14	33	14	40	17	35	18	39	20	25	0
10	44	22	32	20	50	38	41	27	31	22	37	23	43	21	38	23	40	26	30	24
11	35	22	30	14	43	33	38	23	22	5	30	16	33	20	27	13	34	19	26	6
12	26	10	30	12	35	22	27	11	18	0	22	4	20	15	24	6	24	11	17	− 3
13	36	7	31	7	36	19	35	13	31	1	33	3	38	12	32	5	34	13	25	− 1
14	49	20	39	18	44	21	43	19	45	21	49	21	43	16	48	17	45	19	40	19
15	43	21	37	26	47	34	44	27	36	22	40	28	44	21	40	18	42	28	38	22
16	47	16	31	12	45	28	41	21	38	21	41	15	47	23	40	17	40	20	35	19
17	52	26	29	7	52	31	50	24	42	25	48	23	52	20	47	27	50	27	38	22
18	45	28	32	20	56	39	41	26	35	28	36	26	50	26	33	25	36	25	33	22
19	44	30	31	25	52	36	46	26	33	17	35	29	48	28	38	24	43	28	30	20
20	31	16	26	18	36	27	32	14	19	10	29	11	30	21	24	10	28	17	20	7
21	38	11	23	8	37	22	33	16	30	7	34	6	45	11	31	4	33	14	25	1
22	42	34	36	6	41	34	36	27	36	22	35	23	37	20	36	27	36	29	35	16
23	36	11	34	25	41	31	36	18	36	10	37	15	31	31	36	12	37	13	32	20
24	24	6	25	5	31	18	25	10	12	3	16	1	40	13	18	3	21	8	20	− 3
25	44	19	25	5	45	24	40	17	34	7	37	8	44	16	36	11	38	14	30	0
26	44	24	40	25	48	35	40	28	36	25	40	24	43	31	39	24	41	27	32	20
27	42	25	39	29	59	32	46	24	42	28	47	24	53	22	41	23	41	26	41	20
28	41	36	38	30	61	44	49	35	37	33	37	32	50	21	36	33	42	35	37	29
29	37	22	34	32	44	31	40	18	35	19	35	22	40	36	35	19	36	22	33	27
30	37	16	34	28	38	25	36	18	29	13	32	11	35	20	30	13	32	18	27	1
31	46	28	37	10	44	31	41	24	40	27	40	24	45	19	41	26	42	28	36	17
Means	38.7	19.5	31.6c	17.3c	42.3	28.1	37.5	21.0	31.4	17.1	34.4	17.3	39.4	20.6	33.7	17.1	35.6	21.1	29.4	13.7